



## **ADDENDUM TO AN ADOPTED MITIGATED NEGATIVE DECLARATION**

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

The proposed Tenfold Natomas RCFE Project (P21-031) is a request to make changes to the previously-approved Natomas Crossing Alleghany Area #2 PUD project (P96-083) and subsequent Plaza project (P06-070) and Natomas Crossing Apartments (P17-062) (collectively the "prior project") in order to construct a 157,550-square-foot residential care facility on approximately 3.62 acres in the Light Commercial, and Natomas Crossing Area #2 Planned Unit Development (C-1-PUD) zone and to amend the Natomas Crossing Area #2 Schematic Plan to designate the site for residential care facility uses. The project is consistent with the previously-approved prior project site's existing land use designation and zoning. Entitlements include a PUD Schematic Plan Amendment and Site Plan and Design Review.

The City of Sacramento, Community Development Department, has reviewed the proposed changes to the previously-approved prior project and on the basis of the whole record before it, has determined that there is substantial evidence to support the determination that the attached previous Mitigated Negative Declaration (MND) and subsequent Addendum to the MND (collectively the "MND") remain relevant in considering the environmental impacts of the project changes and that there is no substantial evidence to support a fair argument that the changes to the project, as identified in the attached Addendum, may have a significant effect on the environment beyond that which was evaluated in the attached MND. A Subsequent Environmental Impact Report (EIR) or MND is not required pursuant to the California Environmental Quality Act of 1970 (Sections 21000, et. seq., Public Resources Code of the State of California).

This Addendum to the MND has been prepared pursuant to Title 14, Section 15164 of the California Code of Regulations; the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, Planning Division, 300 Richards Boulevard, Sacramento, California 95811.

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

Date: 3-14-2022

By: Scott Johnson

TENFOLD NATOMAS RCFE PROJECT (P21-031)

Addendum No. 3 to the  
Natomas Crossing- Alleghany Area #2 PUD  
Negative Declaration (P96-083)

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# 1.0 INTRODUCTION

## 1.1 PROJECT INFORMATION

<b>Project Name and File Number:</b>	Tenfold Natomas RCFE Project (P21-031)
<b>Project Location:</b>	The southwest corner of the Arena Boulevard and Truxel Road intersection in the North Natomas Community in the City of Sacramento. Parcels include: APNs 225-2970-001 through -007
<b>Existing General Plan Designation:</b>	Suburban Center
<b>Existing Zoning:</b>	Limited Commercial Planned Unit Development (C-1 PUD)

## 1.2 PROJECT BACKGROUND

The Tenfold Natomas RCFE Project (Revised Project) is a Residential Care Facility for the Elderly (RCFE) proposed on the southwest corner of Arena Boulevard and Truxel Road in the North Natomas Community Plan (NNCP) area of the City of Sacramento (City). Refer to Figures 1 and 2 in Appendix A for the location and an aerial of the 6.48-acre site.

On May 3, 1994, the City Council adopted the 1994 North Natomas Community Plan and certified the North Natomas Community Plan Environmental Impact Report (EIR). On June 24, 1997, the City Council approved entitlements to reconfigure land use designations and zoning for a 210.75-acre portion of the NNCP known as the Natomas Crossing-Alleghany Area #2 Planned Unit Development (PUD) (P96-083). The City adopted a Mitigated Negative Declaration (1997 MND) for the Natomas Crossing-Alleghany Area #2 PUD Project.

Since approval of the Natomas Crossing-Alleghany Area #2 PUD Project and adoption of the 1997 MND, the City approved and prepared an Addenda to the 1997 MND for two projects: The Plaza (P06-070) and the Natomas Crossing Apartments (P17-062). The addenda to the 1997 MND are described below.

Addendum No. 1. In 2006, the City approved The Plaza Project (P06-070) in the Natomas Crossing-Alleghany Area #2 PUD, including entitlements for a 17.5-acre project site south of Arena Boulevard, west of Truxel Road, and east of Innovator Drive. Approval of The Plaza Project resulted in the establishment of SC-PUD zoning on 10.7 acres adjacent to Innovator Drive south of Truxel Road for future medium density residential development, and the establishment of C-1 PUD zoning on 6.8 acres with Arena Boulevard to the north, Truxel Road to the east, and Prosper Avenue to the south for future commercial development. The City prepared Addendum No.1 to the 1997 MND to evaluate the environmental impacts of The Plaza Project. The Plaza Project was approved and not constructed. The 6.48-acre Tenfold Natomas RCFE Project site is proposed on the east side of the 17.25-acre site of previous The Plaza Project.

Addendum No. 2. In 2008, the City approved the 293-unit Natomas Crossing Apartments Project (P17-062) south of Arena Boulevard and west of Thrive Drive. Addendum No. 2 to the 1997 MND evaluated the environmental impacts of the Natomas Crossing Apartments Project. The 10.3-acre Natomas

Crossing Apartments project site comprised the west side of The Plaza Project previously approved in 2006. The City prepared Addendum No. 2 to the 1997 MND to evaluate the environmental impacts of the Natomas Crossing Apartments Project. The Natomas Crossing Apartments Project has been constructed.

Addendum No. 3. The proposed Tenfold Natomas RCFE project (Revised Project) is evaluated in this Addendum No. 3 to the 1997 MND. The Revised Project proposes to construct a Residential Care Facility for the Elderly (RCFE) southwest of the Arena Boulevard and Truxel Road intersection in North Natomas. The proposed RCFE would consist of 118 independent/assisted living units and a 24-bed memory care wing. Two courtyards with outdoor amenities would be within the west and north building wings. A small utility building on the west side of the site would house trash and recycling dumpsters.

The Revised Project consists of a 6.8-acre site south of Arena Boulevard and west of Truxel Road. The RCFE building will be located on a 4.58-acre portion of the 6.8-acre site. A 0.56-acre parcel immediately west of Truxel Road would be offered for dedication for the future light rail line. On the south portion of the site and north of Prosper Road, two parcels totaling 1.34 acres are not proposed for development as part of this Revised Project. The 6.8-acre site is within the site evaluated in the Natomas Crossing-Alleghany Area #2 PUD and The Plaza Project area, evaluated in the 1997 MND and Addendum No. 1. The 6.8-acre site consists of APNs 225-2970-001 through -007. The Revised Project site is zoned Limited Commercial Planned Unit Development (C-1 PUD) and designated in the 2035 General Plan as Suburban Center. Further details of the Revised Project are provided below under *Project Description*.

The City of Sacramento determined as the Lead Agency under the California Environmental Quality Act (CEQA), that the Revised Project does not trigger the need for supplemental or subsequent review under Section 15162 of CEQA Guidelines, as detailed below. Therefore, the Revised Project is the subject of this Addendum (Addendum No. 3), prepared pursuant to Section 15164 of the State CEQA Guidelines.

The CEQA Guidelines Section 15164 requires either the Lead Agency or a Responsible Agency to prepare an Addendum to a MND if some changes or additions are necessary, but none of the conditions described in Section 15162 of the State CEQA Guidelines calling for preparation of a subsequent environmental document have occurred (refer to the discussion below regarding criteria described in Section 15162).

### 1.3 PURPOSE OF THE ADDENDUM

The Revised Project includes a proposed 157,500 square foot residential care facility for the elderly (RCFE), parking and landscaping on 4.58-acre site within a 6.8-acre Revised Project site. The Revised Project site is within the 210.8-acre site evaluated in the 1997 MND for the Natomas Crossing-Alleghany #2 PUD and the 17.5-acre site evaluated in the 2006 Addendum No. 1 for The Plaza Project. The analysis of the Revised Project in Addendum No. 3 incorporates all reports associated with the 1997 MND, Addendum No. 1 and Addendum No. 2.

This Addendum has been prepared pursuant to State CEQA Guidelines Section 15164 and Public Resources Code Sections 21083 and 21166. An Addendum is an appropriate subsequent document to a previously certified MND when some changes to a project are necessary, but those changes do not create new or increased significant environmental impacts that warrant major revisions to the 1997 MND. (State CEQA Guidelines Sections 15162(a), 15164(a); see *Save Our Heritage Organization v. City of*

*San Diego* (2018) 28 Cal.App.5th 656, 668.) Also, an addendum is appropriate when circumstances surrounding a project have not substantially changed and when no new information of substantial importance has been uncovered that indicates the project would create new significant impacts or increase the severity of the previously identified significant impacts. Substantial evidence presented in this Addendum demonstrates that the proposed project does not create any new significant impacts or increase the severity of previously identified significant impacts. Nor are there any new circumstances or new information that would create such impacts or require more robust analysis as discussed in more detail below. (State CEQA Guidelines Section 15162(a).) Therefore, an Addendum is the appropriate CEQA document, and a subsequent or supplemental MND is not warranted. (*Id.*, Section 15164(e).)

## 1.4 ENVIRONMENTAL SETTING

The Revised Project site is in the North Natomas Community in the City of Sacramento (City), approximately one mile east of Interstate-5. The Revised Project site is approximately 6.8-acres and zoned Limited Commercial PUD (C-1 PUD) within the Natomas Crossing-Alleghany #2 PUD. The site is an irregular rectangle shape bound by Arena Boulevard (north), a light rail corridor and Truxel Road (east), Thrive Drive (west) and Prosper Road (south). Surrounding land uses include townhomes south of the site, office and retail north of Arena Boulevard, and offices east of Truxel Road. The Sleep Train Arena site to the northwest is proposed to be redeveloped with a medical school and teaching hospital. The 293-unit four-story Alira Apartment community is west of the site.

The site is vacant, disked, sparsely vegetated with grasses, and stubbed with wet and dry utilities. Alleghany Properties, LLC owns the property. A 0.56-acre parcel immediately west of Truxel Road would be offered for dedication for the future light rail line. On the south portion of the site and north of Prosper Road, two parcels totaling 1.34-acres are not proposed for development as part of the Revised Project. The entire 6.8-acre site including the two parcels on the south part of the site not proposed for development, consists of APNs 225-2970-001 through -007.

## 1.5 CEQA REQUIREMENTS

Pursuant to Section 15164 of the CEQA Guidelines, an Addendum to an adopted MND may be prepared by a lead agency or a responsible agency if only minor technical changes or additions are necessary and none of the conditions described in Section 15162 of the CEQA Guidelines calling for the preparation of a subsequent EIR or subsequent MND have occurred. Consistent with CEQA Guidelines 15164, the following discussion demonstrates that none of the conditions described in Section 15162 have occurred and that only minor technical changes are necessary in order to deem the certified MND adequate to describe the impacts of the project. CEQA Guidelines Section 15164 also states that an Addendum need not be circulated for public review but can be included in or attached to the certified MND for consideration by the hearing body.

The following paragraphs address each of the criteria contained in Section 15162 of the CEQA Guidelines in regard to the project.

- **No Substantial Project Changes.** There are no substantial changes proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement



of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

- **No Substantial Change in Circumstances.** No substantial changes have occurred with respect to the circumstances under which the project is undertaken which will require major revisions of the previous MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
- **No New Information of Substantial Importance.** There is no new information of substantial importance, which was not known or could not have been known with the exercise of reasonable diligence at the time the previous MND was certified as complete, which shows any of the following: the project will have one or more significant effects not discussed in the previous MND; significant effects previously examined will be substantially more severe than shown in the previous MND; mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or mitigation measures or alternatives which are considerably different from those analyzed in the MND would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

None of the conditions identified in CEQA Guidelines Section 15162(a) would occur with implementation of the Revised Project because:

- a) The revisions to the Revised Project evaluated in the 1997 MND, as described in Section 2.0, *Project Description*, of this Addendum, are relatively minor in nature and would not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects. The Revised Project is proposing a 157,500 square foot RCFE on 4.58 of the 6.8-acre site. The 1997 MND proposed development on approximately 210-gross acres with 120-gross acres of mixed-use development, 20-gross acres of commercial, 15-gross acres of Employment Center-40, and 36-acres of Employment Center-65. The Revised Project entails construction of the RCFE on 4.58-acres of the total 6.8-acre site that was evaluated in Addendum No.1, on APNs 225-2970-001 through -007. The Revised Project would not result in any new significant environmental impacts or substantial increase in the severity of previously identified significant impacts (refer to the *Environmental Analysis* section for details regarding the impacts associated with the Revised Project).
- b) While some circumstances and existing conditions surrounding the Revised Project have changed from those described in the 1997 MND, the changes relate mostly to ongoing implementation of the Natomas Crossing-Alleghany Area #2 PUD analyzed in the 1997 MND. Existing conditions on and surrounding the project site generally remain as described in the 1997 MND and are not substantially different from those described in that document. Therefore, any changes in circumstances or conditions that have occurred would not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

- c) There is no new information of substantial importance. There is no information available that indicates that the Revised Project would result in significant effects that were not addressed in the previous MND or a substantial increase in the severity of previously identified significant effects; or that mitigation measures or alternatives are available and feasible that would substantially reduce one or more significant effects on the environment.

## 2.0 PROJECT DESCRIPTION

### 2.1 NATOMAS CROSSING-ALLEGHANY AREA #2 PUD (1997 MND)

The Natomas Crossing-Alleghany Area #2 PUD (P96-083) was established for the 210.8-acre portion of the North Natomas Community Plan. The PUD Project consists of mixed-use development with 839 dwelling units. The Entitlements included a Development Agreement, General Plan Amendment, Community Plan Amendment, Rezone, PUD Designation and Guidelines, Tentative Master Parcel Map, and Subdivision Modifications. The PUD Project was approved in 1997 and most of it has been developed with residential uses.

### 2.2 THE PLAZA PROJECT (ADDENDUM NO. 1)

Addendum No. 1 to the 1997 MND evaluated The Plaza Project (P06-070) which was proposed for the 17.5-acres in the northeast portion of the Natomas Crossing-Alleghany #2 PUD Project. The Plaza Project was comprised of approximately 43,000-51,000 square feet of restaurant and retail commercial space within the east 6.8-acres of the 17.5-acre site. The remaining 10.7-acres were designated for future medium density residential development west of Thrive Drive. Associated entitlements included a (1) rezone to relocate the 10.7-acres of Shopping Center PUD (S-C PUD) zoning and 6.8-acres of Limited Commercial PUD zoning; (2) a tentative map to subdivide two parcels into eight parcels on 17.5-net acres in the SC-PUD and C-1-PUD zones; (3) a schematic plan amendment to develop 43,000 square feet of commercial development and devote 10.7-acres to future medium density residential development permitting up to 310 residential units; (4) and plan review to develop approximately 43,000 square feet of commercial space in the C-1-PUD zone. The Plaza Project was approved in 2006. The commercial and restaurant component of the Plaza Project has not constructed. The 6.48-acre Revised Project is proposed on the east side of the 17.25-acre site of previous The Plaza Project.

### 2.3 NATOMAS CROSSING APARTMENTS (ADDENDUM NO. 2)

Addendum No. 2 to the 1997 MND evaluated the Natomas Crossing Apartments (also known as Spanos Apartments at Natomas Crossing) Project (P17-062) was comprised of a 293-unit multi-family apartment complex on a 10.3-acre portion of the 10.7-acre site that was approved with the 2006 Plaza Project and evaluated in Addendum 1 to the 1997 MND. The site was rezoned SC-PUD and set aside for future medium density residential as part of The Plaza Project. The Natomas Crossing Apartments project included five four-story buildings, outdoor amenities, parking, and landscaping. The proposal required a Conditional Use Permit to allow for multi-family residential within the SC-PUD zone and Site Plan and Development Plan review. The Natomas Crossing Apartments Project, approved in 2018, was constructed and is known as the Alira Apartments.

### 2.4 DESCRIPTION OF REVISED PROJECT (ADDENDUM NO. 3)

#### 2.4.1 Project Setting

Tenfold Development, LLC (Applicant) proposes the Tenfold Natomas RCFE Project (Revised Project), a Residential Care Facility for the Elderly (RCFE) southwest of the Arena Boulevard and Truxel Road

intersection in North Natomas community in the City of Sacramento, one mile east of Interstate-5. The proposed RCFE would consist of 118 independent/assisted living units and a 24-bed memory care wing in a 157,500 square foot building. The site is an irregular rectangle shape bound by Arena Boulevard (north), a light rail corridor and Truxel Road (east), Thrive Drive (west), and Prosper Road (south). The site is vacant, disked, sparsely vegetated with grasses, and stubbed with wet and dry utilities. Alleghany Properties, LLC owns the property. The Revised Project is proposed on a 4.58-acre portion of the site south of Arena Boulevard. A 0.56-acre parcel immediately west of Truxel Road would be offered for dedication for the future light rail line. On the south portion of the site and north of Prosper Road, two parcels totaling 1.34-acres are not proposed for development as part of the Revised Project. The entire 6.8-acre site, including the parcels not proposed for development, consists of APNs 225-2970-001 through -007.

Surrounding land uses include townhomes south of the site, office and retail north of Arena Boulevard, and offices east of Truxel Road. The Sleep Train Arena site to the northwest is proposed to be redeveloped with a medical school and teaching hospital. The 293-unit four-story Alira Apartment community is west of the site. The Revised Project site is proximate to residential neighborhoods, employment centers, services, schools, parks, and open space areas in the North Natomas community.

The 2035 General Plan designates the site as Suburban Center. The Suburban Center designation includes predominantly non-residential, lower-intensity commercial development or horizontal and vertical mixed-use development. The floor area ratio in the Suburban Center designation ranges from 0.15 to 2.00. The site is zoned Limited Commercial Planned Unit Development (C-1 PUD). The PUD suffix in the zoning designation identifies the site in the Natomas Crossing PUD with a Schematic Plan that identifies uses and guidelines for design and implementation. The Revised Project is consistent with the City's Planning and Development Code's (PDC) Residential Care Facility definition: "a facility that provides nonmedical resident services to seven or more individuals in need of personal assistance essential for sustaining the activities of daily living, or for the protection of the individual, excluding members of the resident family or persons employed as facility staff, on a 24-hour-a-day basis" (PDC Section 17.108.190). A Residential Care Facility is a permitted use in the C-1 zoning district.

## 2.4.2 Entitlement Request

The following entitlements are requested to implement the Revised Project:

- Amendment to the Natomas Crossing Planned Unit Development (PUD) Schematic Plan to reflect the proposed residential care facility use (4.58-acres); and,
- Site Plan and Design Review for the construction of a three-story, 157,000 square foot residential care facility.

### 2.4.2.1 Proposed Use

The proposed use is a licensed Residential Care Facility for the Elderly (RCFE) with 118 independent/assisted living units, a 24-unit memory care wing, indoor and outdoor amenities, parking, and landscaping.

The proposed 157,500 square foot three-story building is planned adjacent to Arena Boulevard and near Truxel Road, with the main entrance is on the southwest side of the building. The building is irregularly shaped, with wings extending north, south, and west. Two courtyards with outdoor amenities are within the west and north building wings. A small utility building on the west side of the site would house trash and recycling dumpsters.

#### 2.4.2.2 Unit Mix

The proposed RCFE would include 118 independent/assisted senior living units and 24 memory care units. The 118 independent/assisted living units would consist of approximately seven studios, 83 one-bedroom, and 28 two-bedroom units on three levels (Table 1).

**Table 1**  
**TENFOLD NATOMAS RCFE UNIT COUNT**

Unit Type	Average Size	Units
Independent/Assisted Living		
Studio	643 sf	7
One Bedroom	750 sf	83
Two Bedroom	1,077 sf	28
<b>Total Independent/Assisted Living Units</b>		<b>118</b>
Memory Care Units	377 sf	24
<b>Combined Total Units</b>		<b>142 (170 beds)</b>

Each of the independent/assisted living units would include:

- A full kitchen with refrigerator, stove/oven, and solid surface countertops and peninsula;
- A generously sized living room to accommodate a dining set and sitting area furniture;
- Bedroom(s) with walk-in closets;
- Washer and dryer in each unit;
- Patios in some ground floor units and balconies on the second and third-floor units for residents to garden and enjoy the weather.

Under the RCFE license, assisted living services would be provided to the 118 independent/assisted living units. The Harbor memory care wing on the west side of the first floor consists of 24 units, each with a bed and bathroom. Dedicated common areas, including living and dining rooms, an activity room, and an outdoor courtyard, are designed to accommodate the special needs of residents with dementia.

#### 2.4.3 Services

The proposed RCFE would provide integrated services, including a complete culinary program serving three meals a day, a robust events and adventure program, housekeeping, and transportation. As a licensed RCFE, a full range of personal care services is provided by a team of caregivers and medication

technicians, working under the supervision of the on-site professional team. Tenfold's Harbor memory care program would serve the needs of residents with dementia conditions in a dedicated wing. Services provided to dementia care residents are tailored to meet their specialized needs.

#### 2.4.3.1 Amenities

Indoor and outdoor amenities for the independent/assisted living residents include the following:

- Two dining rooms, each with separate menus, open for breakfast, lunch, and dinner offering various culinary options,
- A bistro operating 13 hours a day,
- A gym staffed by a full-time fitness professional,
- A 30-seat state-of-the-art theater,
- A dedicated art studio,
- A club room with an outdoor seating area,
- Various seating and gathering areas, including a formal living room, lobby seating area with a reading nook, and seating spaces on the second and third floor residential wings,
- Salon for hair styling and manicures,
- An outdoor patio and trellis shade structure adjacent to the bistro,
- A large enclosed outdoor courtyard area adjacent to the lobby and dining room. The courtyard would include a large trellis structure with ample seating protected from the sun. Additional seating would surround a fire table where residents can enjoy summer evenings, and tables provide opportunities for outdoor dining. In addition, walking paths, extensive landscaping, and a bocce court encourages residents to enjoy the outdoors. Community garden beds in the courtyard provide residents with the opportunity to plant vegetables and herbs, and
- An on-site walking path provides circulation around the community and links to the adjacent sidewalks.

Amenities for the Harbor Memory Care residents would include:

- A living room with ample seating,
- A dining room where three meals are served daily,
- An activity room in which a Memory Care Coordinator leads a full range of activities tailored to the needs of memory care residents, and
- A dedicated enclosed outdoor area for the memory care wing with outdoor seating and putting green for residents to enjoy outdoor space under staff's watchful supervision without risk of wandering. Raised planter beds in the outdoor area would allow residents to plant and tend vegetables and flowers.

#### 2.4.3.2 Resident Profile and Staffing

The typical resident would be 80+ years old, and most residents would be women. They would move to the Tenfold Natomas RCFE because they desire more social engagement from the community's activity and fitness programs. In addition, residents need assistance with daily living tasks, including meals,

housekeeping, and transportation. Some residents would also need additional personal care services such as medication management, bathing, dressing, and assistance with ambulation. Residents with Alzheimer’s dementia or other dementia require a secure environment in the memory care wing.

The 24-hour staff would include approximately 90 full and part-time employees. Staff would include an executive director and other department directors, culinary staff, activities, and fitness staff, housekeeping and maintenance personnel, a bus driver, caregivers, and medication technicians.

#### **2.4.3.3 State License**

The State of California would license the facility under the California Code of Regulations Title 22 as a Residential Care Facility for the Elderly. The California Department of Social Services Community Care Licensing Division administers Title 22 regulations, and the Revised Project would comply with the regulations.

#### **2.4.3.4 Construction, Building Code, and Alternate Means and Materials Request**

The Revised Project would be a three-story Type VA wood-frame building with various occupancies, including A3 assembly uses in the common amenity areas, B occupancies in the office areas, and R2.1 for the residential areas.

Tenfold is committed to resident safety and, to the extent possible, would like to allow residents to age in place and minimize moving within the facility. The applicant plans to submit an Alternate Means and Materials Request (AMMR) of the City Building Department to allow non-ambulatory residents to live on the third floor. In the AMMR, a combination of increased fire and life-safety systems would be proposed, which may include increased fire rating for bearing walls and circulation routes, increased building compartmentalization to provide more horizontal exits, emergency power for the elevator, and other items as discussed with the City Building and Fire Officials.

#### **2.4.3.5 Landscaping**

The landscape plan for the Revised Project features native and drought-tolerant plant species. Abundant landscaping is proposed on the Arena Boulevard frontage, between the RCFE and light rail corridor, throughout the parking lot and at the building entry. The two outdoor courtyards would be landscaped with large canopy shade trees and low-profile groundcovers and shrubs.

#### **2.4.3.6 Walls, Fencing, and Architecture**

The Revised Project features walls, fences, and gates, on the perimeter of the site. Six-foot tube steel fencing with a top rail is the primary fencing. A seven-foot enhanced masonry wall with pilasters is planned adjacent to the main courtyard for privacy and attenuation of Arena Boulevard traffic noise. Internal to the site, an eight-foot wall finished with painted plaster would provide privacy for the memory care courtyard. At the primary vehicular access, an enhanced tube steel fence would have a two-foot stone base and stone pilasters.

The proposed three-story building is a contemporary expression of traditional architectural styles in the Sacramento Valley characterized by simple building forms, sloping shed roof and a rich palette of textures, materials, and colors.

Each building elevation is designed with a consistent level of quality architecture. The main building has a horizontal expression with a bold plaster base and textured horizontal siding above. The horizontal expression is punctuated with contrasting vertical building forms. Living spaces are stacked with a high, light-colored plaster base and accentuated with horizontal siding above. The forms have a variety of sloping roofs and are separated by residential balconies and patios. The main building entrance, primary building corners, and amenity spaces are enhanced with stone, shingles, horizontal siding, and upward sloping shed roofs. Amenity areas incorporate shade structures that extend the interior environment out to adjacent courtyards.

The color palette for the main building consists of a warm brown with a deeper brown base and dark brown trim. Contrasting building forms incorporate a combination of light cream plaster and siding, and deep blue shingles and siding, and a rich golden stone veneer. A varied, sloping composition shingle roof contrasts with the building walls and conceals roof-mounted mechanical equipment.

#### **2.4.3.7 Signage**

One low-profile building monument sign is proposed on the Arena Boulevard frontage near Thrive Drive. The sign base would be constructed of stone veneer to match the building. A smaller monument sign is planned at the Thrive Drive vehicular entry gate.

#### **2.4.3.8 Access and Circulation**

The building fronts Arena Boulevard and Thrive Drive provides access on the west side of the site. Thrive Drive, a private road, separates the Revised Project site from the Alira apartment site to the west. Two driveways extend east from Thrive Drive to access the site. The north driveway accessing the service area would be signed for service vehicles and deliveries. The south driveway is the primary entry accessing the building and parking area and would include a pedestrian gate and intercom/buzzer system. Both driveway entrances would be gated. No direct vehicular access is proposed to Arena Boulevard or Truxel Road.

The North Natomas Community Plan (NNCP) and Natomas Crossing PUD feature land use patterns that support walking, cycling, and public transit and emphasize pedestrian connectivity and linkages among land uses. A 14-foot (ten feet of asphalt and two feet of decomposed granite on each side) bicycle/pedestrian pathway is planned on the east edge of the site, adjacent and parallel to the light rail parcels. The 14-foot path aligns with existing sidewalks north and south of the site. A pedestrian gate in the northwest corner of the site would provide access from the internal walking path to adjacent public sidewalks and the light rail corridor. To maintain site security, employees and residents would have key access.

#### **2.4.3.9 Transit**

The Revised Project would provide residents with transportation services to local medical appointments, shopping, appointments, and excursions. A full-time driver would coordinate transportation for residents in a five-passenger hybrid town car and a fourteen-passenger van that accommodates wheelchairs. Transportation would be provided to residents on demand and fixed schedule. Three SACRT bus lines (Routes 11, 13, 113) and the North Natomas Jibe shuttle provide transit service in the area.



### 2.4.3.10 Light Rail

Sacramento Regional Transit plans to construct the Downtown-Natomas-Airport light rail extension (Green Line) approximately thirteen miles from downtown Sacramento north to the Sacramento International Airport. An approximately 40-foot-wide corridor on the west side of Truxel Road would accommodate the future Green Line alignment and the Arena Boulevard light rail station. A 0.56-acre parcel east of the site would be offered for dedication for the light rail corridor.

### 2.4.3.11 Parking

The site is in the City's Suburban parking district, and the proposed RCFE use is classified in the Nursing Home category of the parking demand table (PDC 17.608.030).

Vehicle Parking. Under the Nursing Home category, the Revised Project requires one off-street parking space per three patient beds (PDC Section 17.608.030B), including employee, resident, and guest parking demand. Under the Nursing Home Parking standard, the 170-bed facility would require 57 parking spaces. PDC Section 17.608.020.G also states that no minimum parking is required for projects within one-quarter mile of a proposed light rail station, and the Revised Project is within one-quarter mile of the planned Arena Boulevard transit station.

The Revised Project includes 100 off-street parking spaces for residents, guests, and employees. The 100 spaces include 64 uncovered spaces, 26 carport-covered spaces, ten electric vehicle-capable spaces. Four of the 100 spaces would be accessible spaces, and two would be electric vehicle-ready spaces. Parking would be located south of the proposed entrance off of Thrive Drive, on the southern end of the site.

Bicycle Parking. In the Suburban parking district, the standard for Nursing Home requires two short-term bicycle parking spaces. No long-term spaces are required. The Revised Project would include eight short-term bicycle spaces (four racks) and two long-term bicycle racks near the main building entrance (Table 2).

**Table 2**  
**REVISED PROJECT PROPOSED PARKING**

Type	Required	Proposed
Vehicle Parking	PDC 17.608.030.B: (1 space/3 beds) 57 spaces PDC 17.608.020.G: No minimum parking	100 spaces
Bicycle Parking	PDC 17.608.030.C Long Term: 0 spaces Short Term: 2 spaces	Long Term: 2 spaces Short Term: 8 spaces

### 2.4.3.12 Development Standards

The Natomas Crossing-Alleghany #2 PUD establishes development standards for the site. Standards not listed in the PUD are regulated by the Limited Commercial (C-1) zone. The specific development standards applicable to the Revised Project are presented in Table 3.

**Table 3**  
**REVISED PROJECT DEVELOPMENT STANDARDS**

	Reference	Standard	Revised Project
Height	PDC 14.216.620.A and Natomas Crossing PUD	35-feet maximum and two-story height bonus for projects within 1,000-feet of light rail	34-feet at the top plate and 39-feet at the tower top plate
Floor Area Ratio	PDC 17.216.620.C and General Plan	0.15 min to 2.00 max	0.80
Setbacks			
Front- Area Boulevard	PDC 17.216.630.A	No minimum or maximum	28-feet
Street side yard - Thrive Drive (private)	PDC 17.216.630.B	No minimum or maximum	17-feet
Interior Side-yard - Light Rail Corridor	PDC 17.216.630.C	5-feet	23-feet
Rear yard setback - Prosper Road	PDC 17.216.630.D	15-feet	213-feet
Parking Lot Shading	PDC 17.612.040	50%	69.5%

#### 2.4.3.13 Building Height

The proposed building is three stories with a height of approximately 34-feet at the top plate and 39-feet at the tower top plate. The 34-foot building height is below the maximum plate height, and the tower top plate exceeds the height standard by four feet. Deviations from the development standards may be approved if the proposed development is consistent with the purpose and intent of applicable development standards (PDC 17.808.180.B.2).

The 39-foot tower top plate is consistent with the scale and intensity of uses envisioned in the NNCP and Natomas Crossing-Alleghany #2 PUD adjacent to the light rail corridor. The Revised Project is adjacent to the light rail corridor adjacent to Truxel Road and two landscaped arterial roadways. The proposed building height is consistent with the scale and intensity of surrounding uses, including the two-story condominiums to the south, four-story Alira Apartments on the west, and the proposed hospital north of the site. The building architecture, including the gabled roofs and material and color changes, softens the building massing.

The Natomas Crossing-Alleghany #2 PUD Section C.1.a(3) allows buildings within 1,000-feet of a transit station (light rail) a two-story height bonus. The proposed Revised Project is adjacent to and within 1,000-feet of the future Arena Boulevard light rail station.

#### 2.4.3.14 Lot Merger and Boundary Line Adjustment

A parcel map recorded in 2018 created parcels for the shared private drive (Thrive Drive) parking area and six parcels ranging from 0.40 to 1.0-acres. Before the building permit is issued for the Revised

Project, a lot merger and boundary line adjustment would be processed that reconfigures the site into four parcels as presented in Table 4.

**Table 4**  
**REVISED PROJECT PARCEL CONFIGURATION**

Parcel	Size	Use
Parcel A	4.582-acres	Residential Care Facility for Elderly
Parcel B	0.564-acres	Light Rail Corridor
Parcel C	0.698-acres	Future Development
Parcel D	0.639-acres	Future Development
<b>Total</b>	<b>6.483-acres</b>	

#### 2.4.4 General Plan, Community Plan, Planned Unit Development, and Zoning

**General Plan:** The site is designated in the Sacramento 2035 General Plan as Suburban Center. The Suburban Center designation provides predominantly non-residential, lower-intensity commercial development or horizontal and vertical mixed-use development. The floor area ratio in the Suburban Center designation ranges from 0.15 to 2.00.

The Revised Project is consistent with the General Plan Suburban Center designation and policies supporting infill development adjacent to light rail, care facilities, and senior housing opportunities. The Revised Project is consistent with the General Plan, including the following goals and policies:

**Goal LU 8.2 – *Special Uses.*** Provide for the development of Special Uses (e.g., assembly facilities, live-work studios, and care facilities, live-work studios, and care facilities) that are included within several Land Use and Urban Form Designations.

**Policy LU 8.2.3 – *Care Facilities.*** The City shall encourage the development of senior daycare facilities, assisted living facilities, and other care facilities in appropriate areas throughout the city.

**Goal H-3.2 – *Special Needs.*** Provide housing choices appropriate for “special needs” populations, including homeless, youth, female-headed households, persons with disabilities, and seniors.

**Policy H-3.2.1 – *Encourage Senior Housing.*** The City shall encourage the development, rehabilitation, and preservation of senior housing, particularly in neighborhoods that are accessible to public transit, commercial services, and health and community facilities.

**North Natomas Community Plan:** The site is in the NNCP area, which provides a planning framework at the neighborhood level. The Revised Project is consistent with the NNCP goals and policies because it is infill development, utilizes existing infrastructure and resources, and provides services to residents.

**Planned Unit Development:** The Revised Project site is in Natomas Crossing-Alleghany #2 Planned Unit Development which encompasses a 210-acre portion of the NNCP, including the Revised Project site.

In 2006, the City Council approved The Plaza Project (P06-070) with a PUD Schematic Amendment that allows 51,000-square feet of retail and restaurant pads on the site. None of the uses on the existing PUD Schematic Plan has been developed or constructed. The Revised Project includes a proposed PUD Schematic Plan Amendment to replace the 51,000-square feet of retail and restaurant pads with a 157,500 square foot residential care facility.

**Zoning:** The site is zoned Limited Commercial Planned Unit Development (C-1 PUD). The PUD suffix identifies the site in the Natomas Crossing-Alleghany #2 PUD with a Schematic Plan that identifies uses and guidelines for design and implementation.

A residential care facility is a permitted use in the C-1 zoning district. The Revised Project is consistent with the Planning and Design Code's Residential Care Facility definition: "a facility that provides nonmedical resident services to seven or more individuals in need of personal assistance essential for sustaining the activities of daily living, or for the protection of the individual, excluding members of the resident family or persons employed as facility staff, on a 24-hour-a-day basis" (PDC Section 17.108.190).

## 2.5 PREVIOUSLY DISCLOSED IMPACTS

The 1997 MND disclosed impacts of the Natomas Crossing-Alleghany Area #2 PUD. The 1997 MND identified significant impacts to air quality, hydrology/water quality (flood protection/drainage), biological resources, traffic/transportation, and cultural resources and provided mitigation measures to reduce impacts to a less than significant level. The 1997 MND concluded that impacts were less than significant, and no mitigation was required for aesthetics (light and glare), geology and soils, hazards and hazardous materials, land use/planning, noise, population and housing, public services, recreation, and utilities and service systems. In the initial environmental review before the 1997 MND, agricultural resources and mineral resources were identified as having no potential for impacts and, thus, were not examined in detail in the 1997 MND. Energy and wildfire were added to the CEQA Checklist as environmental issue areas after the release of the 1997 MND, and therefore were not discussed in the 1997 MND. The Revised Project would not result in changes to any of the conclusions of the 1997 MND, as described below under *Environmental Analysis*.

## 3.0 ENVIRONMENTAL ANALYSIS

This Addendum to the Natomas Crossing- Alleghany Area #2 PUD MND (1997 MND) includes the following analysis to demonstrate that environmental impacts associated with the Revised Project are consistent with those disclosed in the 1997 MND.

### 3.1 AESTHETICS

#### 3.1.1 Summary of Aesthetics Impacts from 1997 MND

The Natomas Crossing-Alleghany #2 PUD included PUD Guidelines consisting of development standards and design guidelines and a Schematic Plan with a land use concept plan. The PUD Guidelines address each of the land uses in the 210.8-acre PUD including mixed-use development, commercial,

employment center. All uses in the PUD are required to comply with the development standards (height, area, coverage, and setbacks, etc.) and design guidelines contained in the PUD Guidelines. Projects within the PUD are also required to designed consistent with the development standards and regulations in the City Planning and Development Code. No state designated scenic routes or scenic vistas are in the vicinity of the Natomas Alleghany #2 PUD Project site. Projects within the Natomas Crossing Alleghany #2 PUD Project consistent with the PUD Guidelines and the Planning and Development Code would have a less than significant impact to aesthetics.

### **3.1.2 Aesthetics Impacts Associated with Revised Project**

The 4.58-acre Revised Project is a portion the 210.8-acre Natomas Crossing Alleghany #2 PUD Project evaluated in the 1997 MND. The Revised Project would not be in proximity to any state designated scenic routes or scenic vistas. The Revised Project site is vacant, undeveloped and in an urbanized area.

The Revised Project includes development of a three story, 157,500-square feet RCFE building, parking, landscape areas, and amenities such as bike and vehicle parking, landscaped patios/courtyards, walking and biking paths, community gardens, and designated outdoor sports areas. The proposed building height, 34-feet to 39-feet, is consistent with the scale and intensity of surrounding uses, including the two-story condominiums to the south, four-story Alira Apartments on the west, and the proposed hospital north of the site. The Natomas Crossing-Alleghany #2 PUD Section C.1.a(3) allows buildings within 1,000-feet of a transit station (light rail) a two-story height bonus. The Revised Project is adjacent to and within 1,000-feet of the future Arena Boulevard light rail station and would, therefore, be consistent with height limitations. A seven-foot masonry wall would be located on the north side of the main courtyard for privacy and attenuation of traffic noise. The remaining fencing within the Revised Project site would be made of tubular steel. The site would be landscaped with a variety of trees and shrubs on the perimeter of the site, at the building entry, and throughout the parking lot to provide shade. The Revised Project is designed consistent with the Natomas Crossing Alleghany #2 PUD Guidelines and the Planned and Development Code.

Construction of the Revised Project would cause short term light and glare, but all lighting would be directed downward to minimize spill over and reduce glare, as required by the 2035 General Plan Master EIR. Operations of the Revised Project would add light and glare to the site, but this would be consistent with the character of the surrounding urban area including townhomes south of the site, office and retail north of Arena Boulevard, and offices east of Truxel Road, and the 293-unit four-story Alira Apartment community west of Thrive Drive. The impact of the Revised Project on the visual character of the site and its surroundings would be less than significant.

The Revised Project would not result in new significant aesthetic impacts. Therefore, aesthetics impacts would be less than significant, and the Revised Project would not result in significant aesthetics impacts greater than those evaluated in the 1997 MND.

### **3.1.3 Aesthetics Mitigation Measures**

Because impacts to aesthetics would be less than significant, no mitigation is required.

## **3.2 AGRICULTURE AND FORESTRY RESOURCES**

### **3.2.1 Summary of Agriculture and Forestry Resources Impacts from 1997 MND**

Potential impacts to agricultural resources resulting from implementation of the Natomas Crossing-Alleghany Area #2 PUD were not analyzed in the 1997 MND because the impacts of converting agricultural land to urban uses was evaluated in the North Natomas Community Plan Environmental Impact Report. The 210.8-acre Natomas Crossing Alleghany Area #2 PUD Project area was designated and zoned for urban uses, there were no forestry resources on the site and development of the PUD would not result in impacts to agriculture and forestry resources. Consequently, no mitigation was required.

### **3.2.2 Agriculture and Forestry Resources Impacts Associated with Revised Project**

Implementation of the Revised Project would occur within the boundaries of the Natomas Crossing-Alleghany Area #2 PUD Project area, which is designated in the 2035 General Plan with the Suburban Center designation and zoned Limited Commercial Planned Unit Development (C-1 PUD). The Revised Project site has been rough graded and is not vegetated. The site is not under a Williamson Act contract. Implementation of the Revised Project would not result in impacts to agriculture and forestry resources.

### **3.2.3 Agriculture and Forestry Resources Mitigation Measures**

Because impacts to agriculture and forestry resources would be less than significant, no mitigation is required.

## **3.3 AIR QUALITY AND GREENHOUSE GASES**

### **3.3.1 Summary of Air Quality Impacts from 1997 MND**

A Transportation System Management (TSM) Plan and an Air Quality Mitigation Strategy were required for the adoption of the 1997 MND. The required TSM Plan resulted in a 35 percent decrease in peak hour vehicle trips compared to the single occupant vehicle baseline. The required Air Quality Mitigation Strategy resulted in a 35 percent community wide (20 percent for residential and 50 percent for non-residential) decrease in Reactive Organic Gas (ROG) emissions when measured against the baseline conditions. Additionally, the Air Quality Mitigation Strategy promoted electric, other zero-emission, and low-emission vehicle use. Construction management practices associated with the PUD Project relating to reducing PM-10, reduced the impacts of PM-10 to a less than significant level. These decreases in trips and emissions reduced the PUD Project's contribution to the project specific and cumulative air quality impacts to a level below significance.

The 1997 MND included mitigation measures addressing Air Quality and concluded impacts relating to air quality were less than significant. These mitigation measures have been implemented since the adoption of the 1997 MND.

### 3.3.2 Air Quality Impacts Associated with Revised Project

The following analysis reviews the discussions of potential impacts and irreversible significant effects analyzed in the 2035 General Plan Master Environmental Impact Report (2035 General Plan Master EIR) to determine their adequacy for the Revised Project (see CEQA Guidelines Section 15178(b),(c)) and identifies any potential new or additional project-specific significant environmental effects that were not analyzed in the General Plan Master EIR and any mitigation measures or alternatives that may avoid or mitigate any potential identified effects to a less than significant level (City 2014; City 2015a). Refer to Appendix B for the air quality modeling and analysis.

### 3.3.3 Air Quality Setting

The City of Sacramento lies near the southeastern edge of the Sacramento Valley Air Basin (SVAB). The SVAB consists of all or parts of eleven counties spanning from Solano and Sacramento counties in the south, to Shasta County in the north. The Sacramento Metropolitan Air Quality Management District (SMAQMD) is responsible for implementing emissions standards and other requirements of federal and state laws for Sacramento County, including the Revised Project area.

The climate of the SVAB is characterized by hot dry summers and mild rainy winters. During the year the temperature may range from 20 to 115 degrees Fahrenheit with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches with snowfall being very rare. The prevailing winds are moderate in strength and vary from moist breezes from the south to dry land flows from the north. The mountains surrounding the Sacramento Valley create a barrier to airflow, which can trap air pollutants in the valley when certain meteorological conditions are right, and a temperature inversion (areas of warm air overlying areas of cooler air) exists. Air stagnation in the autumn and early winter occurs 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 pollutants to become concentrated in the air. The surface concentrations of pollutants are highest when these conditions are combined with increased levels of smoke or when temperature inversions trap cool air, fog, and pollutants near the ground. The ozone season (May through October) in the SVAB is characterized by stagnant morning air or light winds with the breeze arriving in the afternoon out of the southwest from the San Francisco Bay. Usually, the evening breeze transports the airborne pollutants to the north out of the SVAB. During about half of the days from July to September; however, a phenomenon called the “Schultz Eddy” prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern and pollutants to circle back southward. This phenomenon’s effect exacerbates the pollution levels in the area and increases the likelihood of violating the federal and state air quality standards (SMAQMD 2020).

#### 3.3.3.1 Air Quality Regulatory Framework

##### *Criteria Pollutants*

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged

in strenuous work or exercise. The U.S. Environmental Protection Agency (USEPA), the federal agency that administrates the Federal Clean Air Act of 1970, as amended in 1990, has established national ambient air quality standards (NAAQS) for several air pollution constituents known as criteria pollutants, including: ozone (O<sub>3</sub>); carbon monoxide (CO); coarse particulate matter (PM<sub>10</sub>; particles 10 microns or less) and fine particulate matter (PM<sub>2.5</sub>; particles 2.5 microns or less); sulfur dioxide (SO<sub>2</sub>); and lead (Pb). As permitted by the Clean Air Act, California has adopted the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air constituents. Ground-level ozone is not emitted directly into the environment but is generated from complex chemical and photochemical reactions between precursor pollutants, primarily reactive organic gases (ROGs; also known as volatile organic compounds [VOCs]),<sup>1</sup> and oxides of nitrogen (NO<sub>x</sub>). PM<sub>10</sub> and PM<sub>2.5</sub> are generated from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. In addition, PM<sub>10</sub> and PM<sub>2.5</sub> can also be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere.

The California Air Resources Board (CARB) is required to designate areas of the state as attainment, nonattainment, or unclassified for the ambient air quality standards. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once. An “unclassified” designation indicates that insufficient data was available to determine the status. The air quality attainment status of Sacramento County is shown in Table 5.

**Table 5**  
**SACRAMENTO COUNTY AIR QUALITY ATTAINMENT STATUS**

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone (1-hour)	Nonattainment	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment
Coarse Particulate Matter (PM <sub>10</sub> )	Nonattainment	Attainment
Fine Particulate Matter (PM <sub>2.5</sub> )	Attainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment	Attainment
Lead	Attainment	Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	Attainment
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Source: SMAQMD 2020.

Sacramento County is designated as nonattainment for the state and federal ozone standards, the state PM<sub>10</sub> standards, and the federal PM<sub>2.5</sub> standards. The SMAQMD is responsible for implementing emissions standards and other requirements of federal and state laws in Sacramento County. Attainment plans for meeting the federal air quality standards are incorporated into the State Implementation Plan (SIP), which is subsequently submitted to the USEPA, the federal agency that

<sup>1</sup> CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.



administers the Federal CAA of 1970, as amended in 1990. The current air quality plan applicable to the Revised Project, the *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (Regional Ozone Plan), was developed by the SMAQMD and adjacent air district to describe how the air districts in and near the Sacramento metropolitan area will continue the progress toward attaining state and national ozone air quality standards (SMAQMD 2017).

### *Toxic Air Contaminants*

Toxic air contaminants (TAC) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term chronic health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

The Health and Safety Code (§39655[a]) defines TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” All substances that are listed as hazardous air pollutants pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Sec. 7412[b]) are designated as TACs. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (CARB 2021). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California’s population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2021).

### **3.3.3.2 Greenhouse Gas Setting**

Global climate change refers to changes in average climatic conditions on Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth’s atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with the burning of fossil fuels during motorized transport, electricity

generation, natural gas consumption, industrial activity, manufacturing, and other activities; deforestation; agricultural activity; and solid waste decomposition.

The GHGs defined under California’s Assembly Bill (AB) 32 include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF<sub>6</sub>). Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Estimates of GHG emissions are commonly presented in carbon dioxide equivalents (CO<sub>2</sub>e), which weigh each gas by its global warming potential (GWP). Expressing GHG emissions in CO<sub>2</sub>e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO<sub>2</sub> were being emitted. GHG emissions quantities in this analysis are presented in metric tons (MT) of CO<sub>2</sub>e. For consistency with United Nations Standards, modeling and reporting of GHGs in California and the U.S. use the GWPs defined in the Intergovernmental Panel on Climate Change’s (IPCC) Fourth Assessment Report (IPCC 2007): CO<sub>2</sub> = 1; CH<sub>4</sub> = 25; N<sub>2</sub>O = 298.

### 3.3.3.3 Greenhouse Gas Regulatory Framework

#### *Executive Order S-3-05*

On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California’s air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Executive Orders are not laws and can only provide the governor’s direction to state agencies to act within their authority to reinforce existing laws.

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

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that the California Air Resources Board (CARB) develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed by AB 32 to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

#### *Executive Order B-30-15*

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California’s GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California is on track to meet or exceed the target of reducing GHGs emissions to 1990 levels by 2020, as established in AB 32. California’s new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

#### *Senate Bill 32*

Signed into law by Governor Brown on September 8, 2016, Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California’s GHG emission reduction

programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State’s continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

#### *California Air Resources Board*

In December 2008, CARB adopted its first version of its Climate Change Scoping Plan (Scoping Plan), which contained the main strategies California will implement to achieve the mandate of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California’s GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program (CARB 2008).

On December 14, 2017, CARB adopted the 2017 Climate Change Scoping Plan (2017 Scoping Plan), which lays out the framework for achieving the mandate of SB 32 (2016) to reduce statewide GHG emissions to at least 40 percent below 1990 levels by the end of 2030 (CARB 2017).

The 2017 Scoping Plan includes guidance to local governments in Chapter 5, including plan-level GHG emissions reduction goals and methods to reduce communitywide GHG emissions. In its guidance, CARB recommends that “local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State’s sustainable development objectives and develop plans to achieve the local goals.” CARB further states that “it is appropriate for local jurisdictions to derive evidence-based local per capita goals [or some other metric] that the local jurisdiction deems appropriate, such as mass emissions or per service population, based on local emissions sectors and population projections that are consistent with the framework used to develop the statewide per capita targets” (CARB 2017).

#### *Sacramento Area Council of Governments*

As required by the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the Sacramento Area Council of Governments (SACOG) has developed the 2020 Metropolitan Transportation Plan and Sustainable Communities Strategy. This plan seeks to reduce GHG and other mobile source emissions through coordinated transportation and land use planning to reduce vehicle miles traveled (VMT).

#### *City of Sacramento*

To meet the statewide GHG emission targets, 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, which includes citywide policies and programs that are supportive of reducing GHG emissions.

### 3.3.3.4 Methodology

Emission of criteria pollutants for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip generation, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2021). The input data and subsequent construction and operation emission estimates for the Revised Project are discussed below. The CalEEMod output files for the Revised Project are in Appendix B.

Construction input data for CalEEMod included the anticipated start and finish dates of construction activity, with overall construction beginning in November 2022 and ending June 2024. Construction activities for the Revised Project include site preparation, grading, building construction, paving, and architectural coating. The modeling also incorporated best management practices (BMPs) to comply with applicable emission regulations. Such BMPs include watering for dust, setting a speed limit of 15 miles per hour (mph) on unpaved surfaces, and utilizing low VOC coatings.

The modeling utilized the CalEEMod default operational vehicle trip rates for assisted living land uses, which are trip generation rates from the Institute Transportation Engineers (ITE). Operational input data for CalEEMod assumed compliance with the water conservation strategy and recycling program requirements for solid waste set by the California Green (CALGreen) Building Standards Code. The modeling also included the proposed diesel emergency generator that would run once monthly for 30 minutes and once yearly for 90 minutes.

### 3.3.3.5 Significance Criteria

To be consistent with the analysis in the 2035 General Plan Master EIR, air quality impacts may be considered significant if construction and/or implementation of the Revised Project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- Construction emissions of NO<sub>x</sub> above 85 pounds per day;
- Operational emissions of NO<sub>x</sub> 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<sub>10</sub> concentrations, unless all feasible BACT and BMPs have been applied, then increases above 80 pounds per day or 14.6 tons per year;
- Any increase in PM<sub>2.5</sub> concentrations, unless all feasible BACT and BMPs have been applied, then increases above 82 pounds per day or 15 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.

Exposure of sensitive receptors to TACs is deemed to be significant if:

- TAC exposure results in health risks to sensitive receptors greater than an increased incremental cancer risk of 10 in 1 million or an acute or chronic health index of 1.

A project is considered to have a significant effect relating to greenhouse gas emissions if it conflicts with or obstructs implementation of the City's CAP.

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

The General Plan 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 General Plan Master EIR, Chapter 4.2.

Policies in the 2035 General Plan Environmental Resources section identified potential mitigating effects of development that could occur under the 2035 General Plan. For example, Policy ER 6.1.1 calls for the City to work with 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 and 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 General Plan Master EIR identified exposure to sources of TACs as a potential effect. 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 fronting elevation and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

The General Plan Master EIR found that greenhouse gas 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 2035 General Plan identified in the General Plan Master EIR that would reduce construction related GHG emissions include ER 6.1.11 requiring coordination with SMAQMD to ensure feasible mitigation measures are incorporated to reduce GHG emissions, and ER 6.1.15 requires public education about air quality standards and health effects. The 2035 General Plan incorporates the GHG reduction strategy of the 2012 CAP, which demonstrates compliance mechanism for achieving the City's adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.8 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emission reduction goals, ER 6.1.9 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 emission reduction goal. The discussion of greenhouse gas emissions and climate change in the 2035 General Plan Master EIR are incorporated by reference. (CEQA Guidelines Section 15150; City 2014; City 2015a).

### 3.3.3.7 Air Quality and Greenhouse Gas Impact Analysis

#### *Construction Emissions of NO<sub>x</sub>*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

Construction emissions of NO<sub>x</sub> during project construction would primarily result from the use of heavy diesel-powered off-road equipment and from vehicles (primarily diesel-powered trucks) traveling to and from the Revised Project site. Construction emissions were modeled using CalEEMod, as described above. Maximum daily emissions of NO<sub>x</sub> are predicted to occur during site preparations and would be 34.1 pounds per day. Therefore, construction of the Revised Project would not result in emissions of NO<sub>x</sub> in excess of 85 pounds per day and would have no additional significant environmental effects beyond what has been previously identified in the General Plan Master EIR.

#### *Operational Conditions of NO<sub>x</sub>*

The General Plan Master EIR found this impact to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact (City 2014; City 2015a).

Sources of emissions of NO<sub>x</sub> and ROG from long-term operation of the Revised Project would be exhaust from vehicles occasional use of landscape maintenance equipment, occasional use of solvents and degreasers, and reapplication of paint for building and parking lot maintenance.

Project operational emissions were modeled using CalEEMod, as described above. The results of the modeling show that operation of the Revised Project would produce a maximum of 2.1 pounds per day of NO<sub>x</sub> and 6.5 pounds per day of ROG. Therefore, operations would not result in emissions of NO<sub>x</sub> or ROG in excess of 65 pounds per day and would have no additional significant environmental effects beyond what has been previously identified in the General Plan Master EIR.

#### *Air Quality Standards*

The General Plan Master EIR evaluated impacts related to emissions of ozone precursors (ROG and NO<sub>x</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and found impacts to be to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact. The General Plan Master EIR did not evaluate impacts related to the cumulative contribution of emissions (City 2014; City 2015a).

The pollutants of primary concern in Sacramento County are those related to the NAAQS and CAAQS nonattainment designations discussed above: NO<sub>x</sub> and ROG (because they are ozone precursors), PM<sub>10</sub> and PM<sub>2.5</sub>. Construction and operation of the Revised Project would not result in emissions in excess of the SMAQMD thresholds which were developed to ensure that a development Revised Project's contribution to regional air quality would not result in a new air quality standard violation or result in a cumulatively considerable contribution to an existing air quality violation. Therefore, the Revised Project would have no additional significant environmental effects beyond what has been previously identified in the General Plan Master EIR.

*PM<sub>10</sub> and PM<sub>2.5</sub> Concentrations*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

The Revised Project would result in PM<sub>10</sub> and PM<sub>2.5</sub> emissions during construction in the form of fugitive dust from earth moving and disturbing activities and in the form of exhaust emissions, primarily from diesel powered off-road equipment and on-road trucks. According to the SMAQMD's CEQA Guide to Air Quality Assessment in Sacramento County Thresholds, projects that result in less than 80 pounds per day of PM<sub>10</sub> and less than 82 pounds per day of PM<sub>2.5</sub> during construction would have less than significant impacts. However, all construction projects, regardless of the emission levels, are required to implement the SMAQMD's Basic Construction Emission Control Practices (also known as BMPs; SMAQMD 2019). The BMPs satisfy the requirements of SMAQMD's Rule 403, Fugitive Dust, which requires every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates (SMAQMD 1977). The results of the modeling show that construction of the Revised Project would produce a maximum of 10.6 pounds per day of PM<sub>10</sub> and 6.1 pounds per day of PM<sub>2.5</sub>.

The Revised Project would result in PM<sub>10</sub> and PM<sub>2.5</sub> emissions during operation in the form of fugitive dust, brake dust, and vehicle exhaust from vehicles traveling to and from the site. The results of the modeling show that operation of the Revised Project would produce 2.5 pounds per day of PM<sub>10</sub> and 0.8 pounds per day of PM<sub>2.5</sub>.

Therefore, construction or operation of the Revised Project would not result in emissions of PM<sub>10</sub> or PM<sub>2.5</sub> in excess of the SMAQMD thresholds and would have no additional significant environmental effects beyond what has been previously identified in the General Plan Master EIR.

*CO Concentrations*

The General Plan Master EIR did not evaluate impacts from CO concentrations (City 2014; City 2015a).

As described in the existing air quality discussion, above, Sacramento County is an attainment for the CO NAAQS and CAAQS. According to the SMAQMD's CEQA Guide (SMAQMD 2020): "Other pollutants such as CO, sulfur dioxide and lead are of less concern because operational activities are not likely to generate substantial quantities of these criteria air pollutants and the Sacramento Valley Air Basin has been in attainment for these criteria air pollutants for multiple years." Localized concentrations of CO, or "hot spots," are primarily of concern for heavily congested roadways with stop- and-go traffic, particularly in areas with limited vertical mixing such as tunnels, long underpasses, or below-grade roadways. The Revised Project site is zoned Limited Commercial Planned Unit Development (C-1 PUD) which allows a broad range of commercial uses. In 2006, The Plaza Project (P06-070) was approved for the site and included up to 51,000 square feet of commercial uses. As a residential care facility, the Revised Project will generate fewer vehicle trips than projected under the C-1 PUD zoning and The Plaza Project. Therefore, the Revised Project would not increase traffic on area roadways or result in CO localized concentrations that exceed the CAAQS beyond those previously evaluated in the General Plan Master EIR.

### *Sensitive Receptors*

Development of the site with a residential care facility for the elderly would introduce a residential population that would be considered sensitive receptors. The sensitive receptors that were modeled and evaluated include the residents of the multi-family project approximately 150 feet west of the Revised Project and the residents of the Revised Project itself. The General Plan Master EIR evaluated impacts to sensitive receptors resulting from exposure to substantial concentrations of TACs and found the impacts to be less than significant, and no mitigation was required. The General Plan Master EIR evaluated impacts related to emissions of ozone precursors (ROG and NO<sub>x</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and found impacts to be significant and unavoidable; no mitigation was identified to reduce the significance of the impact. The General Plan Master EIR did not evaluate impacts from exposure of sensitive receptors to substantial concentrations of other criteria pollutants (City 2014; City 2015a).

Sensitive receptors would not be exposed to significant pollutant concentrations and the Revised Project would have no additional significant environmental effects beyond was previously identified in the General Plan Master EIR.

### *Toxic Air Contaminants*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

Revised Project construction would generate DPM emissions from the use of off-road diesel equipment required for site preparation, grading, and other construction activities. Health-related risks associated with diesel exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The quantity to which the receptors could be exposed, which is a function of concentration and duration of exposure, is the primary factor used to determine health risk. The generation of TAC emissions during construction would be variable and sporadic due to the nature of construction activity. The most intense use of construction equipment would be during the site preparation/grading phase which is anticipated to last three months and the overall construction period is anticipated to take approximately 20 months. The sensitive receptors located near the Revised Project site are the residents of the multi-family project approximately 150-feet west of the Revised Project and the residents of the Revised Project itself. Due to the short duration of construction activities, and the highly dispersive properties of DPM, project-related TAC emission impacts during construction would not expose sensitive receptors to substantial pollutant concentrations.

Operation of the Revised Project would include an emergency diesel-powered generator, which would be a source of DPM emissions. The sensitive receptors located near the Revised Project site are the residents of the multi-family project approximately 150-feet west of the Revised Project and the residents of the Revised Project itself. However, the emergency generator would not be used for continuous periods of time, but rather run once monthly for 30 minutes and once yearly for 90 minutes at 80 percent capacity. In addition, the generator would be required to be fitted with DPM reduction technology in compliance with applicable state Airborne Toxic Control Measures (ATCMs), and/or federal New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAP), and applicable SMAQMD regulations. Operation of the Revised Project would not require the use of other diesel-powered stationary equipment and would not increase the number of diesel-powered trucks on the road. Therefore, due to the limited use of the standby generator and the



implementation of DPM reduction technology, the proposed standby generator would not expose sensitive receptors to substantial pollutant concentrations. Operation of the Revised Project would not result in TAC exposures creating an increased cancer risk of 10 in 1 million for stationary sources, or substantially increase health risks from exposure to TACs from mobile sources, and the Revised Project would have no additional significant environmental effects beyond what was previously identified in the General Plan Master EIR.

*Applicable Plans, Policies, or Regulations*

The City has a CAP Consistency Review Checklist for use in determining the consistency of proposed projects with the CAP. The Checklist includes six criteria for evaluating projects. The Checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emission targets identified in the CAP are achieved. Projects that are consistent with each of the six criteria are considered consistent with Sacramento's CAP and would not have a significant GHG impact. The following discussion evaluates the Revised Project for each of these six criteria (City 2015b).

1. Is the proposed project substantially consistent with the City's over-all goals for land use and urban form, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan?

**Yes.** The Revised Project site is designated as Suburban Center in the 2035 General Plan. The Revised Project would be consistent with the Suburban Center General Plan land use designation and land use goals and urban form.

2. Would the proposed project include traffic-calming measures?

**Not Applicable.** The Revised Project does not include any roadway or facility improvements, traffic calming measures do not apply.

3. Would the proposed project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan?

**Yes.** The Revised Project site plan incorporates existing sidewalks along the Arena Boulevard and Thrive Drive frontages. The Revised Project is consistent with the City's development standards for driveways and sidewalks. The site is within a short walk (approximately 800 feet) of transit stops for SacRT bus lines (Routes 11, 13, 113) and the North Natomas Jibe shuttle service. The 40-foot corridor immediately east of the site and west of Truxel Road is reserved for the future extension of the Green Line light rail line and the Arena Boulevard light rail transit station. A 14-foot-wide pedestrian path is planned on the east side of the site, west of the light rail corridor.

4. Would the proposed project incorporate bicycle facilities consistent with the City's Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen?

**Yes.** The Revised Project would comply with the City development standards and regulations for pedestrian or bicycle access and minimum bicycle parking requirements. The Revised Project would include eight short-term bicycle spaces and two long-term bicycle lockers, which exceeds the minimum requirement of two short-term bicycle parking spaces for the Nursing Home category in the Suburban parking district. Nursing Homes in the Suburban parking district do not have long-term bicycle space

requirements. A 14-foot-wide pedestrian path is planned on the east side of the site, west of the light rail corridor, consistent with the City's Bikeway Master Plan.

5. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., photovoltaic systems) that would generate at least a minimum of 15 percent of the project's total energy demand on-site?

**Yes.** The Revised Project involves the construction of an assisted living facility/memory care facility with 142 units consisting of 118 independent/assisted living units and 24 memory care units. The Revised Project would incorporate rooftop solar panels. While the solar panels would reduce energy demand, the solar panels are not anticipated to generate a minimum of 15 percent of the Revised Project's total energy demand. However, as stated in the City's CAP, "[p]rojects may substitute a quantity of energy efficiency for renewable energy, as long as the substituted GHG reduction does not 'double count' GHG reductions already taken by the CAP." In addition to the proposed rooftop solar panels, the Revised Project would incorporate cool pavement treatments and a cool roof. Additionally, the Revised Project would be fully electric with the exception of the commercial kitchen, central boiler, and emergency generator. The emergency generator would only be run once monthly for 30 minutes and once a year for 90 minutes at 80 percent capacity; therefore, the generator would not be a significant source of emissions. Therefore, through the incorporation of sustainability features, in addition to the proposed solar panels, the Revised Project's energy demand would be reduced, consistent with the City's CAP.

6. Would the project (if constructed on or after January 1, 2014) comply with minimum CALGreen Tier I water efficiency standards?

**Yes.** The Revised Project landscaping would comply with City and current CALGreen building water efficiency and water efficient landscaping and irrigation requirements.

As shown in the above discussion of the City's CAP checklist criteria, the Revised Project would be consistent the City's CAP, which was developed to enable the City to meet statewide GHG reduction mandates. Therefore, the Revised Project would not conflict with an applicable GHG reduction plan, policy, or regulation and the Revised Project would have no additional significant environmental effects beyond what has been previously identified in the Master EIR.

### 3.3.4 Air Quality Mitigation Measures

Because impacts to air quality/greenhouse gases would be less than significant, no mitigation is required.

## 3.4 BIOLOGICAL RESOURCES

### 3.4.1 Summary of Biological Resources Impacts from 1997 MND

Biological Resources in the Natomas Crossing- Alleghany Area #2 PUD was based upon a review of the California Natural Diversity Database (CNDDDB), figures in the draft Natomas Basin Habitat Conservation Plan (revised draft October 1995), and the Delineation of Waters of the United States report, prepared by Gibson and Skordal, dated March 1997.

**Special Status Plants:** The 1997 MND found that nine special status wildlife species are known to occur in the PUD Project site. The MND concluded that the PUD Project would comply with the mitigation measures from the NNCP Supplemental EIR (1994) related to provision of garter snake habitat, burrowing owl conservation, and protection of other special-status species. The 1997 MND concluded that a less than significant impact would occur to special status species and required the PUD Project to comply with Mitigation Measure #8 to reduce impacts to burrowing owls. The 1997 MND found that the Natomas Crossing-Alleghany #2 PUD Project would result in a less than significant impact to special-status plants.

**Wetlands:** A wetlands delineation conducted by Gibson and Skordal for the PUD Project in March 1997 indicated that there were three seasonal wetlands in the PUD Project area totaling approximately 2.06 acres. Mitigation Measure #7 in the 1997 MND required the applicant to obtain an Army Corps of Engineers 404 permit prior to recordation of the Final Master Parcel Map for the PUD Project. The 1997 MND concluded that, with implementation of Mitigation Measure #7, a less than significant impact on wetlands would occur.

**Special Status Wildlife Species and Habitat Conservation Plan:** The 1997 MND required implementation of Mitigation Measure #6 which requires participation in the Natomas Basin Habitat Conservation Plan (NBHCP) or otherwise fulfilling obligation of the California Department of Fish and Wildlife (CDFW) and/or United States Fish and Wildlife Service (USFWS) for habitat loss from urban development. With implementation of Mitigation Measure 6, the 1997 MND concluded that the PUD Project would result in a less than significant impact.

### 3.4.2 Biological Resources Impacts Associated with Revised Project

The Revised Project site was previously rough-graded and is vacant and undeveloped. There are no trees on the Revised Project site. The Revised Project involves adding a 157,500 RCFE on a 4.58-acre site within the original 210.8-acre Natomas Crossing Alleghany #2 PUD Project site evaluated in the 1997 MND. Such changes would not result in increased impacts to biological resources. The Revised Project would remain within the boundaries of the area evaluated in the 1997 MND and would not result in construction or operation in new areas that may result in disturbance of any sensitive species, sensitive natural community, riparian habitat, wetlands, or migratory species that would not have already been impacted by implementation of the Natomas Crossing- Alleghany Area #2 PUD Project.

In May 2003, a revised Natomas Basin Habitat Conservation Plan was approved by the City, USFWS, and CDFW. The NBHCP is a conservation plan supporting application for incidental take permits under Section 10(a)(1)(B) of the Endangered Species Act and under Section 2081 of the California Fish and Game Code. The purpose of the NBHCP is to promote biological preservation while allowing urban development and continuation of agricultural operations within the Natomas Basin. The Revised Project is required to comply with the NBHCP, consistent with Mitigation Measure #6.

1997 MND Mitigation Measure #7 required a jurisdictional delineation and 404 Permit to reduced impacts to wetland resources. In Addendum No. 1 to the 1997 MND, wetland indicators were considered isolated and non-jurisdictional, and in Addendum No. 2 to the 1997 MND, no wetland indicators were noted. Based on the conclusions in Addenda No. 1 and No. 2, Mitigation Measure #7 is no longer applicable for the Revised Project.

The Revised Project would be required to implement Mitigation Measure #8, as introduced in Addendum No.1 The Plaza Project, to reduce impacts to burrowing owls to less than significant.

Therefore, the Revised Project would not increase impacts beyond what was identified in the 1997 MND and impacts to biological resources would be less than significant.

### 3.4.3 Biological Resources Mitigation Measures

The Revised Project would implement mitigation measures from the 1997 MND, as revised with Addenda No. 1 and No. 2. With implementation of the mitigation measures, impacts to biological resources would be reduced to a less than significant level. Mitigation Measure #7, in the 1997 MND, would not be required as jurisdictional wetlands were not observed and noted in Addendum No. 1 and Addendum No.2. Therefore, Mitigation Measure #7 is not listed below.

Mitigation Measure #6: The applicant shall participate in the Natomas Basin Habitat Conservation Plan (HCP), once adopted. At the time of grading permit, the applicant shall pay the interim HCP fee, based on Ordinance No. 95-060 and Resolution No. 95-622 adopted by the City Council on October 31, 1995. If the HCP program is never implemented, or if the interim fee exceeds the actual fee, then the applicant shall be refunded the difference, with interest. If the interim fee is less than the actual fee, the applicant shall pay the difference.

Prior to recordation of the Final Master Parcel Map, the Tentative Master Parcel Map shall be revised to accommodate the Corps identified seasonal wetlands. Each contiguous seasonal wetland site shall be fully contained on a minimum of one master parcel. This configuration will allow the integrity of the resource to be maintained, and adequate mitigation to be implemented prior to development or conveyance of the newly created parcel.

Mitigation Measure #8: The applicant shall comply with the following mitigation measure related to reducing impacts to burrowing owls:

1. Immediately prior to grading permit, the applicant/ developer shall hire a qualified biologist to perform a pre-construction survey of the site to determine if any burrowing owls are using the site for foraging or nesting. If any nests are found, the Department of Fish and Game shall be contacted regarding possible suitable mitigation measures. These measures may include the provision of a buffer (typically 300 foot minimum) from the nest site during the breeding season (March 15- August 31) or a relocation effort for the burrowing owls. The survey shall be submitted to the City for review prior to the commencement of any grading or construction activities.
2. If future surveys reveal the presence of burrowing owls on the project site, the applicant/ developer shall prepare a plan for relocation of the burrowing owls to a suitable site. At a minimum, the plan must include the following:
  - a. the location of the birds (and nests) proposed to be relocated;
  - b. the location of the proposed relocation site;
  - c. the number of owls involved and the time of year when the relocation is proposed to take place;

- d. the name and credentials of the biologist who will be retained by the applicant to move the birds (and nests);
- e. the proposed method of capture and transport for the owls to the new site;
- f. a description of the site preparations at the relocation site (e.g., enhancement of existing burrows, creation of artificial burrows, one-time or long-term vegetation control, etc.); and,
- g. a description of efforts proposed to follow-up and/or monitor the relocation.

## 3.5 CULTURAL RESOURCES

### 3.5.1 Summary of Cultural Resources Impacts from 1997 MND

The 1997 MND identified the Natomas Crossing- Alleghany Area #2 PUD Project site as a Primary Impact Area in the Sacramento General Plan Update Draft Environmental Impact Report (SGPU DEIR, page V-5). Also, the project site was indicated to be within a medium and high sensitivity area on the Archaeological Sensitivity Map prepared by David Chavez and Associates. However, based on surveys no prehistoric archaeological sites or historic properties were found on the subject property. The study notes that cultural resources could be located below the surface and could be encountered during construction on the site. Mitigation Measure #12 would reduce the potential impact of the Revised Project on cultural resources if subsurface archaeological or historical remains are discovered during construction. Mitigation Measure #12 is described below.

### 3.5.2 Cultural Resources Impacts Associated with Revised Project

Senate Bill (SB) 18 was signed into law in September 2004 and became effective in March 2005. SB 18 (Burton, Chapter 905, Statutes of 2004) requires city and county governments to consult with California Native American tribes early in the planning process with the intent of protecting traditional tribal cultural places. The purpose of involving tribes at the early stage of planning efforts is to allow consideration of tribal cultural places in the context of broad local land use policy before project-level land use decisions are made by a local government. As such, SB 18 applies to the adoption or substantial amendment of general or specific plans. The process by which consultation must occur in these cases was published by the Governor's Office of Planning and Research through its Tribal Consultation Guidelines: Supplement to General Plan Guidelines (Governor's Office of Planning and Research 2005). The Revised Project does not include an amendment of the General or specific plans, and therefore, no tribal consultation under SB 18 is required.

Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014) established a formal consultation process for California Native American tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts (Public Resources Code Section 21084.2). AB 52 consultation requirements went into effect on July 1, 2015 for all projects that had not already published a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration or published a Notice of Preparation of an Environmental Impact Report prior to that date (Section 11 [c]). Specifically, AB 52 requires that "prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, the lead agency shall begin consultation" (21808.3.1 [a]), and that "the lead agency may certify an environmental impact report or adopt a mitigated negative declaration for a project with a significant impact on an identified tribal cultural resource only if" consultation is formally concluded (21082.3[d]). However, in the case of the Revised

Project, this Addendum is to a previously certified MND, in accordance with Section 15164 of the CEQA Guidelines. An Addendum was determined to be the most appropriate document because none of the conditions described in Section 15162, calling for preparation of a subsequent MND, have occurred. The Addendum addresses minor technical changes or additions and confirms that the Revised Project is consistent with what was previously analyzed under the 1997 MND. Therefore, the AB 52 procedures specified in PRC Sections 21080.3. 1(d) and 21080.3.2 do not apply and no tribal consultation under AB 52 is required.

The Revised Project involves construction of a RCFE, parking, and landscaping on a 4.58 acre site, within a portion of the original 210.8 gross acre Natomas Crossing-Alleghany #2 PUD Project site evaluated in the 1997 MND. Such changes would not result in increased impacts to historic resources, prehistoric resources, or human remains. The Revised Project would remain within the boundaries of the PUD and would not result in additional ground-disturbing activities that could disturb formerly identified or unidentified cultural resources. The Revised Project would implement Mitigation Measure #12 from the 1997 MND to reduce impacts to cultural resource impacts to a less-than-significant level. The Revised Project would be consistent with the findings in the 1997 MND.

### **3.5.3 Cultural Resources Mitigation Measures**

Mitigation Measure #12 from the 1997 MND remains applicable to the Revised Project and would reduce potential impacts to cultural resources to a less-than-significant level.

Mitigation Measure #12: If subsurface archaeological or historical remains (including unusual amounts of bones, stones, or shells) are discovered during excavation or construction of the site, work shall stop immediately and a qualified archaeologist and a representative of the Native American Heritage Commission shall be consulted to develop, if necessary, further mitigation measures to reduce any archaeological impact to a less-than-significant level before construction continues.

## **3.6 ENERGY**

### **3.6.1 Summary of Energy Impacts from 1997 MND**

Impacts of the Natomas Crossing Alleghany #2 PUD Project to energy resources were not evaluated in the 1997 MND because energy was not a topic area evaluated on the CEQA Checklist. Consequently, the 1997 MND did not identify impacts to energy resources. Impacts to electricity and natural gas were evaluated and found to be less than significant, and no mitigation was required.

### **3.6.2 Energy Impacts Associated with Revised Project**

Electric service to the Revised Project is provided by Sacramento Municipal Utilities District (SMUD) and gas service is provided by Pacific Gas and Electric (PG&E). Backbone electric service has been constructed in the Natomas Crossing Alleghany Area #2 PUD Project area and 12kv distribution lines are located underground throughout the PUD site. The Revised Project will connect to electric and natural gas service adjacent to the site.

The Revised Project would require connections to existing electric and natural gas services stubbed to the site. Fuel consumed by construction equipment would be the primary energy resource expended during construction of the Revised Project. Operation of the Revised Project would use natural gas and electricity. The Revised Project would not require new backbone infrastructure to provide electricity or natural gas. Impacts would be less than significant.

### **3.6.3 Energy Mitigation Measures**

Because impacts to energy would be less than significant, no mitigation is required.

## **3.7 GEOLOGY/SOILS**

### **3.7.1 Summary of Geology/Soils Impacts from 1997 MND**

The Natomas Crossing- Alleghany Area #2 PUD Project site is located within the Sacramento Valley which was a part of the larger Great Central Valley.

The 1997 MND concluded that prior to issuance of building permits, the City Planning and Development Department would require a site-specific soil investigation for individual structures proposed for development. The 1997 MND also found that if the potential for geologic, soils, or seismic hazards exists on the site, the Planning and Development Department would require that the UBC standards be met to mitigate potential impacts. Therefore, the 1997 MND concluded that the potential for significant geology, soils, and seismic impacts created by development of the Natomas Crossing Alleghany Area #2 PUD Project would be substantially lessened by implementation of regulatory requirements. Therefore, the City did not recognize a significant impact in the areas of geology, soils, and seismicity.

### **3.7.2 Geology/Soils Impacts Associated with Revised Project**

A Geotechnical Engineering Report was prepared for the Revised Project (Wallace Kuhl & Associates 2021a) that did not identify significant geologic or soil-related hazards at the site. The Geotechnical Engineering Report recommended the same preventative measures outlined in the 2006 Geotechnical Engineering Report conducted for The Plaza Project evaluated in Addendum No.1. The Revised Project would not increase geologic or soil-related impacts above those identified in the 1997 MND as the 4.58-acre Revised Project is within the 210.8-acre site evaluated in the 1997 MND. The Revised Project includes construction of a three story, 157,500 square feet RCFE which would not cause significant ground shaking, topographic alternation, soil disturbance, or seismic hazards. The Revised Project would be conditioned to implement the recommendations of the Geotechnical Engineering Report, in addition to the geological required measures in the 1997 MND requiring compliance with the California Building Code and Uniform Building Code. With these regulatory provisions, the Revised Project would reduce impacts to a less than significant level.

### **3.7.3 Geology/Soils Mitigation Measures**

Because impacts to geology/soils would be less than significant, no mitigation is required.

## 3.8 GREENHOUSE GAS EMISSIONS

### 3.8.1 Summary of Greenhouse Gas Emissions Impacts from 1997 MND

At the time the Natomas Crossing- Alleghany Area #2 PUD MND was adopted in 1997, GHG emissions were not analyzed in the CEQA Checklist. GHG emissions impacts are evaluated in the Air Quality analysis, described above.

## 3.9 HAZARDS AND HAZARDOUS MATERIALS

### 3.9.1 Summary of Hazards and Hazardous Materials Impacts from 1997 MND

The 1997 MND did not analyze impacts from hazards since no construction was proposed with the PUD Project. The 1997 MND concluded that a Phase I Preliminary Site Assessment (PSA) must be conducted for the site prior to approval of any development project, and recommendations from the PSA would likely be included as mitigation measures of conditions for future development. In the Natomas Crossing- Alleghany Area #2 PUD Project, no construction was proposed with this application, and therefore no assessment was conducted.

The 1997 MND found that although hazardous materials, including fuel, lubricants, and cleaning products would be used on-site during construction, compliance with local, state, and federal regulations, including NPDES regulations require that proper containment and control of hazardous materials used during construction as part of the project's stormwater pollution prevention plan, would minimize risk associated with the routine transport, use, or disposal of hazardous materials during construction.

One of the environmental impacts identified in the 1986 NNCP EIR was the impact of mosquitoes from adjacent agricultural operations to urban residents. Mitigation Measure #11 requires future projects to participate in mosquito abatement. With implementation of Mitigation Measure #11, the impacts from mosquitoes would be mitigated to a less than significant level.

The 1997 MND determined that impacts related to hazards and hazardous materials would be less than significant.

### 3.9.2 Hazards and Hazardous Materials Impacts Associated with Revised Project

The Revised Project is a 157,500 square foot RCFE on 4.58 acres of the 210.8- acre Natomas Crossing Alleghany #2 PUD Project site evaluated in the 1997 MND.

A Phase I Environmental Site Assessment (ESA) was prepared for the Revised Project (Wallace Kuhl & Associates 2021b) to assess the site for evidence of Recognized Environmental Conditions (RECs) resulting from currently and/or former activities. The historical land use research dating back to the late 1800s indicated that the site was vacant land since at least the early 2000s and graded in 2002. A soil stockpile was present on the southwestern portion of the site from at least 2006 to at least 2016. An approximate one-acre area on the western and northwestern portions of the site had a layer of gravel placed on it in 2019, which was used for materials storage during construction of the apartments west



of Thrive Drive in 2019. It was concluded that no environmental liens were associated with the site, no future facilities reviewed are likely to have a negative impact on the site, no evidence of RECs were in connection with the site, and a vapor encroachment condition (VEC) is not likely to exist based on the VEC screening matrix. Based on these conclusions presented in the Phase I ESA, no further assessment would be warranted. Therefore, impacts related to hazards and hazardous materials would be less than significant.

Additionally, the Revised Project would be required to comply with Mitigation Measure #11, from the 1997 MND regarding mosquito abatement. With this mitigation measure, impacts related to mosquitos would be less than significant.

With Mitigation Measure 11, Impacts related to hazards and hazardous materials resulting from the Revised Project could be mitigated to less than significant and would not result in new or more significant impacts related to hazards and hazardous materials.

### **3.9.3 Hazards and Hazardous Materials Mitigation Measures**

Mitigation Measure #11 was adopted in the 1997 MND and would be implemented in the Revised Project.

Mitigation Measure #11. The applicant shall participate in the Mosquito Abatement Control Program Assessment District to be established by the Sacramento Yolo Mosquito Abatement District in order to provide urban standards of mosquito control in the project area.

## **3.10 HYDROLOGY/WATER QUALITY**

### **3.10.1 Summary of Hydrology/Water Quality Impacts from 1997 MND**

In the 1997 MND, the Natomas Crossing- Alleghany Area #2 PUD Project described the location of the site in the A99 Flood Zone, an area of the City determined to have less than 100-year flood protection. This determination would cause the project to expose people and or the property to the risk of injury and damage in the event of a 100 year or lesser flood. These risks were considered significant adverse impacts under CEQA. The City Council evaluated these impacts in the Environmental Impact Report (EIR) prepared in connection with the Land Use Planning Policy Within the 100-Year Floodplain (the "Policy") (M89-054) adopted by the City Council on February 6, 1990. This document served as a Program EIR addressing the flood-related risks to people and property created by new development in the 100-year floodplain in the City. The Policy and the subsequently Revised Flood Policy required that non-residential development in the Natomas area meet the building restrictions for non-residential structures to reduce property damage. The 1997 MND stated that building permits could be issued in connection with the project if permitted new construction complied with specific flood-related design restrictions set forth in Article XXVII of Chapter 9, of the Sacramento City Code. Residential development was required to be built at an elevation of at least one foot above the base flood elevation or obtain a flood variance..

The 1997 MND included mitigation measures addressing hydrology and concluded that impacts to hydrology and water quality were less than significant. These mitigation measures have been implemented since the adoption of the 1997 MND.

### 3.10.2 Hydrology/Water Quality Impacts Associated with Revised Project

According to the Federal Emergency Management Agency (FEMA) Flood Map Service Center, the Revised Project is located within a Special Flood Hazard Area (SFHA). The SFHA requires the mandatory purchase of flood insurance. Within the SFHA, the Revised Project is located within Zone A99, which has a 1% annual chance of flood hazard (FEMA 2021). The Revised Project is within the area where the Natomas Levee Improvement Program (NLIP) has upgraded the levee system protecting the Natomas Basin. The Revised Project would not create additional significant impacts, as the project site evaluated in the 1997 MND had the same designation. Mitigation Measures 4 and 5 contained in the 1997 MND have been previously satisfied. With the requirements of the NLIP and implementation of the policies in the 2035 General Plan, the Revised Project would result in a less than significant impact related to flood risks and no new mitigation would be required.

Similar to the Natomas Crossing- Alleghany Area #2 PUD, the Revised Project would introduce new impervious surfaces to the site which may result in significant impacts related to increasing the rate of stormwater runoff, which could contribute to localized or downstream flooding. The Revised Project is subject to the National Pollutant Discharge Elimination System (NPDES) requirements. The Revised Project would implement mitigation measures from the 1997 MND. A Stormwater Quality (SWQ) Plan was prepared by TSD Engineering dated December 3, 2021, (2021a) that describes best management practices (BMPs) that would be incorporated into the Revised Project. The SWQ Plan requires the Revised Project implement source control measures, low impact development measures, and full trash capture methods. The BMPs selected for the Revised Project would treat runoff from impervious areas and include disconnected roof drains and pavement, permeable pavement, interceptor trees, and runoff reduction measures onsite. The grading plan was designed to convey runoff from impervious areas to bio-retention basins prior to discharging to the underground storm drain system. The Revised Project would increase the amount of impervious area but would incorporate an on-site storm drain system to reduce runoff. Implementation of mitigation measures from the 1997 MND and BMPs from the 2021 SWQ Plan would reduce water quality impacts of the Revised Project to a less than significant level.

Based on the foregoing, the Revised Project will not create impacts to hydrology and water quality beyond those previously identified in the 1997 MND. Impacts would be less than significant, and mitigation is not required. .

### 3.10.3 Hydrology/Water Quality Mitigation Measures

Because impacts to hydrology/ water quality would not occur, no mitigation is required.

## 3.11 LAND USE AND PLANNING

### 3.11.1 Summary of Land Use and Planning Impacts from 1997 MND

In 1997, the Natomas Crossing- Alleghany Area #2 PUD was designated in the Sacramento General Plan Update as Low Density Residential, Medium Density Residential, Community/Neighborhood Commercial and Offices, Mixed Use, Parks- Recreation- Open Space, Water, and Public/Quasi-Public/Misc. The 1994 North Natomas Community Plan (NNCP) designated the site as Low, Medium, and High Density Residential, Neighborhood Commercial, Employment Center-40 (EC-40) (40 employees per net acre), EC-

65, Elementary School, Community Center, Civic-Transit, Institution, Park, and Drainage Canal. The site was zoned for Standard Single Family (R-1-PUD), Alternative Single Family (R-1A-PUD), Multi-Family (R-2B-PUD), and Manufacturing Research and Development- maximum 20 percent office (MRD-20-PUD).

With the approval of the Natomas Crossing Area #2 PUD, a General Plan Amendment and Community Plan Amendment reconfigured land uses and rezoned the site to Standard Single Family-PUD (R-1 PUD), Alternative Single Family-PUD (R-1A-PUD), Multi-Family-PUD (R-2B-PUD), Limited Commercial-PUD (C-1 PUD), Shopping Center-PUD (SC PUD), Employment Center-40 (EC-40 PUD), and Employment Center-65 (EC-65 PUD). The 1997 MND concluded that the Natomas Crossing Alleghany Area #2 PUD would not result in less than significant land use impacts.

### 3.11.2 Land Use and Planning Impacts Associated with Revised Project

Since the approval of the Natomas Crossing Alleghany #2 PUD in 1997, The Plaza Project (P06-070) was approved in 2006 which reconfigured the zoning on the parcel to reconfigure the C-1 PUD zoning and permitted approximately 51,000 square feet of retail and restaurant uses on the site. The Plaza Project has not been constructed.

The Revised Project includes construction of a 157,500 square feet RCFE on a 4.58-acre site in the 210.8-acre Natomas Crossing Alleghany #2 PUD site evaluated in the 1997 MND. The Revised Project site is designated Suburban Center in the General Plan and zoned Limited Commercial Planned Unit Development (C-1 PUD). The PUD suffix identifies the site in the Natomas Community (NC) PUD with a Schematic Plan that identifies uses and guidelines for design and implementation. A residential care facility is a permitted use in the C-1 zoning district. The Revised Project is consistent with the PDC's Residential Care Facility definition: "a facility that provides nonmedical resident services to seven or more individuals in need of personal assistance essential for sustaining the activities of daily living, or for the protection of the individual, excluding members of the resident family or persons employed as facility staff, on a 24-hour-a-day basis" (PDC Section 17.108.190).

The Revised Project includes two entitlements: an amendment to the Natomas Crossing PUD Schematic Plan to reflect the proposed RCFE, and Site Plan and Design Review for the construction of the RCFE on the Revised Project site.

The Revised Project is consistent with the General Plan Suburban Center designation and policies supporting infill development adjacent to light rail, care facilities, and senior housing opportunities. The Revised Project is consistent with the General Plan, including the following goals and policies:

- **Goal LU 8.2 – *Special Uses*.** Provide for the development of Special Uses (e.g., assembly facilities, live-work studios, and care facilities, live-work studios, and care facilities) that are included within several Land Use and Urban Form Designations.
- **Policy LU 8.2.3 – *Care Facilities*.** The City shall encourage the development of senior daycare facilities, assisted living facilities, and other care facilities in appropriate areas throughout the city.
- **Goal H-3.2 – *Special Needs*.** Provide housing choices appropriate for "special needs" populations, including homeless, youth, female-headed households, persons with disabilities, and seniors.

- **Policy H-3.2.1 – Encourage Senior Housing.** The City shall encourage the development, rehabilitation, and preservation of senior housing, particularly in neighborhoods that are accessible to public transit, commercial services, and health and community facilities

The Revised Project is a permitted use in the C-1 PUD zone district and would not result in impacts to land use and mitigation is not required. Impacts would be less than those previously identified in the 1997 MND.

### 3.11.3 Land Use and Planning Mitigation Measures

Because impacts to land use and planning would be less than significant, no mitigation is required.

## 3.12 MINERAL RESOURCES

### 3.12.1 Summary of Mineral Resources Impacts from 1997 MND

The 1997 MND did not contain an evaluation of mineral resources because the Natomas Crossing-Alleghany Area #2 PUD Project area was not known to contain mineral resources. With the Natomas Crossing Alleghany Area #2 PUD Project, the loss of availability of a known mineral resource of value to the region and the residents of the state, or a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan would not occur. Significant impacts to mineral resources would not occur with implementation of the Natomas Crossing- Alleghany Area #2 PUD, and no mitigation was required.

### 3.12.2 Mineral Resources Impacts Associated with Revised Project

The 4.58-acre Revised Project site is within the boundaries of the 210.8-acre Natomas Crossing-Alleghany Area #2 PUD Project area, which was not known to contain mineral resources. The Revised Project site is not zoned for or proposed for mineral extraction. The site has not been associated with mineral mining, and therefore, no impacts to the loss of a known mineral resource or locally important mineral resource would occur. The impacts are consistent with the Natomas Crossing- Alleghany Area #2 PUD Project evaluated in the 1997 MND and considered less than significant.

### 3.12.3 Mineral Resources Mitigation Measures

Because impacts to mineral resources would not occur, no mitigation is required.

## 3.13 NOISE

### 3.13.1 Summary of Noise Impacts from 1997 MND

The 1997 MND evaluated noise impacts on the Natomas Crossing Alleghany-Area #2 PUD Project. External noise sources that had an impact on the PUD Project included 1) airport noise from Sacramento International Airport; 2) airport noise from Natomas Air Park; 3) noise from nearby Interstates 5 and 80, and other major streets; 4) noise from the proposed light rail along Truxel Road; and 5) noise from adjacent land uses. No sensitive noise receptors were located adjacent to the PUD Project site. The

closest residential use to the PUD Project was 7,500 feet to the south, across Interstate 80 in South Natomas, and a few solitary homes were located 200-500 feet from the southwest corner of the site. Due to the vacancy of the site, there were no major on-site noise sources.

The 1997 MND concluded that the Natomas Crossing Allegheny Area #2 Project would not result in a significant impact, and no mitigation measures were required.

### 3.13.2 Noise Impacts Associated with Revised Project

#### 3.13.2.1 Noise Setting

The Revised Project site is currently undeveloped and is located in a developed area surrounded by residential and commercial land uses. Existing noise sources in the vicinity of the Revised Project site primarily include vehicular traffic along nearby roadways. An ambient noise measurement survey was conducted on January 11, 2022 at the Revised Project site and included two short-term ambient noise measurements and traffic counts (Appendix C); refer to Figure 4, *Ambient Noise Measurement Locations*. The traffic counts were conducted to estimate the breakdown of heavy trucks (three or more axles), medium trucks (double tires/two axles), and automobiles along the roadway. The measured noise levels are shown in Table 6, *Ambient Noise Measurement Survey*. Traffic counts for the timed measurement and the one-hour equivalent volume are shown in Table 7, *Recorded Traffic Volume and Vehicle Mix*. The site visit sheets are included in Attachment A, *Site Survey Measurement Sheets*.

**Table 6**  
**AMBIENT NOISE MEASUREMENT SURVEY**

Measurement	Location	Time	Noise Level (dBA L <sub>EQ</sub> )
1	South side of Arena Boulevard, between Thrive Drive and Truxel Road	9:28 a.m. – 9:43 a.m.	69.0
2	West side of Truxel Road, between Arena Boulevard and Prosper Road	9:53 a.m. – 10:08 a.m.	69.5

Source: Measurements taken by HELIX on January 11, 2022 (see Attachment A for site survey measurement sheets).

**Table 7**  
**RECORDED TRAFFIC VOLUME AND VEHICLE MIX**

Measurement	Roadway	Traffic	Autos	MT <sup>1</sup>	HT <sup>2</sup>
1	Arena Boulevard	15-minute count	177	1	9
		One-hour equivalent	708	4	36
		<b>Percent</b>	94.7%	0.5%	4.8%
2	Truxel Road	15-minute count	253	2	4
		One-hour equivalent	1,012	8	16
		<b>Percent</b>	97.7%	0.8%	1.5%

<sup>1</sup> Medium Trucks (double tires/two axles)

<sup>2</sup> Heavy Trucks (three or more axles)

### 3.13.2.2 Equipment and Methodology

#### *Ambient Noise Survey*

The following equipment was used to measure existing noise levels at the Revised Project site:

- Larson Davis SoundTrack LxT Sound Level Meter
- Larson Davis Model CAL250 Calibrator
- Microphone windscreen
- Tripod for the SoundTrack LxT Sound Level Meter

The sound-level meters were field-calibrated immediately prior to the noise measurement to ensure accuracy. All measurements were made with meters that conform to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4-1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

#### *Noise Modeling Software*

Project construction noise was analyzed using the U.S. Department of Transportation (USDOT) Roadway Construction Noise Model (RCNM; USDOT 2008), which utilizes estimates of sound levels from standard construction equipment.

Modeling of the exterior noise environment for this report was accomplished using the Computer Aided Noise Abatement (CadnaA) model version 2021. CadnaA is a program developed by DataKustik™ for predicting noise impacts in a wide variety of conditions. It allows for the input of project-related information, such as noise source data, barriers, structures, and topography to create a detailed model, and uses the methodology from the U.S. Department of Transportation Federal Highway Administration (FHWA) Traffic Noise Model TNM version 2.5 (USDOT 2004). The noise models used in this analysis were developed using Google Earth and site plans provided by the project architect. Input variables included building mechanical equipment reference noise levels, road alignment, elevation, lane configuration, projected traffic volumes, estimated truck composition percentages, and vehicle speeds.

The one-hour  $L_{EQ}$  traffic noise level is calculated utilizing peak-hour traffic. The model-calculated one-hour  $L_{EQ}$  noise output is the equivalent to the  $L_{DN}$  (Caltrans 2009). This is shown in the following equation:  $L_{DN} = L_{EQ}(h)_{pk} + 10\log_{10}(4.17/P) + 10\log_{10}(D+10N)$ , where  $L_{EQ}(h)_{pk}$  is peak hour  $L_{EQ}$ , P is the peak hour volume percentage of ADT, D is the daytime fraction of ADT, N is the nighttime fraction of ADT, and  $D+N=1$ . The modeling includes the project building, the emergency generator and trash compactor within the utility building, the project external walls around the courtyards on the north and west sides of the site, and the traffic on Arena Boulevard and Truxel Road. The noise modeling input and output is included in Attachment B to this letter.

## Assumptions and Model Input

### Construction

Construction would require the use of equipment throughout the site for the full term of construction. Typical construction activities include excavating, grading, construction the building, and paving. Standard equipment used on the site is assumed to include an excavator, scraper, front-end loader, dump truck, dozer, grader, backhoe, trencher, skid steer, ready-mix truck, concrete pump, water truck, forklift, scissor lift, loader, and roller. Blasting or the use of pile drivers is not anticipated to be required.

### Operation

According to the project site plan and information proved by the project applicant, anticipated operational noise sources would include: a roof-mounted heating, ventilation, and air conditioning (HVAC) system; an emergency generator; and vehicular traffic.

### *HVAC Units*

The Revised Project would use commercial-sized HVAC units located on the rooftop of the proposed building. Standard HVAC planning assumes one ton of HVAC for every 350 square feet of habitable space (PDH Center 2012). Based upon preliminary building square footage provided by the project applicant, the Revised Project would require 29 16-ton units. The exact HVAC model has not been determined as of this analysis. For the purposes of this analysis, a Carrier 38AQS016 16-ton HVAC unit, with a sound power level ( $S_{WL}$ ) of 86.0 dBA, was used to model the noise impacts from the proposed project's HVAC system (Carrier 2005). The manufacturer's noise data for the HVAC units is provided below in Table 8.

**Table 8**  
**HVAC CONDENSER NOISE DATA (SWL dBA)**

63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall Noise Level
93.0	93.0	86.0	83.0	80.0	78.0	73.0	71.0	86.0

$S_{WL}$  = sound power level; dBA = A-weighted decibel; Hz = Hertz; kHz = kilohertz

### *Emergency Generator*

An emergency generator would be required for the Revised Project. Specifically, the Revised Project is anticipated to use a diesel Kohler Remote Serial Annunciator, which has a sound pressure level ( $S_{PL}$ ) of 75.0 dBA according to the manufacturer's specifications (North State Electrical Contractors 2019), which is approximately equivalent to 103.0 dBA  $S_{WL}$  according to the CadnaA modeling. For maintenance purposes, the generator would be run once monthly for thirty minutes at 4:30 p.m. and once a year for 90 minutes at 80 percent capacity.

### *Trash Compactor*

The Revised Project is anticipated to use a four-yard Marathon trash compactor, which would operate daily for up to two minutes. The trash compactor noise levels used in the analysis is based on noise levels of a trash compactor used in similar projects, which is shown below in Table 9.

**Table 9**  
**TRASH COMPACTOR NOISE DATA (SWL dBA)**

63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall Noise Level
83.3	86.1	91.3	93.0	87.6	91.1	88.9	76.4	96.5

SWL = sound power level; dBA = A-weighted decibel; Hz = Hertz; kHz = kilohertz

### *Vehicular Traffic*

Traffic data for the road segments on Arena Boulevard and Truxel Road was obtained from Appendix D of the City of Sacramento's 2035 General Plan Master EIR (City 2014). A two percent growth rate was used to calculate the number of average daily trips (ADT) on these segments for 2024, the first year the project is anticipated to be operational. Peak hour was calculated using 10 percent of ADT levels. The breakdown of heavy trucks (three or more axles), medium trucks (double tires/two axles), and automobiles inputted using the breakdown of the traffic counts taken during the short-term noise measurements (refer to Table 3). Traffic on both roadway segments was assumed to be traveling at the posted speed limit of 45 miles per hour (mph). Project trips were estimated using ITE's trip generation rates for assisted living facilities, which would result in approximately 370 trips on a weekday, 417 trips on a Saturday, and 448 trips on a Sunday (ITE 2017). The modeling conservatively used 10 percent of the Sunday trips to calculate 45 weekend peak hour trips generated by the project. Weekend peak hour traffic volumes on the modeled road segments are shown in Table 10. It should be noted that the project site is zoned Limited Commercial Planned Unit Development (C-1 PUD) which allows a broad range of commercial uses. In 2006, The Plaza Project (P06-070) was approved on the site for development of up to 51,000 square feet of commercial uses. As a residential care facility, the Revised Project would generate fewer trips than projected under existing zoning and the approved Plaza Project.

**Table 10**  
**REVISED PROJECT TRAFFIC VOLUMES**

Roadway Segment	2024 Weekend Peak Hour	2024 + Project Weekend Peak Hour
Arena Boulevard – I-5 to Truxel Road	1,756	1,801
Truxel Road – Arena Boulevard to I-80	6,059	6,104

Source: City 2014

### 3.13.2.3 Noise Regulations

#### *City of Sacramento Municipal Code*

The following noise ordinances are potentially applicable to the Revised Project (City 2020):

- Section 8.68.60 Exterior Noise Standards** – establishes exterior noise standards for noise received by agricultural and residential properties of 55 dBA from 7:00 a.m. to 10:00 p.m. and 50 dBA from 10:00 p.m. to 7:00 a.m. The ordinance allows the exterior standard to be exceeded by 5 dBA for cumulative periods of 15 minutes per hour, by 10 dBA for cumulative periods of 5 minutes per hour, by 15 dBA for cumulative periods of 1 minute per hour, and by 20 dBA maximum for any period.



- **Section 8.68.60 Interior Noise Standards** – establishes residential interior noise limits during the period of 10:00 p.m. to 7:00 a.m. of: 45 dBA for a cumulative period of more than five minutes in any hour; 50 dBA for a cumulative period of more than one minute in any hour; and 55 dBA for any period of time.
- **Section 8.68.80 Exemptions** – exempts noise sources from the exterior noise requirements due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of 7:00 a.m. and 6:00 p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order.

*City of Sacramento 2035 General Plan*

The following General Plan policies are potentially applicable to the project (City 2015).

- **Policy EC 3.1.1** – establishes normally acceptable noise levels of 60 dBA  $L_{DN}$  for residential—low-density single-family land uses; 70 dBA for office buildings—business, commercial and professional; and 75 dBA  $L_{DN}$  for industrial, manufacturing, utilities, and agriculture uses.
- **Policy EC 3.1.2** – establishes standards for acceptable increases to existing ambient levels due to development projects. Table EC 2 from the 2035 General Plan is reproduced here as Table 11.

**Table 11**  
**EXTERIOR INCREMENTAL NOISE IMPACT STANDARDS FOR NOISE-SENSITIVE USES**

Existing $L_{DN}$ (dBA)	Allowable Noise Increment (dBA)
<b>Residences and buildings where people normally sleep</b>	
45	8
50	5
55	3
60	2
65	1
70	1
75	0
80	0
<b>Institutional land uses with primarily daytime and evening uses</b>	
45	12
50	9
55	6
60	5
65	3
70	3
75	1
80	0

Source: City 2015

- **Policy EC 3.1.3** – requires new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA  $L_{DN}$  (with windows closed) for residential, transient lodgings, hospitals, nursing homes and other uses where people normally sleep; and 45 dBA  $L_{EQ}$  (peak hour with windows closed) for office buildings and similar uses.
- **Policy EC 3.1.10** – requires development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

### 3.13.2.4 Significance Criteria

To be consistent with the analysis in the 2035 General Plan Master EIR, impacts due to noise may be considered significant if construction and/or implementation of the Revised Project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- a) Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for nearby land uses due to the project's noise level increases;
- b) Result in residential interior noise levels of 45 dBA  $L_{DN}$  or greater caused by noise level increases due to the project;
- c) Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;
- 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;
- 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; or
- 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.

In addition to the above standards, the allowable incremental increase in exterior noise established in the 2035 General Plan Policy EC 3.1.2 (shown in Table 7, above) would apply.

### 3.13.2.5 Summary of Analysis Under the 2035 General Plan Master EIR and Applicable General Plan Policies

The General Plan 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 noise standards (Policy EC 3.1.3). Policy EC 3.1.2 establishes exterior incremental noise increase standards for new development. A variety of policies provide standards for the types of development envisioned in the General Plan. Policy EC 3.1.10 calls for the City to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses. 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. No

mitigation measures were identified in the General Plan Master EIR which would reduce the severity of significant noise and vibration impacts. All other noise and vibration impacts were found to be less than significant and would require no mitigation with compliance of General Plan policies (City 2014; City 2015).

### 3.13.2.6 Noise Impact Analysis

#### *Exterior Noise Levels*

##### On-Site Operational Noise

Non-transportation (on-site) noise sources associated with operation of the project would include rooftop HVAC systems, an emergency generator, and a trash compactor. As previously discussed, the trash compactor would only operate for up to two minutes per day, and the emergency generator would only operate for 30 minutes once per month and 90 minutes once per year. As a conservative analysis, the modeling analyzed the hour in which the trash compactor would operate for two minutes and the generator would operate for the full hour, in addition to the operation of the 29 HVAC units. A receiver, referred to as Receiver 1, was placed at the property line of the multi-family residences to the west of the project site, which are the closest NSLUs. The noise modeling input and output is included in Appendix C.

The results of the modeling indicated that operation of the HVAC units, trash compactor, and generator would result in a noise level of 50.8 dBA  $L_{EQ}$  at the receiver, with an  $L_{MAX}$  of 51.1 dBA. This is below the daytime standards of 55 dBA  $L_{EQ}$  and 75 dBA  $L_{MAX}$  in the City's Municipal Code section 8.68.60. The Revised Project would therefore not result in the generation of on-site operational noise exceeding City daytime noise standards established in section 8.68.60 of the City Municipal Code.

The generator and trash compactor would not operate during the nighttime hours of 10:00 p.m. to 7:00 a.m. Therefore, the operational nighttime noise sources would be limited to the HVAC units. The results of the modeling indicated that operation of the HVAC units would result in a noise level of 45.5 dBA  $L_{EQ}$  at the property line of the nearest NSLU, which would not exceed the 50 dBA noise standard from the noise ordinance during the 10:00 p.m. to 7:00 a.m. hours. The Revised Project would therefore not result in the generation of on-site operational noise exceeding City nighttime noise standards established in section 8.68.60 of the City Municipal Code.

##### Off-site Transportation Noise

Future traffic noise levels presented in this analysis are based on traffic volumes described above. Two receivers were placed along each of the roadway segments, with one at a residential building and one at a commercial property, for a total of four receivers. Specifically, Receiver 2 was placed at the northern boundary of the multi-family residences west of the project site, along Arena Boulevard. Receiver 3 was placed at the southern boundary of the commercial building along Arena Boulevard across from Thrive Drive. Receiver 4 was placed at the eastern boundary of the residences south of the project site, along Truxel Road. Receiver 5 was placed at the western boundary of the commercial building east of the project site along Truxel Road.

The traffic noise modeling does not account for noise reduction resulting from structures and barriers on or off the Revised Project site. The results of the traffic noise analysis are shown below in Table 12. The increase in noise is compared to the allowable increase described in Table 11, above. The noise modeling input and output is included in Appendix C.

**Table 12**  
**OFF-SITE TRAFFIC NOISE LEVELS (dBA L<sub>DN</sub>)**

Roadway Segment	2024 Peak Hour	2024 + Project Peak Hour	Increase	Allowable Increase	Exceed Allowable Increase?
<i>Arena Boulevard – I-5 to Truxel Road</i>					
Receiver 2 (residential)	62.5	62.6	0.1	1	No
Receiver 3 (commercial)	62.2	62.3	0.1	3	No
<i>Truxel Road – Arena Boulevard to I-80</i>					
Receiver 4 (residential)	62.8	62.8	0	1	No
Receiver 5 (commercial)	66.1	66.1	0	3	No

Source: CadnaA (see Attachment B for model output).

dBA = A-weighted decibel; L<sub>DN</sub> = Day Night sound level; I- = Interstate

As shown in Table 12, existing ambient noise levels exceed the City's normally acceptable standard of 60 dBA L<sub>DN</sub> noise level limit for residential land uses along both roadway segments. However, the maximum noise increase as a result of the addition of project traffic would be 0.1 dBA L<sub>DN</sub>. This increase would not be noticeable and would not exceed the 1 dBA L<sub>DN</sub> maximum allowable increase for residential uses. Existing ambient noise levels do not exceed the City's normally acceptable standard of 70 dBA L<sub>DN</sub> noise level limit for commercial/professional buildings along either roadway segment. The maximum noise increase as a result of the addition of Revised Project traffic would be 0.1 dBA L<sub>DN</sub>. This increase would not be noticeable and would not exceed the 3 dBA L<sub>DN</sub> maximum allowable increase for commercial/professional uses. Additionally, as a residential care facility, the Revised Project would generate fewer trips than projected under existing zoning and the approved Plaza project.

Operation of the Revised Project would not result in a substantial increase in ambient noise levels in the vicinity of the project in excess of standards established in the 2035 General Plan or noise ordinance. The impact would be less than significant and would have **no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

#### *Residential Interior Noise*

The General Plan Master EIR found this impact to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact (City 2014; City 2015).

The City of Sacramento 2035 General Plan Update establishes a normally acceptable exterior noise level of 60 dBA L<sub>DN</sub> and interior noise level of 45 dBA L<sub>DN</sub> for residential land uses. Traditional architectural materials typically used in residential construction attenuate noise levels by 15 dBA. Therefore, if the noise level at the exterior of the nearest NSLUs would exceed 60 dBA L<sub>DN</sub>, the interior noise levels would potentially exceed the City standard of 45 dBA L<sub>DN</sub>.

To analyze noise levels that would occur on the Revised Project site, receivers were placed along the proposed building's northern and eastern facades, in the northern courtyard, and in the western courtyard. The Revised Project proposes to construct an eight-foot wall at the boundaries of each of the courtyards for traffic noise attenuation. The modeling estimated noise levels at these locations with and without the proposed courtyard noise barriers. The results of the noise analysis are shown below in Table 13. The noise modeling input and output is included in Appendix C.

**Table 13**  
**ON-SITE TRAFFIC NOISE LEVELS (dBA L<sub>DN</sub>)**

Receivers	2024 + Project Peak Hour (no barriers)	Exceed 60 dBA Standard?	2024 + Project Peak Hour (with barriers)	Exceed 60 dBA Standard?
<i>Building Facades</i>				
Receiver 6 (facing Arena Boulevard, west side)	59.9	No	59.9	No
Receiver 7 (facing Arena Boulevard, east side)	61.6	Yes	61.5	Yes
Receiver 8 (facing Truxel Road, north side)	61.9	Yes	61.9	Yes
Receiver 9 (facing Truxel Road, south side)	61.9	Yes	61.9	Yes
<i>Courtyards</i>				
Receiver 10 (northern courtyard)	61.4	Yes	54.1	No
Receiver 11 (western courtyard)	47.4	No	43.9	No

Source: CadnaA (see Attachment B for model output).

dBA = A-weighted decibel; L<sub>DN</sub> = Day Night sound level

As shown in Table 13, the exterior building walls facing Arena Boulevard and Truxel Road would exceed 60 dBA L<sub>DN</sub> at most locations; therefore, the building would exceed the interior noise standard of 45 dBA L<sub>DN</sub> in the units that face Arena Boulevard and Truxel Road. Additionally, without the courtyard noise attenuation barriers, the noise level in the northern courtyard would exceed the 60 dBA L<sub>DN</sub> exterior threshold. However, with implementation of the barrier, the noise level in the northern courtyard would be reduced to below the threshold. Noise levels at the western courtyard would be below the 60 dBA L<sub>DN</sub> exterior threshold with and without the barrier.

Policy EC 3.1.3 of the 2035 General Plan requires inclusion of noise reduction strategies in the design of new residential or other noise sensitive uses. Therefore, the project would be required to incorporate noise reduction strategies into the project design to meet interior noise standards. The interior noise attenuation strategies are provided in compliance measure NOI-1, below. With adherence to measure NOI-1, the Revised Project would not result in interior noise levels exceeding the City standard and would have no additional significant environmental effects beyond what has been previously identified in the General Plan Master EIR.

#### *City of Sacramento Noise Ordinance Standards*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015).

The Revised Project site area, which is anticipated to have significant construction activity, is approximately 55 feet east of the property line of the nearest NSLUs. The noisiest heavy construction equipment anticipated to be used near NSLUs would be a grader, used during site preparations and

grading. Modeling with the RCNM shows that noise from a grader would be 80.2 dBA  $L_{EQ}$  at the closest residential property line. This noise level would exceed the City Noise Ordinance standard of 55 dBA from 7:00 a.m. to 10:00 p.m. and 50 dBA from 10:00 p.m. to 7:00 a.m.

According to the City Code Section 8.68.060, *Exemptions*, noise sources associated with construction of the project which are conducted between the hours of 7:00 a.m. and 6:00 p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday, are exempt for the City noise standard provided that all internal combustion engines used in the construction activities are equipped with suitable exhaust and intake silencers in good working order (City 2020). To address noise from construction activities the 2035 General Plan includes Policy EC 3.1.10, which requires proponents of development projects to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

The Revised Project would adhere to General Plan compliance measure NOI-2, provided below, which would restrict construction hours to the above limitations and require all construction equipment to be equipped with intake and exhaust silencers. Therefore, with adherence to measure NOI-2, construction of the project would not result in exterior noise levels exceeding the City standard and all additional significant environmental effects would be mitigated to a less than significant level. With adherence to measure NOI-2, construction of the Revised Project would have no additional significant environmental effects beyond what has been previously identified in the General Plan Master EIR.

#### *Vibration-Peak-Particle Velocities due to Construction*

The General Plan Master EIR found this impact to be significant and unavoidable, no mitigation was identified which would reduce the severity of the impact (City 2014; City 2015).

Construction activities known to generate excessive ground-borne vibration, such as pile driving or blasting, would not be conducted by the Revised Project. A possible source of vibration during project construction activities would be a vibratory roller, which may be used within 150 feet of the nearest off-site building (multi-family residence) to the west. A large vibratory roller could create approximately 0.210 inch per second PPV at 25 feet (Caltrans 2020). With typical ground conditions, a large vibratory roller at 150 feet would result in 0.03 inches per second PPV. This vibration level would not exceed the 0.5 inches per second PPV threshold risk of architectural damage to non-engineered timber and masonry buildings. Therefore, although a vibratory roller may be perceptible to nearby human receptors, impacts associated with construction vibration impacts would be less than significant and the Revised Project would have no additional significant environmental effects beyond what has been previously identified in the General Plan Master EIR.

#### *Vibration-Peak-Particle due to Highway Traffic*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015).

The Revised Project does not propose new highways or railroads and there are no existing highways or railroads within 1,000 feet of the project site. The Revised Project would not affect operations on any railroads and would result in a minimal amount of truck trips to highways in the City due to the nature of the project. Therefore, the Revised Project would not result in ground-borne vibration in excess of

0.5 inch per second PPV from highway traffic or rail operations and would have no additional significant environmental effects beyond what has been previously identified in the General Plan Master EIR.

*Vibration-Peak-Particle due to Construction and Highway Traffic*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015).

Buildings older than 45 years (built before 1976) have the potential to be listed as historically significant in California. A possible source of vibration during project construction activities would be a vibratory roller throughout the Revised Project site. As shown in the response to question (d) above, a large vibratory roller would result in 0.03 inches per second PPV at the nearest building, which is the multi-family residential building located to the west of the Revised Project site. The vibration would not exceed the threshold of 0.2 inches per second PPV. Additionally, the multi-family residential building was not constructed before 1976. Therefore, impacts related vibrations from project construction or project affected highways would be less than significant and would have no additional significant environmental effects beyond what has been previously identified in the General Plan Master EIR.

On-site project operational noise or project-generated traffic noise would not result in noise levels increases in excess of 2035 General Plan standards and would not result in new impacts or worsen any impacts that were identified in the General Plan Master EIR. The Revised Project also would not conflict with the noise regulations in the City of Sacramento Municipal Code. The proposed building would meet the exterior noise standard of 60 dBA  $L_{DN}$  at both outdoor courtyards with the construction of the proposed 8-foot noise barriers along the courtyards. Additionally, with adherence to General Plan compliance measure NOI-1, the project's proposed building would meet the applicable interior noise standard.

With adherence to General Plan compliance measure NOI-2 to restrict the hours of construction, noise generated by project construction activities would not exceed the standards in the City noise ordinance and would not result in new impacts or worsen any impacts that were identified in the General Plan Master EIR.

Construction or operation of the Revised Project would not generate excessive ground-borne vibration levels affecting nearby residents or building and would not result in new impacts or worsen any impacts that were identified in the General Plan Master EIR.

### 3.13.3 Noise Mitigation Measures

With adherence to compliance Measures, NOI-1 and NOI-2, the Revised Project would limit impacts to a less than significant level.

**NOI-1 On-site Interior Noise Level Reduction.** For the project's habitable areas (both living rooms and bedrooms) with a direct line-of-sight to Arena Boulevard and Truxel Road, the following measures shall be incorporated in the design of the project to reduce interior noise levels to 45 dBA  $L_{DN}$  or less:

- Minimum exterior wall requirement of STC 46 with a construction of standard 0.875-inch stucco, stone veneer over a plaster base or on-hour rated composite siding assemblies over 0.5-inch shearwall on 2x6 studs with 0.625-inch Type “X” Drywall.
- Minimum window requirement of STC 28 with a window construction of dual glazing window thickness 0.125-inch and 0.5-inch air gap.

**NOI-2 Construction Hourly Limits.** The City shall note on all construction permits that any project construction activities that may result in the generation of noise shall not occur outside of the hours of 7:00 a.m. and 6:00 p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and outside the hours of 9:00 a.m. and 6:00 p.m. on Sunday, and that all internal combustion engines used for project construction shall be equipped with intake and exhaust silencers and maintained in accordance with the equipment manufacturer’s specifications.

### 3.14 POPULATION AND HOUSING

#### 3.14.1 Summary of Population and Housing Impacts from 1997 MND

The 1 Natomas Crossing- Alleghany Area #2 PUD Project resulted in a reduction of residential units and population compared to the units and population associated with buildout of the North Natomas Community Plan. The PUD Project resulted in approximately 220 fewer residential units, from 1,059 to 839 in the NNCP and 115 fewer employees, from 2,113 to 1,998 employees. Using 1.35 housed workers per employee, and the ending units of 29,995 and the ending employees of 58,669, the Natomas Crossing Alleghany #2 PUD Project changed the jobs/housing ratio (housed workers to employees) from 70.0 to 69.0 percent for the City portion of the NNCP. The Natomas Crossing-Alleghany #2 PUD Project resulted in net reduction in population and employees and less than significant impacts to population and housing.

#### 3.14.2 Population and Housing Impacts Associated with Revised Project

The Revised Project is a 157,500 square feet RCFE with 142 independent living/assisted living and memory care units (170 beds) and 90 full-time and part-time employees. The Revised Project site is undeveloped and vacant, and the Revised Project would provide housing for approximately 170 senior residents. The Revised Project would be consistent with the City of Sacramento’s General Plan because it would increase housing for seniors. This growth is accounted for and analyzed in the 2035 General Plan Master EIR. The addition of approximately 170 residents would not result in significant adverse impacts related to population and housing and would not result in increased impacts beyond those identified in the 1997 MND and evaluated under The Plaza Project (Addendum No. 2). Impacts would be less than significant, and mitigation is not required.

#### 3.14.3 Population and Housing Mitigation Measures

As described in the 1997 MND, impacts to population and housing would be less than significant, and no mitigation is required.



## 3.15 PUBLIC SERVICES

### 3.15.1 Summary of Public Services Impacts from 1997 MND

The 1997 MND concluded that the Natomas Crossing-Alleghany Area #2 PUD project would not result in significant impacts to fire services, police services, schools, libraries, and parks and recreational facilities. The 1997 MND stated that the public services needed for the NNCP area have been planned for within the NNCP and the capital costs of these services would be funded through the North Natomas Financing Plan. Operation and maintenance costs would be paid for through City-wide and community-wide revenue programs. The 1997 MND concluded that the Natomas Crossing-Alleghany Area #2 PUD would not result in public services impacts.

### 3.15.2 Public Services Impacts Associated with Revised Project

The Revised Project is a RCFE with 142 independent/assisted living and memory care units (170 beds) on a portion of the site. The proposed RCFE would accommodate approximately 170 residents over the age of 55, and 90 employees, for a total population of 260 people. Buildout of the site under the previously approved The Plaza Project would have resulted in employees in 51,000 square feet of retail and restaurant pads on the site. The 170 residents and 90 employees in the Revised Project would not result in significant increases or impacts to public services beyond those previously evaluated in the 1997 MND.

**Fire Protection:** The 157,500 square foot RCFE would accommodate approximately 170 residents and 90 full-time and part-time employees. The 2035 General Plan Update Master EIR analyzed the need for twelve additional fire stations due to the expected population increase of 165,000 new residents in the City by 2035, which includes development of the site. Therefore, the need for fire prevention facilities associated with the Revised Project is within the growth planned within the 2035 General Plan Update. Additionally, the Revised Project would participate in the North Natomas Financing Plan which funds capital costs related to fire services. Three fire hydrants, a fire department connection, a fire water pump room, and 20-foot fire lanes with inner turning radii of 35 feet and an outer turning radii of 55 feet are proposed on the Revised Project site for fire access. The Revised Project's impact to fire services would not result in new or increased impacts to fire protection services beyond those previously evaluated in the 1997 MND.

**Law Enforcement:** The 157,500 square foot RCFE would accommodate approximately 170 residents and 90 full-time and part-time employees. The 2035 General Plan Update Master EIR anticipated law enforcement staffing required to serve buildout of the City. The Revised Project is within assumptions for buildout anticipated under the 2035 General Plan Update. The Revised Project would participate in the North Natomas Financing Plan which funds capital costs related to police services. The Revised Project includes gated access at the vehicle entrance, and secure access at pedestrian access points. The Revised Project would include a buzzer/intercom system at the Thrive Drive access, site lighting, and additional security and operational measures. The Revised Project would not result in new or more or increased impacts to law enforcement service beyond those previously evaluated in the 1997 MND.

**Schools:** The Revised Project is a residential care facility for the elderly with 142 independent living/assisted living and memory care units that would accommodate approximately 170 senior residents. The resident population and employees of the Revised Project would not increase the

demand for school capacity. The Revised Project is within the Natomas Unified School District boundaries and the Revised Project would be subject to school impact fees. The Revised Project would not increase the demand for school facilities or create new or increased impacts to schools beyond those previously evaluated in the 1997 MND.

**Libraries:** The 157,500 square foot RCFE would accommodate approximately 170 residents and 90 full-time and part-time employees. The City's library system has been sized to meet City buildout projections. The Revised Project would participate in the North Natomas Financing Plan which funds capital costs related to library services. The Revised Project would not result in new or increased impacts to library services beyond those previously evaluated in the 1997 MND.

**Parks and Recreation:** The Revised Project would contribute to an increase in parkland because the Revised Project would potentially add approximately 170 residents and 90 employees. The City provides neighborhood and community parks in the NNCP in the vicinity of the Revised Project and would require the Revised Project to participate in the North Natomas Financing Plan to fund capital costs of parks. The Revised Project includes on-site recreation amenities which would lessen the Revised Projects' demand for park facilities. The on-site recreation amenities include walking paths, outdoor patios/courtyards with lounge areas, multipurpose lawns, community garden beds, putting green, bocce court, gym with fitness equipment, and extensive social and educational programming. The increased demand for parks facilities is considered less than significant because the parks and recreation facilities have been constructed and anticipated in the NNCP. The Revised Project's would not result in new or increased impacts to parks and recreation services beyond those previously evaluated in the 1997 MND.

The Revised Project would not result new or increased impacts to fire protection, law enforcement, schools, libraries, and parks and recreation beyond those previously evaluated in the 1997 MND. Therefore, impacts to public services would be less than significant.

### **3.15.3 Public Services Mitigation Measures**

As described in the 1997 MND, impacts to public services would be less than significant, and no mitigation is required.

## **3.16 RECREATION**

### **3.16.1 Summary of Recreation Impacts from 1997 MND**

The 1997 MND evaluated recreation impact of the Natomas Crossing- Alleghany Area #2 PUD Project. The demand for park and recreation facilities created by the PUD Project has been addressed with park and recreation facilities in the PUD and the NNCP.

Financing of park development is addressed in the North Natomas Financing Plan. Land acquisition of community/ neighborhood parks would be paid for through Quimby Act fees; development costs of the community/neighborhood parks were included in the Public Facilities Fee portion of the North Natomas Development Impact Fees; and operation and maintenance of the parks would be paid for through a Lighting and Landscaping District. All projects are required to participate in the North Natomas Financing Plan, pay Quimby fees, and participate in the Landscaping and Lighting District.

The 1997 MND found the PUD Project's impact on recreation to be less than significant.

### 3.16.2 Recreation Impacts Associated with Revised Project

As discussed in Section 3.5.2 of this Addendum, above, the Revised Project would result in a less than significant impact related to park facilities. Park facilities in the NNCP have been sized to reflect buildout of the NNCP and the 2035 General Plan. The Revised Project includes the construction of amenities for future residents, which would reduce demand for off-site park facilities. Proposed amenities include an outdoor patios/courtyard with lounge areas, multipurpose lawns, community garden beds, putting green, bocce court, gym with fitness equipment, and extensive social and educational programming. A 14-foot wide (ten feet of asphalt and two feet of decomposed granite on each side) bicycle/pedestrian pathway is planned on the east edge of the site, adjacent and parallel to the light rail corridor. The path aligns with existing sidewalks north and south of the site. Implementation of the Revised Project would result in less than significant impacts related to recreation.

### 3.16.3 Recreation Mitigation Measures

Because impacts to recreation would be less than significant, no mitigation is required.

## 3.17 TRANSPORTATION

### 3.17.1 Summary of Transportation Impacts from 1997 MND

The traffic impact analysis (TIA) prepared for the Natomas Crossing-Alleghany #2 PUD Project and evaluated eight intersections:

- Truxel Road/ Del Paso Road
- Truxel Road/ Arena Boulevard
- Truxel Road/ Road D
- Truxel Road/ Road F
- Road J/ Arena Boulevard
- Road J/ Road D
- Road J/ Road E
- Road J/ Road F

The conclusions of the Traffic Impact Analysis indicated that the PUD Project would add a significant number of vehicles to the existing roadway network. The 1997 MND identified Mitigation Measure #9 requiring signalization of three intersections: 1) Truxel Road/ Road D; 2) Truxel Road/ Road F; and 3) Road J/ Road F. The signals at Truxel Road/ Road D and Truxel Road/ Road F were required for access to Truxel Road. The signal at Road J/ Road F was required to mitigate an impact created by the PUD Project. The PUD Project was conditioned to construct the signals with the first phase of development. The 1997 MND concluded that it could be possible to defer the operation of the signal(s) until actual traffic volumes increase to a point where each signal would be needed.

The MND also concluded to mitigate impacts of increased traffic, the PUD Project must comply with the City Zoning Ordinance. The 1997 MND required Mitigation Measure #10 requiring preparation of a

Mitigation Management Plan. With implementation of Mitigation Measures 9 and 10, the 1997 MND concluded that transportation impacts of the Natomas Crossing Alleghany #2 PUD Project were reduced to less than significant.

### 3.17.2 Transportation Impacts Associated with Revised Project

The Revised Project is a proposed residential care facility for the elderly, a permitted use in the Limited Commercial Planned Use Development (C-1 PUD) zone. Residents of the Revised Project will be seniors with an average age of 80 years. The vehicle trip generation for the Revised Project would be significantly less for other types of commercial uses permitted in the C-1 PUD zone, including the commercial and retail uses evaluated in Addendum 2 to the 1997 MND for The Plaza Project.

The City's 2035 General Plan Master EIR analyzed the cumulative transportation and circulation impacts of growth within the City of Sacramento. The Revised Project would be consistent with the Natomas Crossing Alleghany Area #2 PUD Project within the NNCP, which is consistent with the City's 2035 General Plan. Because the Revised Project is consistent with the City's 2035 General Plan, cumulative traffic impacts of planned development on the Revised Project site were analyzed in the 2035 General Plan Master EIR which found that although implementation of the 2035 General Plan would result in daily traffic volume increases, the Arena Boulevard and Truxel Road roadway segments near the Revised Project site would operate at acceptable levels of service (LOS) ranging from LOS A through LOS D. Therefore, the intersection at Arena Boulevard and Truxel Rod would also operate an acceptable level. The 2035 General Plan Master EIR concluded that there would be less than significant LOS impacts based on the 2035 horizon year analysis. The 2035 General Plan Update Master EIR also concluded that adherence to General Plan policies, the impact to transit, bicycle facilities, pedestrian circulation would be less than significant.

The Revised Project incorporates measures that reduce transportation impacts. The Revised Project is located immediately adjacent to a light rail corridor for the future Green Line and Arena Boulevard light rail station. Three SACRT bus lines (Routes 11, 13, and 113) and the North Natomas Jibe shuttle provide transit service near the Arena Boulevard/Truxel Road intersection. The Revised Project will provide on demand and scheduled transportation services for residents to local medical appointments, shopping, and excursions. A 14-foot-wide pedestrian path is planned east of the Revised Project and west of the light rail corridor. The path will connect to the path system north and south of the Revised Project site.

Mitigation Measure #9 from the 1997 MND requiring construction of three signals has been previously satisfied. The Revised Project is required to comply with Residential Air Quality Plan for Natomas Crossing Area Two (February 5, 1999) to satisfy Mitigation Measure #10. The Revised Project would not result in new or significant transportation impacts beyond those described in the 1997 MND.

### 3.17.3 Transportation Mitigation Measures

Mitigation Measure #9: The Intersection of Road J/ Road F shall be signalized to mitigate significant impacts indicated at this location. In addition, the intersection of Truxel Road/ Road D and Truxel Road/ Road F should be signalized in order to provide access to and from Truxel road.

Mitigation Measure #10: The applicant shall comply with the City's Transportation Systems Management Ordinance and prepare a Transportation Management Plan.

## 3.18 UTILITIES AND SERVICE SYSTEMS

### 3.18.1 Summary of Utilities and Service Systems Impacts from 1997 MND

The 1997 MND analyzed utility services for the Natomas Crossing- Alleghany Area #2 PUD Project.

Drainage: The PUD Project is within the Detention Basin #5 and #6 watershed areas of the North Natomas drainage system. The 1997 MND concluded that the increase in impervious surfaces resulting from the development of the PUD Project would increase runoff. To mitigate impacts to drainage, future projects would be required to provide an on-site storm drain system. The 1997 MND concluded that, after implementation of Mitigation Measure #3, the impact to drainage would be less than significant.

Sewer Service: Development in North Natomas is served by the County of Sacramento's Regional Sanitation District. The County of Sacramento has indicated that sanitary sewer service, after payment of applicable connection fees, is available to the subject property. The cost of sewer lateral extension and sewer service installation to the property line is the responsibility of the developer. The 1997 MND concluded that the impact to sanitary sewer would be less than significant.

Recycling and Solid Waste: Prior to construction of any non-residential building or multi-family residential development on the site, an approved Special Permit would be required. During the review of the project, the recycling program for the building(s) would be evaluated. Because it is subject to Section 34 of the Zoning Ordinance, the PUD Project would not result in a significant impact to solid waste disposal.

Electricity/Natural Gas: The 1997 MND concluded that impacts to electricity and natural gas would be less than significant.

### 3.18.2 Utilities and Service Systems Impacts Associated with Revised Project

The Revised Project includes the development of a 157,500 square foot RCFE facility on 4.58 acres. The RCFE would include 142 units and 90 full time and part time staff, for a total on-site population of approximately 260-290 people. Although the Revised Project would increase demand for some utilities and service systems compared to the previous Plaza project and land uses in the Natomas Crossing Alleghany #2 PUD, impacts would not be new or greater than those analyzed in the 1997 MND and would be less than significant.

Water Supply: The City of Sacramento would provide water service to the Revised Project. New water pipelines would be constructed throughout the project site and would connect to the existing water infrastructure in Prosper Road, Thrive Drive, and Arena Boulevard. The 2035 General Plan Update Master EIR concluded that the City would have sufficient water supplies through the year 2035. The Revised Project would be within the growth planned under the 2035 General Plan Update. Therefore, the Revised Project would not result new or significant water supply impacts.

Sewer Service: The Sacramento Area Sewer District (SASD) would provide sanitary sewer service to the Revised Project site. New sewer lines are proposed on the Revised Project site and would connect with the existing sewer lines in Thrive Drive and Arena Boulevard. The Revised Project would pay connection

fees to the SASD for connecting to and expanding sewer collection systems. Therefore, the Revised Proposed project would not result new or significant sanitary sewer impacts.

Stormwater/ Drainage: The Revised Project site is served by the City of Sacramento for stormwater drainage. The Revised Project site is vacant, and development of the proposed RCFE facility would increase the impervious area. A Stormwater Quality (SWQ) Plan prepared by TSD Engineering (2021) describes the best management practices (BMPs) incorporated into the Revised Project for stormwater quality. The Revised Project BMPs would be used to treat runoff from impervious areas, including the use of bio-retention basins. A Drainage Memo prepared by TSD Engineering on December 23, 2021 (2021b) concluded that the Revised Project, in the North Natomas Drainage Plan, would have reduced impervious area compared to the PUD Project evaluated in the 1997 MND. Runoff would be further reduced as a result of the BMPs outlined in the SWQ Plan. The existing drainage system would convey runoff from the Revised Project site to a regional basin north of the site, and peak flow mitigation would not be required. Implementation of Mitigation Measure #3, BMPs from the 2021 SWQ Plan, and the reduced percentage of impervious surfaces would mitigate stormwater and drainage impacts from the Revised Project to a less than significant level with mitigation.

The State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB) are responsible for stormwater pollution control in the City of Sacramento. Stormwater pollution control is implemented through National Pollution Discharge Elimination System (NPDES) permits. The City of Sacramento is responsible for ensuring compliance with the stormwater pollution control standards. Therefore, although there would be impervious areas on the site, the Revised Project would be required to comply with the NPDES permits requirements. The Revised Project would not result in new significant stormwater impacts.

Recycling/ Solid Waste: Solid waste from the Revised Project would be disposed of at the Sacramento County Kiefer Landfill. The Revised Project would generate approximately 1.40 tons of solid waste per day based on a combination of residential and commercial solid generation factors. Solid waste disposal from buildout of the Natomas Crossing Alleghany #2 PUD Project was considered in the 1997 MND. The Revised Project is within the planned growth projected in the 2035 General Plan Update and 2035 General Plan Update Master EIR. The Revised Project would be served by the landfill with sufficient permitted capacity to accommodate the Revised Project's solid waste disposal needs and no new impacts to solid waste would occur.

Electricity/ Natural Gas: The Revised Project would be served by Sacramento Municipal Utility District (SMUD) for electricity and Pacific Gas and Electric (PG&E) for natural gas. The Revised Project is in the planned growth assumed in the 2035 General Plan Update and 2035 General Plan Update Master EIR. The Revised Project is also within the SMUD and PGE service areas. The Revised Project would be served SMUD and PG&E and there would be no new or significant impacts to electricity and natural gas service.

### 3.18.3 Utilities and Service Systems Mitigation Measures

Implementation of Mitigation Measure #3 would reduce drainage impacts impervious surfaces to a less than significant level. Mitigation Measure #3 was introduced in the 1997 MND and required for the Revised Project.

Mitigation Measure #3: A Drainage Agreement coordinating the provision of stormwater drainage

with all the property owners must be executed. An adequate stormwater drainage plan shall be designed to the satisfaction of the City Utilities Director prior to recordation of the Master Parcel Map. Construction of the drainage facilities shall be commenced prior to issuance of a building permit. Construction of the drainage facilities shall be completed prior to issuance of a certificate of occupancy for any building on the site.

## 4.0 CEQA DETERMINATION

Section 15164(a) of the CEQA Guidelines states the following:

The lead agency or a responsible agency shall prepare an addendum to a previously certified MND if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a Subsequent MND have occurred.

The Revised Project would not result in new significant environmental effects or a substantial increase in the severity of previously identified significant effects due to substantial project changes or a substantial change in circumstances beyond those evaluated in the 1997 MND. Furthermore, new information does not indicate that the Revised Project would have one or more significant effects not discussed in the 1997 MND; that significant effects previously examined would be substantially more severe than shown in the 1997 MND; that mitigation measures or alternatives previously found not to be feasible would in fact be feasible; or that mitigation measures or alternatives which are considerably different from those analyzed in the 1997 MND would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measures or alternative. Therefore, an Addendum was prepared to comply with CEQA.

As the Lead Agency for the proposed Revised Project, the City of Sacramento is issuing this Addendum in accordance with Section 15164 of the CEQA Guidelines.

**Signature:** \_\_\_\_\_  
Scott Johnson  
Environmental Planning Services  
City of Sacramento

**Date:** \_\_\_\_\_

## 5.0 REFERENCES

Federal Emergency Management Agency (FEMA). 2021. National Flood Hazard Layer. November 19.

Governor's Office of Planning and Research. 2005. Tribal Consultation Guidelines Supplement to General Plan Guidelines. November 19.

HELIX Environmental Planning, Inc. 2022a. Air Quality and Greenhouse Gas Emissions Technical Analysis for the Tenfold Natomas RCFE.

\_\_\_\_\_. 2022b. Noise Technical Analysis for the Tenfold Natomas RCFE.

TSD Engineering, Inc. 2021a. Preliminary Stormwater Quality Plan, Tenfold Natomas RCFE. December 23

\_\_\_\_\_ 2021b. Tenfold Natomas RCFE Preliminary Drainage. December 23.

Wallace Kuhl & Associates. 2019a. Geotechnical Engineering Report, North Natomas Seniors. WKA No. 10239.18. July 7.

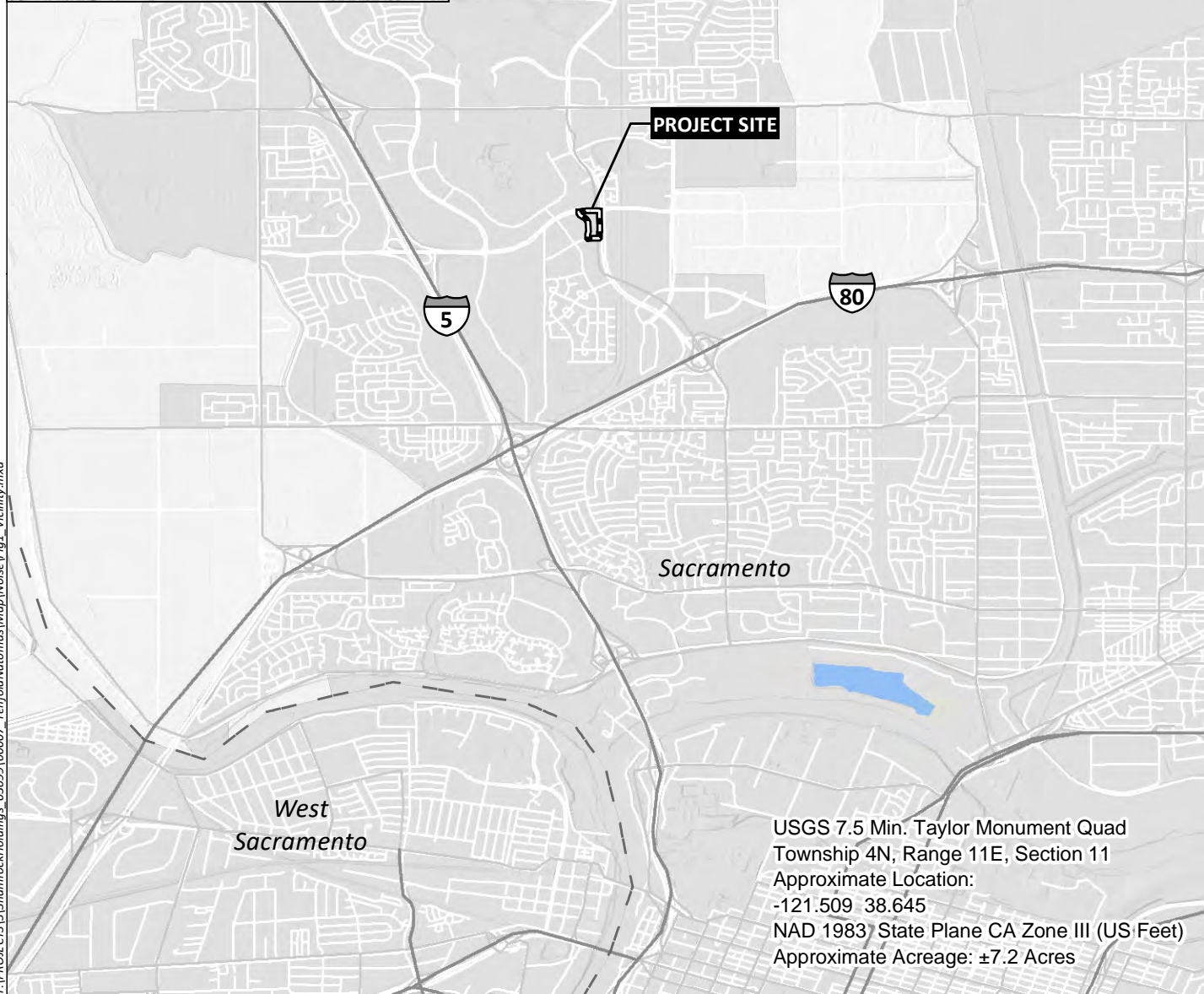
\_\_\_\_\_ 2019b. Phase I Environmental Site Assessment, North Natomas Senior Property. WKA No. 10239.16. July 7.



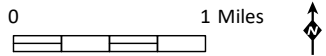
# Appendix A

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Figures






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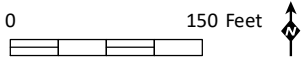
Source: Base Map Layers (Esri, USGS, NGA, NASA)

Legend

-  Project Site
-  Future Light Rail Development (not included in proposed project)
-  Future Development (not included in proposed project)

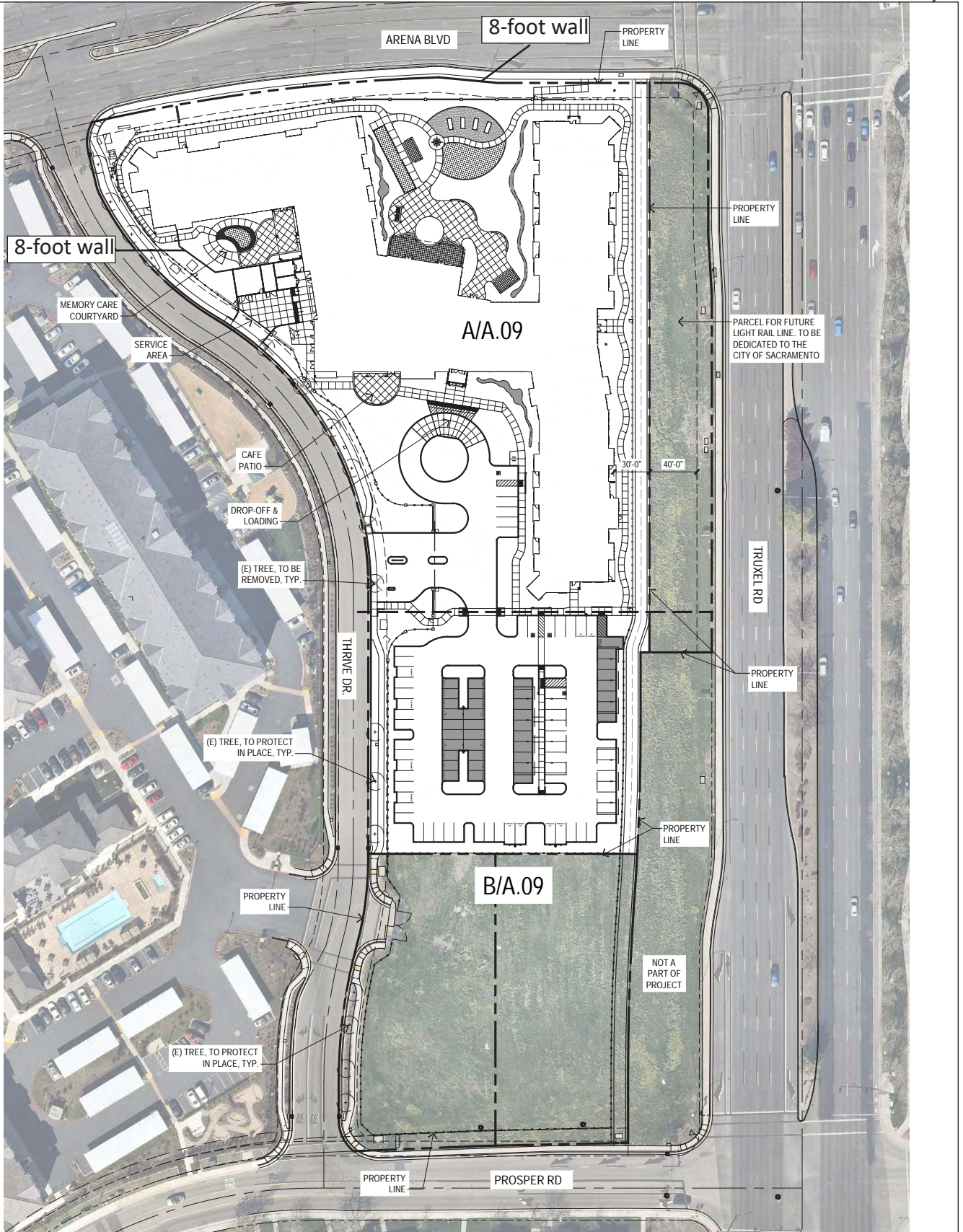


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Source: Aerial (Maxar, 3/4/2021)

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Source: LPAS, INC. 2021

-  Project Site
-  Future Light Rail Development (not included in proposed project)
-  Future Development (not included in proposed project)
-  Noise Receiver



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Source: Aerial (Maxar, 3/4/2021)

## Appendix B

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Air Quality and  
Greenhouse Gas Emissions  
Technical Analysis

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January 31, 2022

03099.00007.001

Brigid Flanigan  
Tenfold Development, LLC  
985 SW Disk Drive, Suite 120  
Bend, OR 97702

**Subject: Noise Technical Analysis for the Tenfold Natomas Residential Care Facility for the Elderly Project**

Dear Ms. Flanigan:

HELIX Environmental Planning, Inc. (HELIX) has assessed the noise and vibration impacts related to the construction and operation of the proposed Tenfold Natomas Residential Care Facility for the Elderly (RCFE) Project (project). Analysis within this report was prepared to support impact analysis pursuant to the California Environmental Quality Act (CEQA; 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 (City). The analysis reviews the discussions of potential impacts and irreversible significant effects analyzed in the 2035 General Plan Master Environmental Impact Report (EIR) to determine their adequacy for the project (see CEQA Guidelines Section 15178(b),(c)) and identifies any potential new or additional project-specific significant environmental effects that were not analyzed in the General Plan Master EIR and any mitigation measures or alternatives that may avoid or mitigate any potential identified effects to a less than significant level (City 2014; City 2015a).

## PROJECT LOCATION

The 4.58-acre project site is in the southwest corner of the intersection of Arena Boulevard and Truxel Road in the North Natomas community of the City of Sacramento in Sacramento County, as shown on Figure 1, *Vicinity Map*. A 0.56-acre parcel is located immediately east of the project site and will be offered for dedication for a future light rail line not included in the proposed project. Immediately south of the project site are two parcels totaling 1.34 acres, which are not proposed for development as part of this project. These parcels, including the project site, collectively total 6.48 acres consisting of Assessor's Parcel Numbers (APNs) 225-2970-001 through -007. The project site is currently vacant, sparsely vegetated with grasses and stubbed with wet and dry utilities. Surrounding land uses include townhomes south of the site, office and retail north of Arena Boulevard, and offices east of Truxel Road (see Figure 2, *Aerial Photograph*). The Sleep Train Arena site to the northwest is proposed to be redeveloped with a medical school and teaching hospital. The 293-unit four-story Alira Apartment

community is west of the site. The project site is proximate to residential neighborhoods, employment centers, services, schools, parks, and open space areas in the North Natomas community.

## PROJECT DESCRIPTION

The proposed project consists of development of a licensed RCFE with 118 independent/assisted living units, a 24-unit memory care wing, indoor and outdoor amenities, parking, and landscaping (Figure 3, *Site Plan*). The project would construct an approximately 157,500 square foot three-story building adjacent to Arena Boulevard, with the main entrance on the southwest side of the building. The building would be irregularly shaped, with wings extending north, south, and west. Two courtyards with outdoor amenities would be within the west and north building wings. A small utility building on the west side of the site would house trash and recycling dumpsters.

The proposed RCFE would include 118 independent/assisted living units consisting of approximately seven studios with an average size of 643 square feet; 83 one-bedroom units with an average size of 750 square feet; and 28 two-bedroom units with an average size of 1,077 square feet. Indoor and outdoor amenities for the independent/assisted living residents would include two dining rooms, a bistro, a gym, a 30-seat theater, an art studio, a club room, various seating/gathering areas, a hair/nail salon, an outdoor patio, an enclosed outdoor courtyard with community garden beds, and an on-site walking path.

The Harbor memory care wing on the west side of the first floor would consist of 24 units, each with a bed and bathroom. The 24 memory care units would have an average size of 377 square feet. Dedicated common areas, including living and dining rooms, an activity room, and an outdoor courtyard, would be designed to accommodate the special needs of residents with dementia. Amenities for the Harbor memory care residents would include a living room, a dining room, an activity room, and a dedicated enclosed outdoor area with seating and raised planter beds.

The project would provide residents with transportation services to local medical appointments, shopping, appointments, and excursions. A full-time driver and staff would coordinate transportation for residents in a five-passenger hybrid town car and a fourteen-passenger van that accommodates wheelchairs. Transportation would be provided to residents on demand and fixed schedules. The project would include 100 off-street parking spaces for residents, guests, and employees, consisting of 64 uncovered spaces, 26 carport-covered spaces, four accessible spaces, and 10 electric vehicle-capable spaces. Accessible parking would be located near the building entrance. The project would also include eight short-term bicycle spaces and two long-term bicycle lockers near the main building entrance.

Landscaping for the proposed project would include native and drought-tolerant plant species. Landscaping is proposed on the Arena Boulevard frontage, between the RCFE and future light rail corridor, throughout the parking lot, and at the building entry. The two outdoor courtyards would be landscaped with large canopy trees and low-profile groundcovers and shrubs.

The project would include walls, fences, and gates, on the perimeter of the site. Six-foot tube steel fencing with a top rail would be the primary fencing. An eight-foot enhanced masonry wall with pilasters is planned adjacent to the main courtyard for privacy and attenuation of Arena Boulevard traffic noise. Internal to the project, an eight-foot wall finished with painted plaster would provide privacy for the



memory care courtyard. At the primary vehicular access point, an enhanced tube steel fence would have a two-foot stone base and stone pilasters.

### Construction Activities

Construction activities would occur over an approximately 20-month period and are assumed to begin November 2022 and end by June 2024. Construction equipment would include excavators, scraper, dozers, dump trucks, graders, backhoes, trenchers, skid steers, ready-mix trucks, concrete pumps, water trucks, forklifts, scissor lifts, and loaders.

### Operational Activities

Once construction is completed, the project site would operate as a licensed residential care facility for the elderly. The project would provide elderly residents with non-medical assistance with their activities of daily living. The facility would consist of approximately 118 independent/assisted living units and a 24-unit memory care wing. The proposed project would include 24-hour staff consisting of approximately 90 full and part-time employees. Staff would include an executive director and other department directors, culinary staff, activities and fitness staff, housekeeping and maintenance personnel, a bus driver, caregivers, and medication technicians.

## FUNDAMENTALS OF NOISE/SOUND AND VIBRATION

### Noise Metrics

All noise-level and sound-level values presented herein are expressed in terms of decibels (dB), with A-weighting, abbreviated “dBA,” to approximate the hearing sensitivity of humans. Time averaged noise levels of one hour are expressed by the symbol “ $L_{EQ}$ ” unless a different time period is specified. Maximum noise levels are expressed by the symbol “ $L_{MAX}$ .” Some of the data also may be presented as octave-band-filtered and/or A octave band-filtered data, which are a series of sound spectra centered on each stated frequency, with half of the bandwidth above and half of the bandwidth below, the stated frequency. These data are typically used for machinery noise analysis and barrier-effectiveness calculations. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level ( $L_{DN}$ ), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours.

Noise emission data are often provided based on the industry standard format of sound power (noted by  $S_{WL}$ ), which represents the total acoustic power level radiated from a given sound source as related to a reference power level. Sound power differs from sound pressure (if notation is needed, the abbreviation is  $S_{PL}$ ), which measures the fluctuations in air pressure caused by the presence of sound waves and is generally the format that describes noise levels as heard by the receiver. Sound pressure is the actual noise experienced by a human or registered by a sound level instrument. When sound pressure is used to describe a noise source, the distance from the noise source must be provided to provide complete information. Sound power is a specialized analytical method to provide information without the distance requirement, but it may be used to calculate the sound pressure at any desired distance.

Because decibels are logarithmic units,  $S_{PL}$  cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an  $S_{PL}$  of 70 dBA when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1 dBA changes in sound levels, when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000 Hertz [Hz]–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5 dBA increase is generally perceived as a distinctly noticeable increase, and a 10 dBA increase is generally perceived as a doubling of loudness.

#### Vibration Metrics

Groundborne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. Sources of groundborne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Peak particle velocity (PPV) is commonly used to quantify vibration amplitude. The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. For the purposes of this analysis, a PPV descriptor with units of inches per second in/sec is used to evaluate construction-generated vibration for building damage and human complaints.

### EXISTING NOISE-SENSITIVE LAND USES

Noise sensitive land uses (NSLU) are land uses that may be subject to stress and/or interference from excessive noise and generally include residences, hospitals, schools, hotels, resorts, libraries, sensitive wildlife habitat, or similar facilities where quiet is an important attribute of the environment. The nearest NSLUs to the project site are the multi-family residential buildings located approximately 150 feet to the west, with the property line occurring as close as 55 feet to the project site.

### EXISTING NOISE SETTING

The proposed project site is currently undeveloped and is located in a developed area surrounded by residential and commercial land uses. Existing noise sources in the vicinity of the project site primarily include vehicular traffic along nearby roadways. An ambient noise measurement survey was conducted on January 11, 2022 at the project site and included two short-term ambient noise measurements and traffic counts. The traffic counts were conducted to estimate the breakdown of heavy trucks (three or more axles), medium trucks (double tires/two axles), and automobiles along the roadway. The measured noise levels are shown in Table 1, *Ambient Noise Measurement Survey*. Traffic counts for the timed measurement and the one-hour

equivalent volume are shown in Table 2, *Recorded Traffic Volume and Vehicle Mix*. The site visit sheets are included in Attachment A, *Site Survey Measurement Sheets*.

**Table 1**  
**AMBIENT NOISE MEASUREMENT SURVEY**

Measurement	Location	Time	Noise Level (dBA L <sub>EQ</sub> )
1	South side of Arena Boulevard, between Thrive Drive and Truxel Road	9:28 a.m. – 9:43 a.m.	69.0
2	West side of Truxel Road, between Arena Boulevard and Prosper Road	9:53 a.m. – 10:08 a.m.	69.5

Source: Measurements taken by HELIX on January 11, 2022 (see Attachment A for site survey measurement sheets).

**Table 2**  
**RECORDED TRAFFIC VOLUME AND VEHICLE MIX**

Measurement	Roadway	Traffic	Autos	MT <sup>1</sup>	HT <sup>2</sup>
1	Arena Boulevard	15-minute count	177	1	9
		One-hour equivalent	708	4	36
		<b>Percent</b>	94.7%	0.5%	4.8%
2	Truxel Road	15-minute count	253	2	4
		One-hour equivalent	1,012	8	16
		<b>Percent</b>	97.7%	0.8%	1.5%

<sup>1</sup> Medium Trucks (double tires/two axles)

<sup>2</sup> Heavy Trucks (three or more axles)

## EQUIPMENT AND METHODOLOGY

### Ambient Noise Survey

The following equipment was used to measure existing noise levels at the project site:

- Larson Davis SoundTrack LxT Sound Level Meter
- Larson Davis Model CAL250 Calibrator
- Microphone windscreen
- Tripod for the SoundTrack LxT Sound Level Meter

The sound-level meters were field-calibrated immediately prior to the noise measurement to ensure accuracy. All measurements were made with meters that conform to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI S1.4-1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

## Noise Modeling Software

Project construction noise was analyzed using the U.S. Department of Transportation (USDOT) Roadway Construction Noise Model (RCNM; USDOT 2008), which utilizes estimates of sound levels from standard construction equipment.

Modeling of the exterior noise environment for this report was accomplished using the Computer Aided Noise Abatement (CadnaA) model version 2021. CadnaA is a program developed by DataKustik™ for predicting noise impacts in a wide variety of conditions. It allows for the input of project-related information, such as noise source data, barriers, structures, and topography to create a detailed model, and uses the methodology from the U.S. Department of Transportation Federal Highway Administration (FHWA) Traffic Noise Model TNM version 2.5 (USDOT 2004). The noise models used in this analysis were developed using Google Earth and site plans provided by the project architect. Input variables included building mechanical equipment reference noise levels, road alignment, elevation, lane configuration, projected traffic volumes, estimated truck composition percentages, and vehicle speeds.

The one-hour  $L_{EQ}$  traffic noise level is calculated utilizing peak-hour traffic. The model-calculated one-hour  $L_{EQ}$  noise output is the equivalent to the  $L_{DN}$  (Caltrans 2009). This is shown in the following equation:  $L_{DN} = L_{EQ}(h)_{pk} + 10\log_{10}(4.17/P) + 10\log_{10}(D+10N)$ , where  $L_{EQ}(h)_{pk}$  is peak hour  $L_{EQ}$ , P is the peak hour volume percentage of ADT, D is the daytime fraction of ADT, N is the nighttime fraction of ADT, and  $D+N=1$ . The modeling includes the project building, the emergency generator and trash compactor within the utility building, the project external walls around the courtyards on the north and west sides of the site, and the traffic on Arena Boulevard and Truxel Road. The noise modeling input and output is included in Attachment B to this letter.

## Assumptions and Model Input

### Construction

Construction would require the use of equipment throughout the site for the full term of construction. Typical construction activities include excavating, grading, construction the building, and paving. Standard equipment used on the site is assumed to include an excavator, scraper, front-end loader, dump truck, dozer, grader, backhoe, trencher, skid steer, ready-mix truck, concrete pump, water truck, forklift, scissor lift, loader, and roller. Blasting or the use of pile drivers is not anticipated to be required.

### Operation

According to the project site plan and information proved by the project applicant, anticipated operational noise sources would include: a roof-mounted heating, ventilation, and air conditioning (HVAC) system; an emergency generator; and vehicular traffic.

### HVAC Units

The project would use commercial-sized HVAC units located on the rooftop of the proposed building. Standard HVAC planning assumes one ton of HVAC for every 350 square feet of habitable space (PDH Center 2012). Based upon preliminary building square footage provided by the project applicant, the project would require 29 16-ton units. The exact HVAC model has not been determined as of this

analysis. For the purposes of this analysis, a Carrier 38AQS016 16-ton HVAC unit, with a sound power level ( $S_{WL}$ ) of 86.0 dBA, was used to model the noise impacts from the proposed project’s HVAC system (Carrier 2005). The manufacturer’s noise data for the HVAC units is provided below in Table 3, *HVAC Condenser Noise Data (SWL dBA)*.

**Table 3**  
**HVAC CONDENSER NOISE DATA (SWL dBA)**

63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall Noise Level
93.0	93.0	86.0	83.0	80.0	78.0	73.0	71.0	86.0

$S_{WL}$  = sound power level; dBA = A-weighted decibel; Hz = Hertz; kHz = kilohertz

### Emergency Generator

An emergency generator would be required for the project. Specifically, the project is anticipated to use a diesel Kohler Remote Serial Annunciator, which has a sound pressure level ( $S_{PL}$ ) of 75.0 dBA according to the manufacturer’s specifications (North State Electrical Contractors 2019), which is approximately equivalent to 103.0 dBA  $S_{WL}$  according to the CadnaA modeling. For maintenance purposes, the generator would be run once monthly for thirty minutes at 4:30 p.m. and once a year for 90 minutes at 80 percent capacity.

### Trash Compactor

The project is anticipated to use a four-yard Marathon trash compactor, which would operate daily for up to two minutes. The trash compactor noise levels used in the analysis is based on noise levels of a trash compactor used in similar projects, which is shown below in Table 4, *Trash Compactor Noise Data (SWL dBA)*.

**Table 4**  
**TRASH COMPACTOR NOISE DATA (SWL dBA)**

63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	Overall Noise Level
83.3	86.1	91.3	93.0	87.6	91.1	88.9	76.4	96.5

$S_{WL}$  = sound power level; dBA = A-weighted decibel; Hz = Hertz; kHz = kilohertz

### Vehicular Traffic

Traffic data for the road segments on Arena Boulevard and Truxel Road was obtained from Appendix D of the City of Sacramento’s 2035 General Plan Master EIR (City 2014). A two percent growth rate was used to calculate the number of average daily trips (ADT) on these segments for 2024, the first year the project is anticipated to be operational. Peak hour was calculated using 10 percent of ADT levels. The breakdown of heavy trucks (three or more axles), medium trucks (double tires/two axles), and automobiles inputted using the breakdown of the traffic counts taken during the short-term noise measurements (refer to Table 2). Traffic on both roadway segments was assumed to be traveling at the posted speed limit of 45 miles per hour (mph). Project trips were estimated using ITE’s trip generation rates for assisted living facilities, which would result in approximately 370 trips on a weekday, 417 trips on a Saturday, and 448 trips on a Sunday (ITE 2017). The modeling conservatively used 10 percent of the Sunday trips to calculate 45 weekend peak hour trips generated by the project. Weekend peak hour

traffic volumes on the modeled road segments are shown in Table 5, *Traffic Volumes*. It should be noted that the project site is zoned Limited Commercial Planned Unit Development (C-1 PUD) which allows a broad range of commercial uses. In 2006, The Plaza project (P06-070) was approved on the site for development of up to 51,000 square feet of commercial uses. As a residential care facility, the proposed project would generate fewer trips than projected under existing zoning and the approved Plaza project.

**Table 5**  
**TRAFFIC VOLUMES**

Roadway Segment	2024 Weekend Peak Hour	2024 + Project Weekend Peak Hour
Arena Boulevard – I-5 to Truxel Road	1,756	1,801
Truxel Road – Arena Boulevard to I-80	6,059	6,104

Source: City 2014

## NOISE REGULATIONS

City of Sacramento Municipal Code

The following noise ordinances are potentially applicable to the project (City 2020):

**Section 8.68.60 Exterior Noise Standards** – establishes exterior noise standards for noise received by agricultural and residential properties of 55 dBA from 7:00 a.m. to 10:00 p.m. and 50 dBA from 10:00 p.m. to 7:00 a.m. The ordinance allows the exterior standard to be exceeded by 5 dBA for cumulative periods of 15 minutes per hour, by 10 dBA for cumulative periods of 5 minutes per hour, by 15 dBA for cumulative periods of 1 minute per hour, and by 20 dBA maximum for any period.

**Section 8.68.60 Interior Noise Standards** – establishes residential interior noise limits during the period of 10:00 p.m. to 7:00 a.m. of: 45 dBA for a cumulative period of more than five minutes in any hour; 50 dBA for a cumulative period of more than one minute in any hour; and 55 dBA for any period of time.

**Section 8.68.80 Exemptions** – exempts noise sources from the exterior noise requirements due to the erection (including excavation), demolition, alteration or repair of any building or structure between the hours of 7:00 a.m. and 6:00 p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday; provided, however, that the operation of an internal combustion engine shall not be exempt pursuant to this subsection if such engine is not equipped with suitable exhaust and intake silencers which are in good working order.

City of Sacramento 2035 General Plan

The following General Plan policies are potentially applicable to the project (City 2015).

**Policy EC 3.1.1** – establishes normally acceptable noise levels of 60 dBA  $L_{DN}$  for residential—low-density single-family land uses; 70 dBA for office buildings—business, commercial and professional; and 75 dBA  $L_{DN}$  for industrial, manufacturing, utilities, and agriculture uses.

**Policy EC 3.1.2** – establishes standards for acceptable increases to existing ambient levels due to development projects. Table EC 2 from the 2035 General Plan is reproduced here as Table 6, *Exterior Incremental Noise Impact Standards for Noise-Sensitive Uses (dBA)*.

**Table 6**  
**EXTERIOR INCREMENTAL NOISE IMPACT STANDARDS FOR NOISE-SENSITIVE USES**

Existing L <sub>DN</sub> (dBA)	Allowable Noise Increment (dBA)
<b>Residences and buildings where people normally sleep</b>	
45	8
50	5
55	3
60	2
65	1
70	1
75	0
80	0
<b>Institutional land uses with primarily daytime and evening uses</b>	
45	12
50	9
55	6
60	5
65	3
70	3
75	1
80	0

Source: City 2015

**Policy EC 3.1.3** – requires new development to include noise mitigation to assure acceptable interior noise levels appropriate to the land use type: 45 dBA L<sub>DN</sub> (with windows closed) for residential, transient lodgings, hospitals, nursing homes and other uses where people normally sleep; and 45 dBA L<sub>EQ</sub> (peak hour with windows closed) for office buildings and similar uses.

**Policy EC 3.1.10** – requires development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

## SIGNIFICANCE CRITERIA

To be consistent with the analysis in the 2035 General Plan Master EIR, impacts due to noise may be considered significant if construction and/or implementation of the project would result in the following impacts that remain significant after implementation of 2035 General Plan policies:

- a) Result in exterior noise levels in the project area that are above the upper value of the normally acceptable category for nearby land uses due to the project’s noise level increases;

- b) Result in residential interior noise levels of 45 dBA  $L_{DN}$  or greater caused by noise level increases due to the project;
- c) Result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance;
- 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;
- 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; or
- 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.

In addition to the above standards, the allowable incremental increase in exterior noise established in the 2035 General Plan Policy EC 3.1.2 (shown in Table 6, above) would apply.

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

The General Plan 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 noise standards (Policy EC 3.1.3). Policy EC 3.1.2 establishes exterior incremental noise increase standards for new development. A variety of policies provide standards for the types of development envisioned in the General Plan. Policy EC 3.1.10 calls for the City to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses. 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. No mitigation measures were identified in the General Plan Master EIR which would reduce the severity of significant noise and vibration impacts. All other noise and vibration impacts were found to be less than significant and would require no mitigation with compliance of General Plan policies (City 2014; City 2015).

#### IMPACT ANALYSIS

- a) *Would the project 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?*

The General Plan Master EIR found this impact to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact (City 2014; City 2015a).

#### On-Site Operational Noise

Non-transportation (on-site) noise sources associated with operation of the project would include rooftop HVAC systems, an emergency generator, and a trash compactor. As previously discussed, the



trash compactor would only operate for up to two minutes per day, and the emergency generator would only operate for 30 minutes once per month and 90 minutes once per year. As a conservative analysis, the modeling analyzed the hour in which the trash compactor would operate for two minutes and the generator would operate for the full hour, in addition to the operation of the 29 HVAC units. A receiver, referred to as Receiver 1 (see Figure 4, *Receiver Locations*), was placed at the property line of the multi-family residences to the west of the project site, which are the closest NSLUs. The noise modeling input and output is included in Attachment B to this letter.

The results of the modeling indicated that operation of the HVAC units, trash compactor, and generator would result in a noise level of 50.8 dBA  $L_{EQ}$  at the receiver, with an  $L_{MAX}$  of 51.1 dBA. This is below the daytime standards of 55 dBA  $L_{EQ}$  and 75 dBA  $L_{MAX}$  in the City's Municipal Code section 8.68.60. The project would therefore not result in the generation of on-site operational noise exceeding City daytime noise standards established in section 8.68.60 of the City Municipal Code.

The generator and trash compactor would not operate during the nighttime hours of 10:00 p.m. to 7:00 a.m. Therefore, the operational nighttime noise sources would be limited to the HVAC units. The results of the modeling indicated that operation of the HVAC units would result in a noise level of 45.5 dBA  $L_{EQ}$  at the property line of the nearest NSLU, which would not exceed the 50 dBA noise standard from the noise ordinance during the 10:00 p.m. to 7:00 a.m. hours. The project would therefore not result in the generation of on-site operational noise exceeding City nighttime noise standards established in section 8.68.60 of the City Municipal Code.

#### Off-site Transportation Noise

Future traffic noise levels presented in this analysis are based on traffic volumes described above. Two receivers were placed along each of the roadway segments, with one at a residential building and one at a commercial property, for a total of four receivers. Specifically, Receiver 2 was placed at the northern boundary of the multi-family residences west of the project site, along Arena Boulevard. Receiver 3 was placed at the southern boundary of the commercial building along Arena Boulevard across from Thrive Drive. Receiver 4 was placed at the eastern boundary of the residences south of the project site, along Truxel Road. Receiver 5 was placed at the western boundary of the commercial building east of the project site along Truxel Road. Refer to Figure 4 for a map of receiver locations.

The traffic noise modeling does not account for noise reduction resulting from structures and barriers on or off the project site. The results of the traffic noise analysis are shown below in Table 7, *Off-site Traffic Noise Levels (dBA  $L_{DN}$ )*. The increase in noise is compared to the allowable increase described in Table 6, above. The noise modeling input and output is included in Attachment B to this letter.

**Table 7**  
**OFF-SITE TRAFFIC NOISE LEVELS (dBA L<sub>DN</sub>)**

Roadway Segment	2024 Peak Hour	2024 + Project Peak Hour	Increase	Allowable Increase	Exceed Allowable Increase?
<i>Arena Boulevard – I-5 to Truxel Road</i>					
Receiver 2 (residential)	62.5	62.6	0.1	1	No
Receiver 3 (commercial)	62.2	62.3	0.1	3	No
<i>Truxel Road – Arena Boulevard to I-80</i>					
Receiver 4 (residential)	62.8	62.8	0	1	No
Receiver 5 (commercial)	66.1	66.1	0	3	No

Source: CadnaA (see Attachment B for model output).  
dBA = A-weighted decibel; L<sub>DN</sub> = Day Night sound level; I- = Interstate

As shown in Table 7, existing ambient noise levels exceed the City’s normally acceptable standard of 60 dBA L<sub>DN</sub> noise level limit for residential land uses along both roadway segments. However, the maximum noise increase as a result of the addition of project traffic would be 0.1 dBA L<sub>DN</sub>. This increase would not be noticeable and would not exceed the 1 dBA L<sub>DN</sub> maximum allowable increase for residential uses. Existing ambient noise levels do not exceed the City’s normally acceptable standard of 70 dBA L<sub>DN</sub> noise level limit for commercial/professional buildings along either roadway segment. The maximum noise increase as a result of the addition of project traffic would be 0.1 dBA L<sub>DN</sub>. This increase would not be noticeable and would not exceed the 3 dBA L<sub>DN</sub> maximum allowable increase for commercial/professional uses. Additionally, as a residential care facility, the proposed project would generate fewer trips than projected under existing zoning and the approved Plaza project.

Operation of the project would not result in a substantial increase in ambient noise levels in the vicinity of the project in excess of standards established in the 2035 General Plan or noise ordinance. The impact would be less than significant and would have **no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

*b) Would the project result in residential interior noise levels of 45 dBA L<sub>DN</sub> or greater caused by noise level increases due to the project?*

The General Plan Master EIR found this impact to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact (City 2014; City 2015).

The City of Sacramento 2035 General Plan Update establishes a normally acceptable exterior noise level of 60 dBA L<sub>DN</sub> and interior noise level of 45 dBA L<sub>DN</sub> for residential land uses. Traditional architectural materials typically used in residential construction attenuate noise levels by 15 dBA. Therefore, if the noise level at the exterior of the nearest NSLUs would exceed 60 dBA L<sub>DN</sub>, the interior noise levels would potentially exceed the City standard of 45 dBA L<sub>DN</sub>.

To analyze noise levels that would occur on the proposed project site, receivers were placed along the proposed building’s northern and eastern facades, in the northern courtyard, and in the western courtyard; refer to Figure 5 for a map of receiver locations. The project proposes to construct an eight-foot wall at the boundaries of each of the courtyards for traffic noise attenuation. The modeling estimated noise levels at these locations with and without the proposed courtyard noise barriers. The

results of the noise analysis are shown below in Table 8, *On-site Traffic Noise Levels (dBA L<sub>DN</sub>)*. The noise modeling input and output is included in Attachment B to this letter.

**Table 8**  
**ON-SITE TRAFFIC NOISE LEVELS (dBA L<sub>DN</sub>)**

Receivers	2024 + Project Peak Hour (no barriers)	Exceed 60 dBA Standard?	2024 + Project Peak Hour (with barriers)	Exceed 60 dBA Standard?
<i>Building Facades</i>				
Receiver 6 (facing Arena Boulevard, west side)	59.9	No	59.9	No
Receiver 7 (facing Arena Boulevard, east side)	61.6	Yes	61.5	Yes
Receiver 8 (facing Truxel Road, north side)	61.9	Yes	61.9	Yes
Receiver 9 (facing Truxel Road, south side)	61.9	Yes	61.9	Yes
<i>Courtyards</i>				
Receiver 10 (northern courtyard)	61.4	Yes	54.1	No
Receiver 11 (western courtyard)	47.4	No	43.9	No

Source: CadnaA (see Attachment B for model output).  
dBA = A-weighted decibel; L<sub>DN</sub> = Day Night sound level

As shown in Table 8, the exterior building walls facing Arena Boulevard and Truxel Road would exceed 60 dBA L<sub>DN</sub> at most locations; therefore, the building would exceed the interior noise standard of 45 dBA L<sub>DN</sub> in the units that face Arena Boulevard and Truxel Road. Additionally, without the courtyard noise attenuation barriers, the noise level in the northern courtyard would exceed the 60 dBA L<sub>DN</sub> exterior threshold. However, with implementation of the barrier, the noise level in the northern courtyard would be reduced to below the threshold. Noise levels at the western courtyard would be below the 60 dBA L<sub>DN</sub> exterior threshold with and without the barrier.

Policy EC 3.1.3 of the 2035 General Plan requires inclusion of noise reduction strategies in the design of new residential or other noise sensitive uses. Therefore, the project would be required to incorporate noise reduction strategies into the project design to meet interior noise standards. The interior noise attenuation strategies are provided in compliance measure NOI-1, below. With adherence to measure NOI-1, the project would not result in interior noise levels exceeding the City standard and **would have no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

#### General Plan Compliance Measure

**NOI-1 On-site Interior Noise Level Reduction.** For the project’s habitable areas (both living rooms and bedrooms) with a direct line-of-sight to Arena Boulevard and Truxel Road, the following measures shall be incorporated in the design of the project to reduce interior noise levels to 45 dBA L<sub>DN</sub> or less:

- Minimum exterior wall requirement of STC 46 with a construction of standard 0.875-inch stucco, stone veneer over a plaster base or on-hour rated composite siding assemblies over 0.5-inch shearwall on 2x6 studs with 0.625-inch Type “X” Drywall.

- Minimum window requirement of STC 28 with a window construction of dual glazing window thickness 0.125-inch and 0.5-inch air gap.

c) *Would the project result in construction noise levels that exceed the standards in the City of Sacramento Noise Ordinance?*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015).

The project site area, which is anticipated to have significant construction activity, is approximately 55 feet east of the property line of the nearest NSLUs. The noisiest heavy construction equipment anticipated to be used near NSLUs would be a grader, used during site preparations and grading. Modeling with the RCNM shows that noise from a grader would be 80.2 dBA  $L_{EQ}$  at the closest residential property line. This noise level would exceed the City Noise Ordinance standard of 55 dBA from 7:00 a.m. to 10:00 p.m. and 50 dBA from 10:00 p.m. to 7:00 a.m.

According to the City Code Section 8.68.060, *Exemptions*, noise sources associated with construction of the project which are conducted between the hours of 7:00 a.m. and 6:00 p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and between 9:00 a.m. and 6:00 p.m. on Sunday, are exempt for the City noise standard provided that all internal combustion engines used in the construction activities are equipped with suitable exhaust and intake silencers in good working order (City 2020). To address noise from construction activities the 2035 General Plan includes Policy EC 3.1.10, which requires proponents of development projects to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible.

The project would adhere to General Plan compliance measure NOI-2, provided below, which would restrict construction hours to the above limitations and require all construction equipment to be equipped with intake and exhaust silencers. Therefore, with adherence to measure NOI-2, construction of the project would not result in exterior noise levels exceeding the City standard and all additional significant environmental effects would be mitigated to a less than significant level. With adherence to measure NOI-2, construction of the project **would have no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

#### General Plan Compliance Measure

**NOI-2 Construction Hourly Limits.** The City shall note on all construction permits that any project construction activities that may result in the generation of noise shall not occur outside of the hours of 7:00 a.m. and 6:00 p.m., on Monday, Tuesday, Wednesday, Thursday, Friday and Saturday, and outside the hours of 9:00 a.m. and 6:00 p.m. on Sunday, and that all internal combustion engines used for project construction shall be equipped with intake and exhaust silencers and maintained in accordance with the equipment manufacturer's specifications.

- d) *Would the project 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?*

The General Plan Master EIR found this impact to be significant and unavoidable, no mitigation was identified which would reduce the severity of the impact (City 2014; City 2015).

Construction activities known to generate excessive ground-borne vibration, such as pile driving or blasting, would not be conducted by the project. A possible source of vibration during project construction activities would be a vibratory roller, which may be used within 150 feet of the nearest off-site building (multi-family residence) to the west. A large vibratory roller could create approximately 0.210 inch per second PPV at 25 feet (Caltrans 2020). With typical ground conditions, a large vibratory roller at 150 feet would result in 0.03 inches per second PPV.<sup>1</sup> This vibration level would not exceed the 0.5 inches per second PPV threshold risk of architectural damage to non-engineered timber and masonry buildings. Therefore, although a vibratory roller may be perceptible to nearby human receptors, impacts associated with construction vibration impacts would be less than significant and the project would have **no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

- e) *Would the project 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?*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015).

The project does not propose new highways or railroads and there are no existing highways or railroads within 1,000 feet of the project site. The project would not affect operations on any railroads and would result in a minimal amount of truck trips to highways in the City due to the nature of the project. Therefore, the project would not result in ground-borne vibration in excess of 0.5 inch per second PPV from highway traffic or rail operations and would have **no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

- f): *Would the project 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?*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015).

Buildings older than 45 years (built before 1976) have the potential to be listed as historically significant in California. A possible source of vibration during project construction activities would be a vibratory roller throughout the project site. As shown in the response to question (d) above, a large vibratory roller would result in 0.03 inches per second PPV at the nearest building, which is the multi-family residential building located to the west of the project site. The vibration would not exceed the threshold

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<sup>1</sup>  $PPV = PPV_{REF} (D_{REF}/D)^N$  where  $PPV_{REF}$  = the reference vibration level,  $D_{REF}$  = the reference distance,  $D$  = the distance from the vibration source to the receiver, and  $N = 1.1$  for typical soils (Caltrans 2020).

of 0.2 inches per second PPV. Additionally, the multi-family residential building was not constructed before 1976. Therefore, impacts related vibrations from project construction or project affected highways would be less than significant and would have **no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

## CONCLUSION

On-site project operational noise or project-generated traffic noise would not result in noise levels increases in excess of 2035 General Plan standards and would not result in new impacts or worsen any impacts that were identified in the General Plan Master EIR. The project also would not conflict with the noise regulations in the City of Sacramento Municipal Code. The proposed building would meet the exterior noise standard of 60 dBA  $L_{DN}$  at both outdoor courtyards with the construction of the proposed 8-foot noise barriers along the courtyards. Additionally, with adherence to General Plan compliance measure NOI-1, the project's proposed building would meet the applicable interior noise standard.

With adherence to General Plan compliance measure NOI-2 to restrict the hours of construction, noise generated by project construction activities would not exceed the standards in the City noise ordinance and would not result in new impacts or worsen any impacts that were identified in the General Plan Master EIR.

Construction or operation of the project would not generate excessive ground-borne vibration levels affecting nearby residents or building and would not result in new impacts or worsen any impacts that were identified in the General Plan Master EIR.

Sincerely,



Joanne M. Dramko, AICP  
Principal Noise Specialist



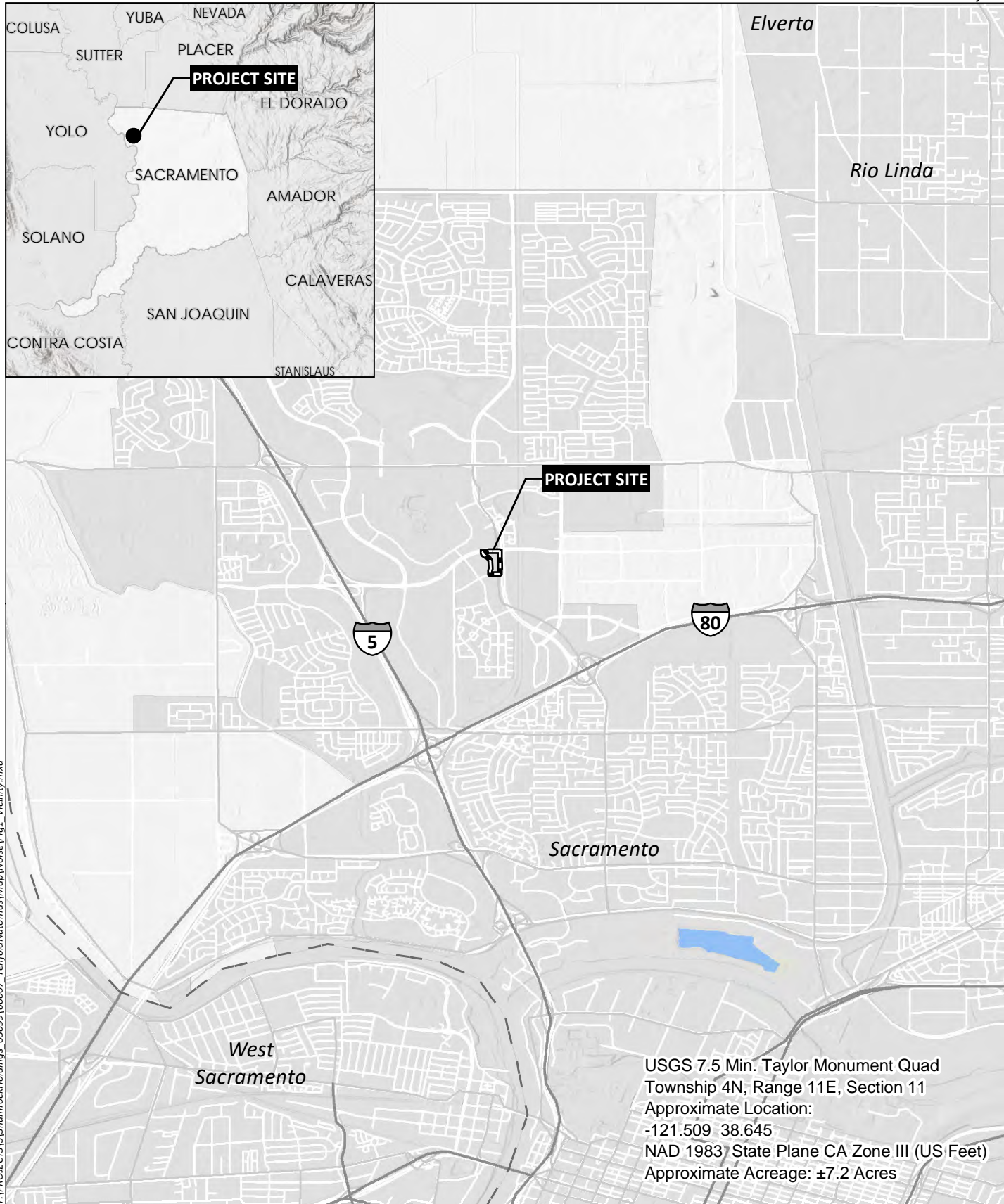
Kristen Garcia  
Noise Analyst

### Attachments:

- Figure 1: Vicinity Map
- Figure 2: Aerial Photograph
- Figure 3: Site Plan
- Figure 4: Receiver Locations
- Attachment A: Site Survey Measurement Sheets
- Attachment B: CadnaA Modeling

## REFERENCES

- California Department of Transportation (Caltrans). 2020. Transportation and Construction Vibration Guidance Manual. April. Available at: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>.
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USGS 7.5 Min. Taylor Monument Quad  
 Township 4N, Range 11E, Section 11  
 Approximate Location:  
 -121.509 38.645  
 NAD 1983 State Plane CA Zone III (US Feet)  
 Approximate Acreage: ±7.2 Acres

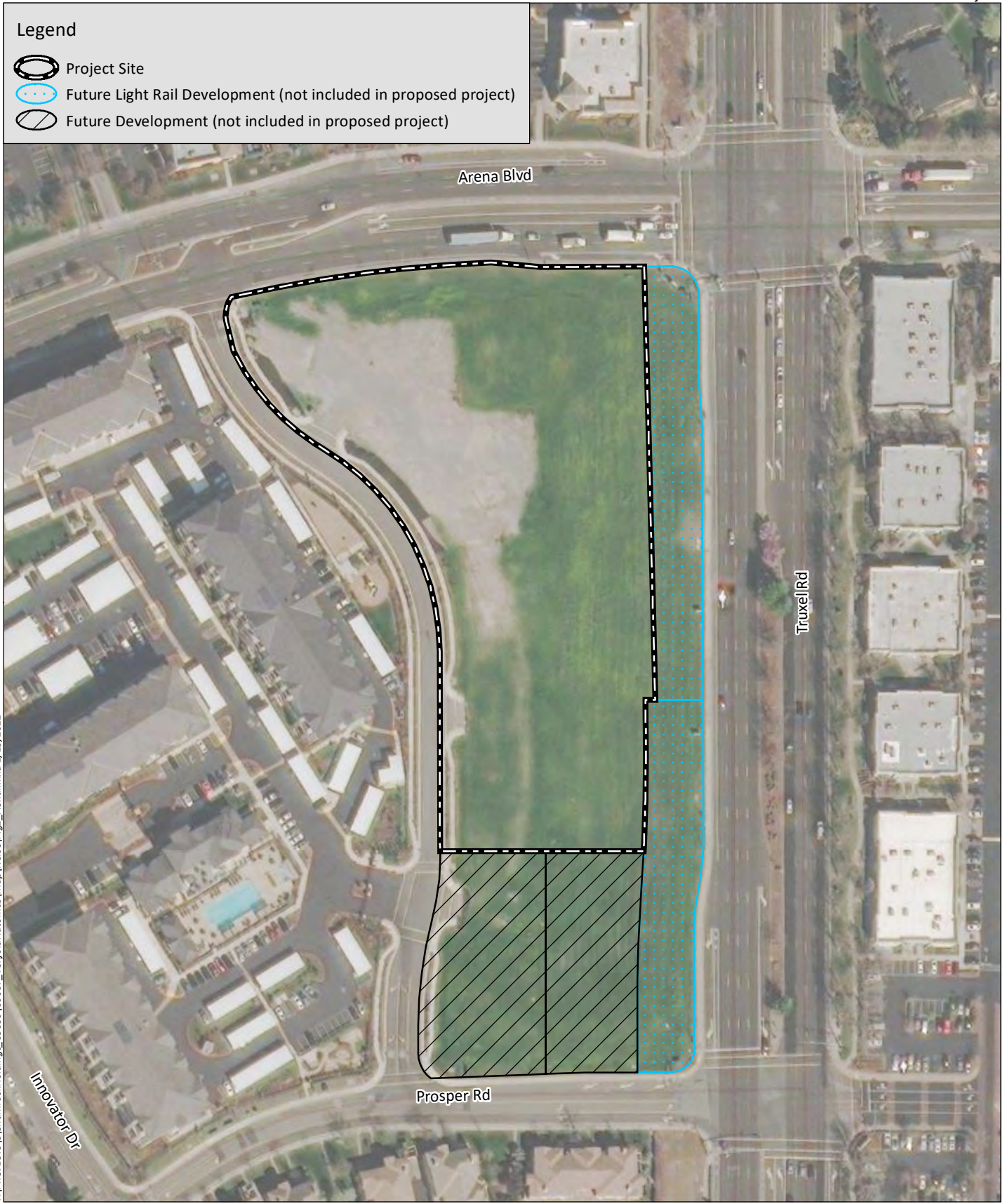
Source: Base Map Layers (Esri, USGS, NGA, NASA)

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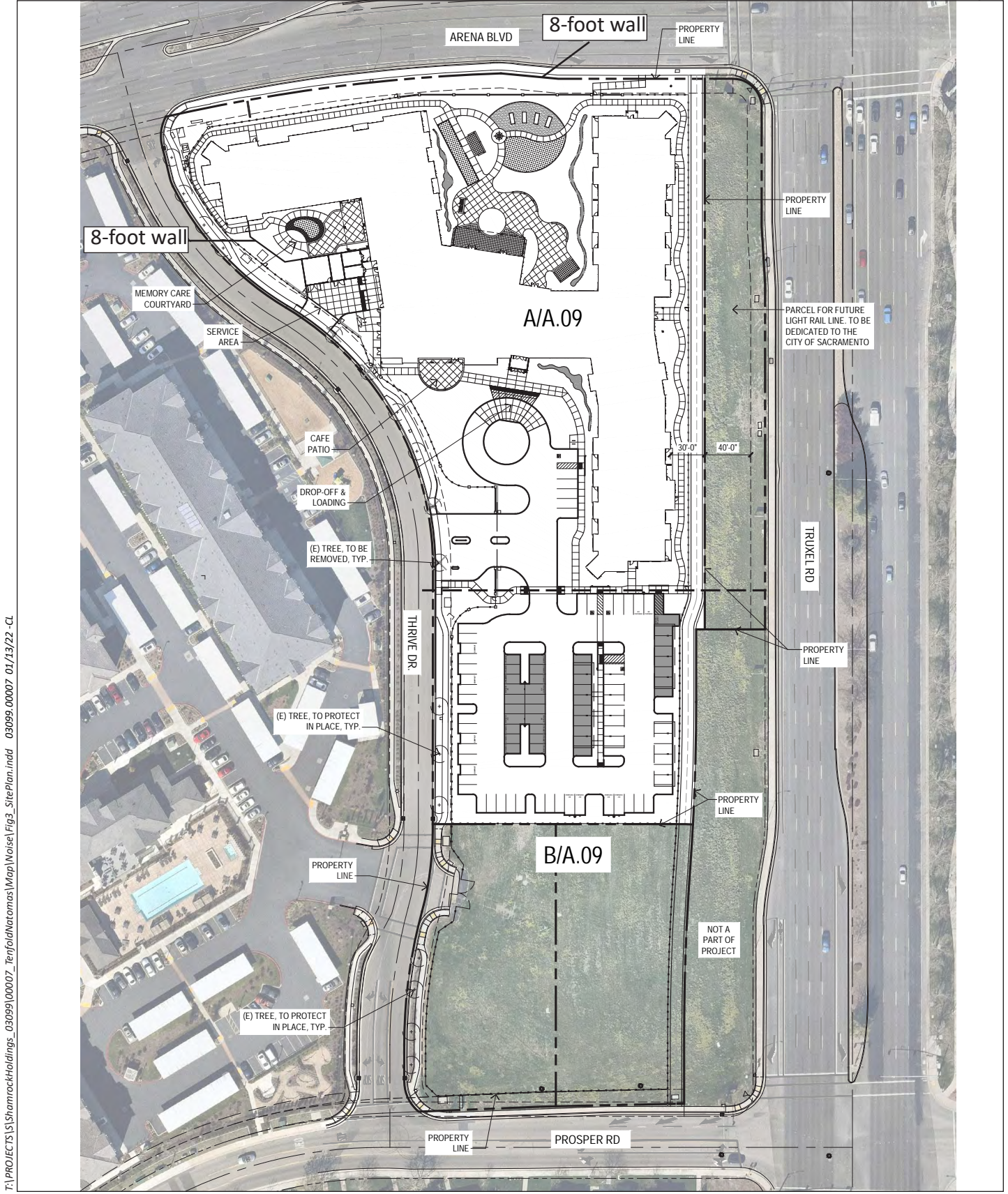
Legend

-  Project Site
-  Future Light Rail Development (not included in proposed project)
-  Future Development (not included in proposed project)







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Source: Aerial (Maxar, 3/4/2021)



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Source: LPAS, INC. 2021

-  Project Site
-  Future Light Rail Development (not included in proposed project)
-  Future Development (not included in proposed project)
-  Noise Receiver



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# Attachment A

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Ambient Noise  
Measurement  
Locations

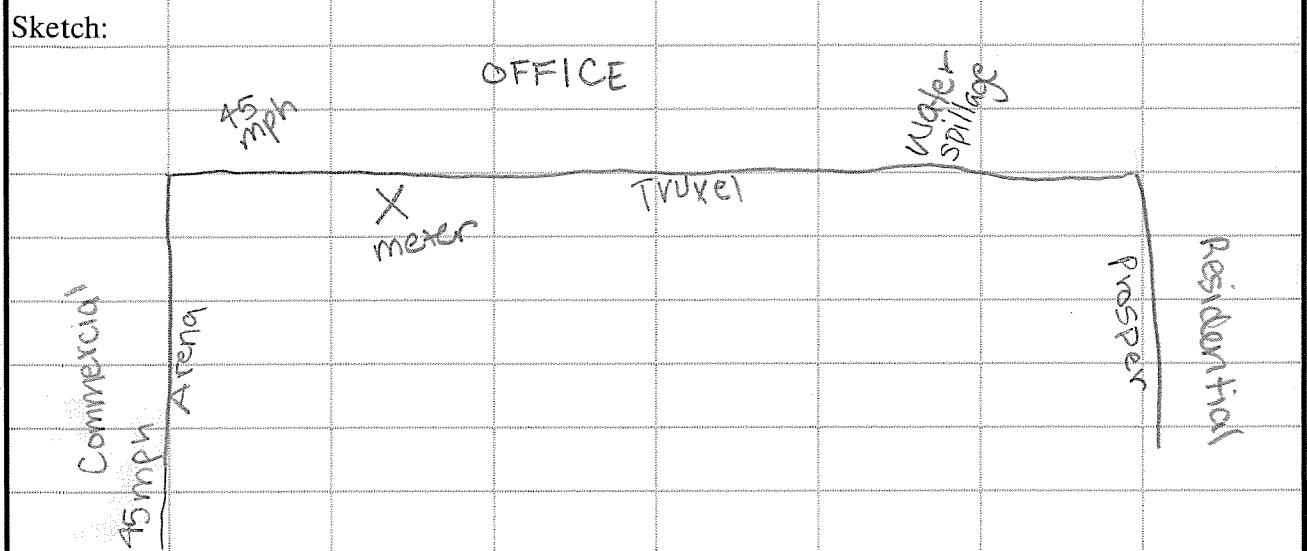
KG 623.249.9609

Site Survey			
Job #		Project Name:	
Date: 1/11/22	Site #: Arena (#1)	Engineer: JP, RE	
Address: Arena Blvd at Thrive Drive			
Meter: LXT 1	Serial #: 1013	Calibrator: CALISO	Serial #: 5529
Notes: Airplane (three overhead), clear conditions			
LXT - data.096 (File saved under)			
Sketch:			
Temp: 44°	Wind Spd: 0 mph	mph	Humidity: 91 %
Start of Measurement: 9:28	End of Measurement: 9:43	69.0 dBA L <sub>EQ</sub>	
Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)	
<del>     </del> <del>     </del> <del>     </del> <del>     </del> <del>     </del> <del>     </del> + 2 cars		<del>     </del> <del>     </del> <del>     </del>	
Noise Measurement for Information Only			
No Through Roadways			
No Calibration Analysis Will Be Provided			

### Site Survey

Job #	Project Name: <b>Natomas RCFE</b>		
Date: <b>1/11/22</b>	Site #: <b>Truxel #2</b>	Engineer: <b>Julia Pano</b>	
Address: <b>Truxel Road at Arena Blvd</b>			
Meter: <b>LXT1</b>	Serial #: <b>1013</b>	Calibrator: <b>CAL150</b>	Serial #: <b>5529</b>

Notes: **Standing water 300 ft to the south, speeds are between 45-55 mph on Truxel, clear conditions**  
**LXT data.097 (File saved under)**



Temp: <b>45°F</b>	Wind Spd: <b>1</b> mph	Humidity: <b>88</b> %
Start of Measurement: <b>9:53</b>	End of Measurement: <b>10:08</b>	<b>69.5</b> dBA L <sub>EQ</sub>

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
Noise Measurement for Information Only		
No Through Roadways		
No Calibration Analysis Will Be Provided		

# Attachment B

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## Receiver Locations





CadnaA  
Input-Traffic

Name	M.	ID	Lme			Count Data		exact Count Data						Speed Limit		SCS Dist.	Surface		Gradient (%)	Mult. Reflection	
			Day (dBA)	Evening (dBA)	Night (dBA)	DTV	Str.class.	M	p (%)			Auto (km/h)	Truck (km/h)	Dstro (dB)	Type		Drefl (dB)	Hbuild (m)		Dist. (m)	
Arena_eastb	+		63	0	0			901	0	0	0.5	0	25	72	0	0	1	0	0		
Arena_westb	+		64.7	0	0			901	0	0	0.5	0	25	72	0	0	1	0	0		
Truxel_southb	+		68.4	0	0			3053	0	0	0.8	0	25	72	0	0	1	0	0		
Truxel_northb	+		68.4	0	0			3053	0	0	0.8	0	25	72	0	0	1	0	0		

CadnaA

Land Use Compatibility - Project, No Wall

Name	M.	ID	Level Lr		Limit. Value		Land Use		Height (m)	Coordinates			
			Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Type	Auto		Noise Type	X (m)	Y (m)	Z (m)
R6 on-site north - west		ONS1	59.9	-68.2	0	0	x		Total	1.52 r	1540236	1231369	1.52
R7 on-site north - east		ONS1	61.6	-66.9	0	0	x		Total	1.52 r	1540331	1231370	1.52
R8 on-site east - north		ONS1	61.9	-68.9	0	0	x		Total	1.52 r	1540337	1231349	1.52
R9 on-site east - south		ONS1	61.9	-69.1	0	0	x		Total	1.52 r	1540334	1231294	1.52
R10 on-site north courtyard		ONS1	61.4	-66.7	0	0	x		Total	1.52 r	1540293	1231372	1.52
R11 onsite courtyard west		ONS1	47.4	-76.2	0	0	x		Total	1.52 r	1540231	1231342	1.52

CadnaA

Land Use Compatibility - Project with Wall

Name	M. ID	Level Lr		Limit. Value		Land Use		Height (m)	Coordinates			
		Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Type	Auto		Noise Type	X (m)	Y (m)	Z (m)
R6 on-site north - west	ONS1	59.9	-68.2	0	0	x		Total	1.52 r	1540236	1231369	1.52
R7 on-site north - east	ONS1	61.5	-67.1	0	0	x		Total	1.52 r	1540331	1231370	1.52
R8 on-site east - north	ONS1	61.9	-68.9	0	0	x		Total	1.52 r	1540337	1231349	1.52
R9 on-site east - south	ONS1	61.9	-69.1	0	0	x		Total	1.52 r	1540334	1231294	1.52
R10 on-site north courtyard	ONS1	54.1	-71.8	0	0	x		Total	1.52 r	1540293	1231372	1.52
R11 onsite courtyard west	ONS1	43.9	-77.9	0	0	x		Total	1.52 r	1540231	1231342	1.52

CadnaA Output  
Traffic - 2024

Name	M.	ID	Level Lr		Limit. Value		Land Use		Height	Coordinates			
			Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Type	Auto		Noise Type	X (m)	Y (m)	Z (m)
R2 Arena-res		ONS1	62.5	-66	0	0	x		Total	1.52 r	1540155	1231356	1.52
R3 Arena-com		ONS1	62.2	-66.7	0	0	x		Total	1.52 r	1540196	1231418	1.52
R4 Truxel-res		ONS1	62.8	-69.1	0	0	x		Total	1.52 r	1540332	1231069	1.52
R5 Truxel-com		ONS1	66.1	-66.6	0	0	x		Total	1.52 r	1540409	1231264	1.52

CadnaA Output

Traffic - 2024 + Project

Name	M.	ID	Level Lr		Limit. Value		Land Use		Noise Type	Height (m)	Coordinates		
			Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Type	Auto			X (m)	Y (m)	Z (m)
R2 Arena-res		ONS1	62.6	-66	0	0	0	x	Total	1.52 r	1540155	1231356	1.52
R3 Arena-com		ONS1	62.3	-66.7	0	0	0	x	Total	1.52 r	1540196	1231418	1.52
R4 Truxel-res		ONS1	62.8	-69.1	0	0	0	x	Total	1.52 r	1540332	1231069	1.52
R5 Truxel-com		ONS1	66.1	-66.6	0	0	0	x	Total	1.52 r	1540409	1231264	1.52

CadnaA Output

Daytime Operational - HVAC, Generator (60 min), Compactor

Name	M.	ID	Level Lr		Limit. Value		Land Use		Height (m)	Coordinates			
			Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Type	Auto		Noise Type	X (m)	Y (m)	Z (m)
R1 off-site west		OFFS1	50.8	45.5	0	0	x		Total	1.52 r	1540221	1231312	1.52

CadnaA Output

Daytime Operational - HVAC, Generator (60 min), Compactor

Name	M.	ID	Level Lr		Limit. Value		Land Use		Height (m)	Noise Type	Coordinates		
			Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Type	Auto			X (m)	Y (m)	Z (m)
R1 off-site west		OFFS1	51.1	45.5	0	0	0	x	1.52 r	Total	1540221	1231312	1.52

CadnaA Output  
 Nighttime Operational - HVAC

Name	M. ID	Level Lr		Limit. Value		Land Use		Noise Type	Height (m)	Coordinates		
		Day (dBA)	Night (dBA)	Day (dBA)	Night (dBA)	Type	Auto			X (m)	Y (m)	Z (m)
R1 off-site west	OFFS1	45.5	45.5	0	0	0	x	Total	1.52 r	1540221	1231312	1.52



# Appendix C

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Noise Technical Study

February 22, 2022

03099.00007.001

Brigid Flanigan  
Tenfold Development, LLC  
985 SW Disk Drive, Suite 120  
Bend, OR 97702

**Subject: Air Quality and Greenhouse Gas Emissions Technical Analysis for the Tenfold Natomas Residential Care Facility for the Elderly Project**

Dear Ms. Flanigan:

HELIX Environmental Planning, Inc. (HELIX) has assessed the air quality and greenhouse gas (GHG) emissions associated with the construction and operation of the proposed Tenfold Natomas Residential Care Facility for the Elderly (RCFE). Analysis within this report was prepared to support impact analysis pursuant to the California Environmental Quality Act (CEQA; 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 (City). The following analysis reviews the discussions of potential impacts and irreversible significant effects analyzed in the 2035 General Plan Master Environmental Impact Report (2035 General Plan Master EIR) to determine their adequacy for the Revised Project (see CEQA Guidelines Section 15178(b),(c)) and identifies any potential new or additional project-specific significant environmental effects that were not analyzed in the General Plan Master EIR and any mitigation measures or alternatives that may avoid or mitigate any potential identified effects to a less than significant level (City 2014; City 2015a).

## PROJECT LOCATION

The 4.58-acre Revised Project site is in the southwest corner of the intersection of Arena Boulevard and Truxel Road in the North Natomas community of the City of Sacramento in Sacramento County, as shown on Figure 1, *Vicinity Map*. A 0.56-acre parcel is located immediately east of the Revised Project site and will be offered for dedication for a future light rail line not included in the Revised Project. Immediately south of the Revised Project site are two parcels totaling 1.34 acres, which are not proposed for development as part of this project. These parcels, including the Revised Project site, total 6.48 acres consisting of Assessor's Parcel Numbers (APN) 225-2970-001 through -007. The Revised Project site is currently vacant, sparsely vegetated with grasses, and stubbed with wet and dry utilities. Surrounding land uses include townhomes south of the site, office and retail north of Arena Boulevard, and offices east of Truxel Road (see Figure 2, *Aerial Photograph*). The Sleep Train Arena site to the northwest is proposed to be redeveloped with a medical school and teaching hospital. The 293-unit four-story Alira Apartment community is west of the site. The Revised Project site is proximate to residential neighborhoods, employment centers, services, schools, parks, and open space areas in the North Natomas community.

## PROJECT DESCRIPTION

The Revised Project consists of development of a licensed RCFE with 118 independent/assisted living units, a 24-unit memory care wing, indoor and outdoor amenities, parking, and landscaping (Figure 3, *Site Plan*). The Revised Project would construct an approximately 157,500 square foot three-story building adjacent to Arena Boulevard, with the main entrance on the southwest side of the building. The building would be irregularly shaped, with wings extending north, south, and west. Two courtyards with outdoor amenities would be within the west and north building wings. A small utility building on the west side of the site would house trash and recycling dumpsters.

The proposed RCFE would include 118 independent/assisted living units consisting of approximately seven studios with an average size of 643 square feet; 83 one-bedroom units with an average size of 750 square feet; and 28 two-bedroom units with an average size of 1,077 square feet. Resort-inspired indoor and outdoor amenities for the independent/assisted living residents would include two dining rooms, a bistro, a gym, a 30-seat theater, an art studio, a club room, various seating/gathering areas, a hair/nail salon, an outdoor patio, an enclosed outdoor courtyard with community garden beds, and an on-site walking path.

The Harbor memory care wing on the west side of the first floor would consist of 24 units, each with a bed and bathroom. The 24 memory care units would have an average size of 377 square feet. Dedicated common areas, including living and dining rooms, an activity room, and an outdoor courtyard, would be designed to accommodate the special needs of residents with dementia. Amenities for the Harbor memory care residents would include a living room, a dining room, an activity room, and a dedicated enclosed outdoor area with seating and raised planter beds.

The Revised Project would provide residents with transportation services to local medical appointments, shopping, appointments, and excursions. A full-time driver and staff would coordinate transportation for residents in a five-passenger hybrid town car and a fourteen-passenger van that accommodates wheelchairs. Transportation would be provided to residents on demand and fixed schedules. The Revised Project would include 100 off-street parking spaces for residents, guests, and employees, consisting of 64 uncovered spaces, 26 carport-covered spaces, 4 accessible spaces, and 10 electric vehicle-capable spaces. Accessible parking would be located near the building entrance. The Revised Project would also include eight short-term bicycle spaces and two long-term bicycle lockers near the main building entrance.

Landscaping for the Revised Project would include native and drought-tolerant plant species. Landscaping is proposed on the Arena Boulevard frontage, between the RCFE and future light rail corridor, throughout the parking lot, and at the building entry. The two outdoor courtyards would be landscaped with large canopy trees and low-profile groundcovers and shrubs.

## Construction Activities

Construction activities would occur over an approximately 20-month period and are assumed to begin November 2022 and end by June 2024. Construction equipment would include excavators, scraper, dozers, dump trucks, graders, backhoes, trenchers, skid steers, ready-mix trucks, concrete pumps, water trucks, forklifts, scissor lifts, and loaders.

## Operational Activities

Once construction is completed, the Revised Project site would operate as a licensed residential care facility for the elderly. The project would provide elderly residents with non-medical assistance with their activities of daily living. The facility would consist of approximately 118 independent/assisted living units and a 24-unit memory care wing. The Revised Project would include amenities and services designed to promote the welfare of its elderly residents including 24-hour staff, three meal a day dining, a physical wellness gym, diverse activities, and social events that foster meaningful connections with nature, the community at large, and each other. The typical resident is anticipated to be 80+ years old. The Revised Project would include 24-hour staff consisting of approximately 90 full and part-time employees. Staff would include an executive director and other department directors, culinary staff, activities and fitness staff, housekeeping and maintenance personnel, a bus driver, caregivers, and medication technicians.

## AIR QUALITY ANALYSIS

### Setting

The City of Sacramento lies near the southeastern edge of the Sacramento Valley Air Basin (SVAB). The SVAB consists of all or parts of eleven counties spanning from Solano and Sacramento counties in the south, to Shasta County in the north. The Sacramento Metropolitan Air Quality Management District (SMAQMD) is responsible for implementing emissions standards and other requirements of federal and state laws for Sacramento County, including the Revised Project area.

The climate of the SVAB is characterized by hot dry summers and mild rainy winters. During the year the temperature may range from 20 to 115 degrees Fahrenheit with summer highs usually in the 90s and winter lows occasionally below freezing. Average annual rainfall is about 20 inches with snowfall being very rare. The prevailing winds are moderate in strength and vary from moist breezes from the south to dry land flows from the north. The mountains surrounding the Sacramento Valley create a barrier to airflow, which can trap air pollutants in the valley when certain meteorological conditions are right and a temperature inversion (areas of warm air overlying areas of cooler air) exists. Air stagnation in the autumn and early winter occurs 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 pollutants to become concentrated in the air. The surface concentrations of pollutants are highest when these conditions are combined with increased levels of smoke or when temperature inversions trap cool air, fog, and pollutants near the ground. The ozone season (May through October) in the SVAB is characterized by stagnant morning air or light winds with the breeze arriving in the afternoon out of the southwest from the San Francisco Bay. Usually, the evening breeze transports the airborne pollutants to the north out of the SVAB. During about half of the days from July to September; however, a phenomenon called the "Schultz Eddy" prevents this from occurring. Instead of allowing for the prevailing wind patterns to move north carrying the pollutants out of the valley, the Schultz Eddy causes the wind pattern and pollutants to circle back southward. This phenomenon's effect exacerbates the pollution levels in the area and increases the likelihood of violating the federal and state air quality standards (SMAQMD 2020).

## Regulatory Framework

### Criteria Pollutants

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The U.S. Environmental Protection Agency (USEPA), the federal agency that administrates the Federal Clean Air Act of 1970, as amended in 1990, has established national ambient air quality standards (NAAQS) for several air pollution constituents known as criteria pollutants, including: ozone (O<sub>3</sub>); carbon monoxide (CO); coarse particulate matter (PM<sub>10</sub>; particles 10 microns or less) and fine particulate matter (PM<sub>2.5</sub>; particles 2.5 microns or less); sulfur dioxide (SO<sub>2</sub>); and lead (Pb). As permitted by the Clean Air Act, California has adopted the more stringent California ambient air quality standards (CAAQS) and expanded the number of regulated air constituents. Ground-level ozone is not emitted directly into the environment but is generated from complex chemical and photochemical reactions between precursor pollutants, primarily reactive organic gases (ROGs; also known as volatile organic compounds [VOC]),<sup>1</sup> and oxides of nitrogen (NO<sub>x</sub>). PM<sub>10</sub> and PM<sub>2.5</sub> are generated from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. In addition, PM<sub>10</sub> and PM<sub>2.5</sub> can also be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere.

The California Air Resources Board (CARB) is required to designate areas of the state as attainment, nonattainment, or unclassified for the ambient air quality standards. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “nonattainment” designation indicates that a pollutant concentration violated the standard at least once. An “unclassified” designation indicates that insufficient data was available to determine the status. The air quality attainment status of Sacramento County is shown in Table 1, *Sacramento County Attainment Status*.

Sacramento County is designated as nonattainment for the state and federal ozone standards, the state PM<sub>10</sub> standards, and the federal PM<sub>2.5</sub> standards. The SMAQMD is responsible for implementing emissions standards and other requirements of federal and state laws in Sacramento County. Attainment plans for meeting the federal air quality standards are incorporated into the State Implementation Plan (SIP), which is subsequently submitted to the USEPA, the federal agency that administrates the Federal CAA of 1970, as amended in 1990. The current air quality plan applicable to the Revised Project, the *Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan* (Regional Ozone Plan), was developed by the SMAQMD and adjacent air district to describe how the air districts in and near the Sacramento metropolitan area will continue the progress toward attaining state and national ozone air quality standards (SMAQMD 2017).

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<sup>1</sup> CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

**Table 1**  
**SACRAMENTO COUNTY ATTAINMENT STATUS**

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone (1-hour)	Nonattainment	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment
Coarse Particulate Matter (PM <sub>10</sub> )	Nonattainment	Attainment
Fine Particulate Matter (PM <sub>2.5</sub> )	Attainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
Nitrogen Dioxide (NO <sub>2</sub> )	Attainment	Attainment
Lead	Attainment	Attainment
Sulfur Dioxide (SO <sub>2</sub> )	Attainment	Attainment
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Source: SMAQMD 2020.

### Toxic Air Contaminants

Toxic air contaminants (TAC) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term chronic health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

The Health and Safety Code (§39655[a]) defines TAC as “an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.” All substances that are listed as hazardous air pollutants pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Sec. 7412[b]) are designated as TACs. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is referred to as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (CARB 2021). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a notable effect on California’s population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2021).

## GREENHOUSE GAS ANALYSIS

### Setting

Global climate change refers to changes in average climatic conditions on Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting sunlight in but preventing heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; deforestation; agricultural activity; and solid waste decomposition.

The GHGs defined under California's Assembly Bill (AB) 32 include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulfur hexafluoride (SF<sub>6</sub>). Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Estimates of GHG emissions are commonly presented in carbon dioxide equivalents (CO<sub>2</sub>e), which weigh each gas by its global warming potential (GWP). Expressing GHG emissions in CO<sub>2</sub>e takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO<sub>2</sub> were being emitted. GHG emissions quantities in this analysis are presented in metric tons (MT) of CO<sub>2</sub>e. For consistency with United Nations Standards, modeling and reporting of GHGs in California and the U.S. use the GWPs defined in the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report (IPCC 2007): CO<sub>2</sub> = 1; CH<sub>4</sub> = 25; N<sub>2</sub>O = 298.

### Regulatory Framework

#### Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050. Executive Orders are not laws and can only provide the governor's direction to state agencies to act within their authority to reinforce existing laws.

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

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that the California Air Resources Board (CARB) develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed by AB 32 to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

### Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California is on track to meet or exceed the target of reducing GHGs emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

### Senate Bill 32

Signed into law by Governor Brown on September 8, 2016, Senate Bill (SB) 32 (Amendments to the California Global Warming Solutions Action of 2006) extends California's GHG emission reduction programs beyond 2020. SB 32 amended the Health and Safety Code to include Section 38566, which contains language to authorize CARB to achieve a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. SB 32 codified the targets established by EO B-30-15 for 2030, which set the next interim step in the State's continuing efforts to pursue the long-term target expressed in EO B-30-15 of 80 percent below 1990 emissions levels by 2050.

### California Air Resources Board

In December 2008, CARB adopted its first version of its Climate Change Scoping Plan (Scoping Plan), which contained the main strategies California will implement to achieve the mandate of AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program (CARB 2008).

On December 14, 2017, CARB adopted the 2017 Climate Change Scoping Plan (2017 Scoping Plan), which lays out the framework for achieving the mandate of SB 32 (2016) to reduce statewide GHG emissions to at least 40 percent below 1990 levels by the end of 2030 (CARB 2017).

The 2017 Scoping Plan includes guidance to local governments in Chapter 5, including plan-level GHG emissions reduction goals and methods to reduce communitywide GHG emissions. In its guidance, CARB recommends that "local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals." CARB further states that "it is appropriate for local jurisdictions to derive evidence-based local per capita goals [or some other metric] that the local jurisdiction deems appropriate, such as mass emissions or per service population, based on local emissions sectors and population projections that are consistent with the framework used to develop the statewide per capita targets" (CARB 2017).

### Sacramento Area Council of Governments

As required by the Sustainable Communities and Climate Protection Act of 2008 (SB 375), the Sacramento Area Council of Governments (SACOG) has developed the 2020 Metropolitan Transportation Plan and Sustainable Communities Strategy. This plan seeks to reduce GHG and other



mobile source emissions through coordinated transportation and land use planning to reduce vehicle miles traveled (VMT).

City of Sacramento

To meet the statewide GHG emission targets, 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, which includes citywide policies and programs that are supportive of reducing GHG emissions.

## METHODOLOGY

Emission of criteria pollutants for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model was developed for the California Air Pollution Control Officers Association (CAPCOA) in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip generation, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2021). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. The CalEEMod output files for the project are included as Attachment A to this letter report.

Construction input data for CalEEMod included the anticipated start and finish dates of construction activity, with overall construction beginning in November 2022 and ending June 2024. Construction activities for the project include site preparation, grading, building construction, paving, and architectural coating. The modeling also incorporated best management practices (BMP) to comply with applicable emission regulations. Such BMPs include watering for dust, setting a speed limit of 15 miles per hour (mph) on unpaved surfaces, and utilizing low VOC coatings.

The modeling utilized the CalEEMod default operational vehicle trip rates for assisted living land uses, which are trip generation rates from the Institute Transportation Engineers (ITE). Operational input data for CalEEMod assumed compliance with the water conservation strategy and recycling program requirements for solid waste set by the California Green (CALGreen) Building Standards Code. The modeling also included the proposed diesel emergency generator that would run once monthly for 30 minutes and once yearly for 90 minutes.

## SIGNIFICANCE CRITERIA

To be consistent with the analysis in the 2035 General Plan Master EIR, 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<sub>x</sub> above 85 pounds per day;
- Operational emissions of NO<sub>x</sub> 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<sub>10</sub> concentrations, unless all feasible BACT and BMPs have been applied, then increases above 80 pounds per day or 14.6 tons per year;
- Any increase in PM<sub>2.5</sub> concentrations, unless all feasible BACT and BMPs have been applied, then increases above 82 pounds per day or 15 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.

Exposure of sensitive receptors to TACs is deemed to be significant if:

- TAC exposure results in health risks to sensitive receptors greater than an increased incremental cancer risk of 10 in 1 million or an acute or chronic health index of 1.

A project is considered to have a significant effect relating to greenhouse gas emissions if it conflicts with or obstructs implementation of the City's CAP.

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

The General Plan 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 General Plan Master EIR, Chapter 4.2.

Policies in the 2035 General Plan Environmental Resources section identified potential mitigating effects of development that could occur under the 2035 General Plan. For example, Policy ER 6.1.1 calls for the City to work with 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 and 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 General Plan Master EIR identified exposure to sources of TACs as a potential effect. 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 fronting elevation and design elements that provide proper filtering, ventilation, and exhaust of vehicle air emissions from buildings.

The General Plan Master EIR found that greenhouse gas 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 2035 General Plan identified in the General Plan Master EIR that would reduce construction related GHG emissions include ER 6.1.11 requiring coordination with SMAQMD to ensure feasible mitigation measures are incorporated to reduce GHG emissions, and ER 6.1.15 requiring public education about air quality standards and health effects. The 2035 General Plan incorporates the GHG reduction strategy of the 2012 CAP, which demonstrates compliance mechanism for achieving the City's adopted GHG reduction target of 15 percent below 2005 emissions by 2020. Policy ER 6.1.8 commits the City to assess and monitor performance of GHG emission reduction efforts beyond 2020, and progress toward meeting long-term GHG emission reduction goals, ER 6.1.9 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 emission reduction goal. The discussion of greenhouse gas emissions and climate change in the 2035 General Plan Master EIR are incorporated by reference (CEQA Guidelines Section 15150; City 2014; City 2015a).

## Impact Analysis

### *a) Result in construction emissions of NO<sub>x</sub> above 85 pounds per day?*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

Construction emissions of NO<sub>x</sub> during project construction would primarily result from the use of heavy diesel-powered off-road equipment and from vehicles (primarily diesel-powered trucks) traveling to and from the Revised Project site. Construction emissions were modeled using CalEEMod, as described above. Maximum daily emissions of NO<sub>x</sub> are predicted to occur during site preparations and would be 34.1 pounds per day. Therefore, construction of the Revised Project would not result in emissions of NO<sub>x</sub> in excess of 85 pounds per day and would have **no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

### *b) Result in operational emissions of NO<sub>x</sub> or ROG above 65 pounds per day?*

The General Plan Master EIR found this impact to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact (City 2014; City 2015a).

Sources of emissions of NO<sub>x</sub> and ROG from long-term operation of the Revised Project would be exhaust from vehicles, occasional use of landscape maintenance equipment, occasional use of solvents and degreasers, and the reapplication of paint for building and parking lot maintenance.

Project operational emissions were modeled using CalEEMod, as described above. The results of the modeling show that operation of the Revised Project would produce a maximum of 2.1 pounds per day of NO<sub>x</sub> and 6.5 pounds per day of ROG. Therefore, operation of the project would not result in emissions of NO<sub>x</sub> or ROG in excess of 65 pounds per day and would **have no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

*c) Violate any air quality standard or have a cumulatively considerable contribution to an existing or projected air quality violation?*

The General Plan Master EIR evaluated impacts related to emissions of ozone precursors (ROG and NO<sub>x</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and found impacts to be to be significant and unavoidable; no mitigation was identified which would reduce the severity of the impact. The General Plan Master EIR did not evaluate impacts related to the cumulative contribution of emissions (City 2014; City 2015a).

The pollutants of primary concern in Sacramento County are those related to the NAAQS and CAAQS nonattainment designations discussed above: NO<sub>x</sub> and ROG (because they are ozone precursors), PM<sub>10</sub> and PM<sub>2.5</sub>. Construction and operation of the Revised Project would not result in emissions in excess of the SMAQMD thresholds which were developed to ensure that a development project's contribution to regional air quality would not result in a new air quality standard violation or result in a cumulatively considerable contribution to an existing air quality violation. Therefore, the Revised Project would have **no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

*d) Result in PM<sub>10</sub> and PM<sub>2.5</sub> concentrations that exceed SMAQMD requirements?*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

The Revised Project would result in PM<sub>10</sub> and PM<sub>2.5</sub> emissions during construction in the form of fugitive dust from earth moving and disturbing activities and in the form of exhaust emissions, primarily from diesel powered off-road equipment and on-road trucks. According to the SMAQMD's CEQA Guide to Air Quality Assessment in Sacramento County Thresholds, projects that result in less than 80 pounds per day of PM<sub>10</sub> and less than 82 pounds per day of PM<sub>2.5</sub> during construction would have less than significant impacts. However, all construction projects, regardless of the emission levels, are required to implement the SMAQMD's Basic Construction Emission Control Practices (also known as BMPs; SMAQMD 2019). The BMPs satisfy the requirements of SMAQMD's Rule 403, Fugitive Dust, which requires every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates (SMAQMD 1977). The results of the modeling show that construction of the Revised Project would produce a maximum of 10.6 pounds per day of PM<sub>10</sub> and 6.1 pounds per day of PM<sub>2.5</sub>.

The Revised Project would result in PM<sub>10</sub> and PM<sub>2.5</sub> emissions during operation in the form of fugitive dust, brake dust, and vehicle exhaust from vehicles traveling to and from the site. The results of the modeling show that operation of the Revised Project would produce 2.5 pounds per day of PM<sub>10</sub> and 0.8 pounds per day of PM<sub>2.5</sub>.

Therefore, construction or operation of the Revised Project would not result in emissions of PM<sub>10</sub> or PM<sub>2.5</sub> in excess of the SMAQMD thresholds and would have **no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

*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)?*

The General Plan Master EIR did not evaluate impacts from CO concentrations (City 2014; City 2015a).

As described in the existing air quality discussion, above, Sacramento County is in attainment for the CO NAAQS and CAAQS. According to the SMAQMD's CEQA Guide (SMAQMD 2020): "Other pollutants such as CO, sulfur dioxide and lead are of less concern because operational activities are not likely to generate substantial quantities of these criteria air pollutants and the Sacramento Valley Air Basin has been in attainment for these criteria air pollutants for multiple years." Localized concentrations of CO, or "hot spots," are primarily of concern for heavily congested roadways with stop-and-go traffic, particularly in areas with limited vertical mixing such as tunnels, long underpasses, or below-grade roadways. The Revised Project site is zoned Limited Commercial Planned Unit Development (C-1 PUD) which allows a broad range of commercial uses. In 2006, The Plaza project (P06-070) was approved on the site for development of up to 51,000 square feet of commercial uses. As a residential care facility, the proposed project would generate fewer vehicle trips than projected under C-1 PUD zoning and The Plaza Project. Therefore, the Revised Project would not increase traffic on area roadways or result in CO localized concentrations that exceed the CAAQS beyond those previously evaluated in the General Plan Master EIR. The impact would be **less than significant**.

*f) Result in exposure of sensitive receptors to substantial pollutant concentrations?*

Development of the site with a residential care facility for the elderly would introduce a residential population that would be considered sensitive receptors. The sensitive receptors that were modeled and evaluated include the residents of the multi-family project approximately 150 feet west of the Revised Project and the residents of the Revised Project itself. The General Plan Master EIR evaluated impacts to sensitive receptors resulting from exposure to substantial concentrations of TACs and found the impacts to be less than significant, and no mitigation was required. The General Plan Master EIR evaluated impacts related to emissions of ozone precursors (ROG and NO<sub>x</sub>) and particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>) and found impacts to be significant and unavoidable; no mitigation was identified to reduce the significance of the impact. The General Plan Master EIR did not evaluate impacts from exposure of sensitive receptors to substantial concentrations of other criteria pollutants (City 2014; City 2015a).

The closest sensitive receptors to the project site are approximately 150 feet west of the project site, in addition to the residents of the project. As discussed in question E above, and question G, below, sensitive receptors would not be exposed to significant pollutant concentrations and the Revised Project would have **no additional significant environmental effects** beyond what was identified in the General Plan Master EIR.

*g) Result in TAC exposures creating an increased cancer risk of 10 in 1 million for stationary sources, or substantially increase health risks from exposure to TACs from mobile sources?*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

Revised Project construction would generate DPM emissions from the use of off-road diesel equipment required for site preparation, grading, and other construction activities. Health-related risks associated with diesel exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The quantity to which the receptors could be exposed, which is a function of concentration and duration of exposure, is the primary factor used to determine health risk. The generation of TAC emissions during construction would be variable and sporadic due to the nature of construction activity. The most intense use of construction equipment would be during the site preparation/grading phase which is anticipated to last three months and the overall construction period

is anticipated to take approximately 20 months. The sensitive receptors located near the Revised Project site are the residents of the multi-family project approximately 150 feet west of the Revised Project site and the residents of the Revised Project itself. Due to the short duration of construction activities, and the highly dispersive properties of DPM, project-related TAC emission impacts during construction would not expose sensitive receptors to substantial pollutant concentrations.

Operation of the Revised Project would include an emergency diesel-powered generator, which would be a source of DPM emissions. The sensitive receptors located near the Revised Project site are the residents of the multi-family project approximately 150 feet west of the project site, and the residents of the Revised Project. However, the emergency generator would not be used for continuous periods of time, but rather run once monthly for 30 minutes and once yearly for 90 minutes at 80 percent capacity. In addition, the generator would be required to be fitted with DPM reduction technology in compliance with applicable state Airborne Toxic Control Measures (ATCMs), and/or federal New Source Performance Standards (NSPS) and National Emissions Standards for Hazardous Air Pollutants (NESHAP), and applicable SMAQMD regulations. Operation of the Revised Project would not require the use of other diesel-powered stationary equipment, and would not increase the number of diesel-powered trucks on the road. Therefore, due to the limited use of the standby generator and the implementation of DPM reduction technology, the proposed standby generator would not expose sensitive receptors to substantial pollutant concentrations. Operation of the Revised Project would not result in TAC exposures creating an increased cancer risk of 10 in 1 million for stationary sources, or substantially increase health risks from exposure to TACs from mobile sources, and the Revised Project would have **no additional significant environmental effects** beyond what was identified in the General Plan Master EIR.

*h) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

The General Plan Master EIR found this impact to be less than significant, and no mitigation would be required (City 2014; City 2015a).

The City has a CAP Consistency Review Checklist for use in determining the consistency of proposed projects with the CAP. The Checklist includes six criteria for evaluating projects. The Checklist contains measures that are required to be implemented on a project-by-project basis to ensure that the specified emission targets identified in the CAP are achieved. Projects that are consistent with each of the six criteria are considered consistent with Sacramento's CAP and would not have a significant GHG impact. The following discussion evaluates the Revised Project for each of these six criteria (City 2015b).

1. Is the proposed project substantially consistent with the City's overall goals for land use and urban form, allowable floor area ratio (FAR) and/or density standards in the City's 2035 General Plan?

**Yes.** The Revised Project site is designated as Suburban Center in the 2035 General Plan. The Revised Project would be consistent with the Suburban Center General Plan land use designation and land use goals and urban form.

2. Would the proposed project include traffic-calming measures?

**Not Applicable.** The Revised Project does not include any roadway or facility improvements, traffic calming measures do not apply.

3. Would the proposed project incorporate pedestrian facilities and connections to public transportation consistent with the City's Pedestrian Master Plan?

**Yes.** The Revised Project site plan incorporates existing sidewalks along the Arena Boulevard and Thrive Drive frontages. The Revised Project is consistent with the City's development standards for driveways and sidewalks. The site is within a short walk (approximately 800 feet) of transit stops for Sacramento Regional Transit District (SacRT) bus lines (Routes 11, 13, and 113) and the North Natomas Jibe shuttle service. The 40-foot corridor immediately east of the site and west of Truxel Road is reserved for the future extension of the Green Line light rail line and the Arena Boulevard light rail transit station. A 14-foot-wide pedestrian path is planned on the east side of the site, west of the light rail corridor.

4. Would the proposed project incorporate bicycle facilities consistent with the City's Bikeway Master Plan, and meet or exceed minimum standards for bicycle facilities in the Zoning Code and CALGreen?

**Yes.** The Revised Project would comply with the City development standards and regulations for pedestrian or bicycle access, and minimum bicycle parking requirements. The Revised Project would include eight short-term bicycle spaces and two long-term bicycle lockers, which exceeds the minimum requirement of two short-term bicycle parking spaces for Nursing Homes category in the Suburban parking district. Nursing Homes in the Suburban parking district do not have long-term bicycle space requirements. A 14-foot-wide pedestrian path is planned on the east side of the site, west of the light rail corridor, consistent with the City's Bikeway Master Plan.

5. For residential projects of 10 or more units, commercial projects greater than 25,000 square feet, or industrial projects greater than 100,000 square feet, would the project include on-site renewable energy systems (e.g., photovoltaic systems) that would generate at least a minimum of 15 percent of the project's total energy demand on-site?

**Yes.** The Revised Project involves the construction of an assisted living facility/memory care facility with 142 units consisting of 118 independent/assisted living units and 24 memory care units. The Revised Project would incorporate rooftop solar panels. While the solar panels would reduce energy demand, the solar panels are not anticipated to generate a minimum of 15 percent of the Revised Project's total demand. However, as stated in the City's CAP, "[p]rojects may substitute a quantity of energy efficiency for renewable energy, as long as the substituted GHG reduction does not 'double count' GHG reductions already taken by the CAP." In addition to the proposed rooftop solar panels, the Revised Project would incorporate cool pavement treatments and a cool roof. Additionally, the Revised Project would be fully electric with the exception of the commercial kitchen, central boiler, and emergency generator. The emergency generator would only be run once monthly for 30 minutes and once a year for 90 minutes at 80 percent capacity; therefore, the generator would not be a significant source of emissions. Therefore, through the incorporation of sustainability features, in addition to the proposed solar panels, the Revised Project's energy demand would be reduced, consistent with the City's CAP.

6. Would the project (if constructed on or after January 1, 2014) comply with minimum CALGreen Tier I water efficiency standards?

**Yes.** The Revised Project landscaping would comply with City and current CALGreen building water efficiency and water efficient landscaping and irrigation requirements.

## Impact Conclusion

As shown in the above discussion of the City's CAP checklist criteria, the Revised Project would be consistent with the City's CAP, which was developed to enable the City to meet statewide GHG reduction mandates. Therefore, the Revised Project would not conflict with an applicable GHG reduction plan, policy, or regulation and the Revised Project would **have no additional significant environmental effects** beyond what has been previously identified in the General Plan Master EIR.

## SUMMARY

The project's GHG emissions would be below the City's adjusted screening thresholds and would be less than significant. Additionally, the project would be consistent with local and regional GHG emission reduction plans, including the City's CAP, and would result in a less than significant impact.

Sincerely,



Kristen Garcia  
Air Quality Specialist



Victor Ortiz  
Senior Air Quality Specialist

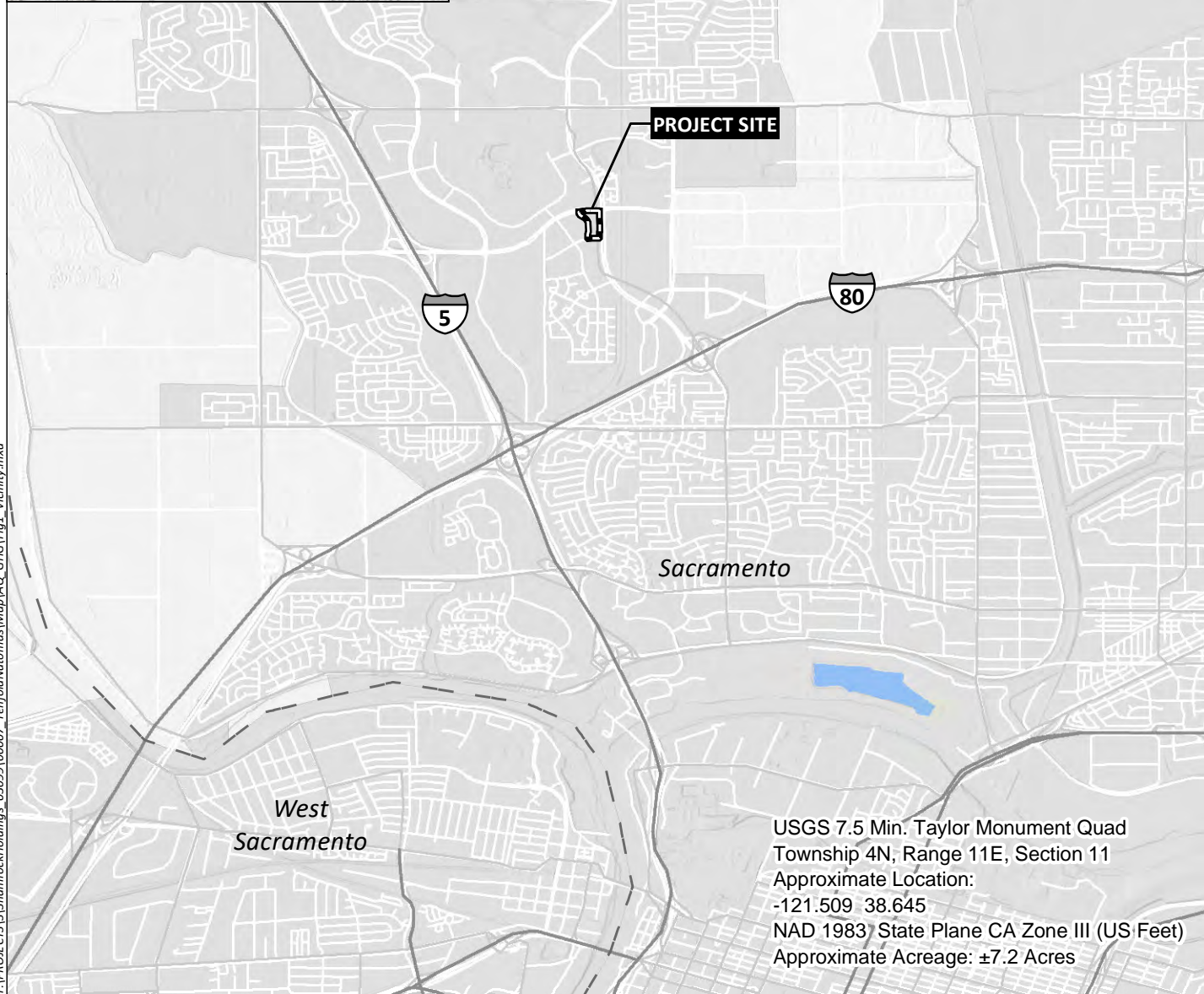
## Attachments:

- Figure 1: Vicinity Map
- Figure 2: Aerial Photograph
- Figure 3: Site Plan
- A: CalEEMod Output

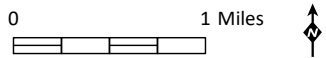


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Source: Base Map Layers (Esri, USGS, NGA, NASA)

Legend

-  Project Site
-  Future Light Rail Development (not included in proposed project)
-  Future Development (not included in proposed project)

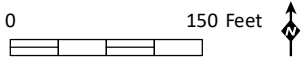


Arena Blvd

Truxell Rd

Prosper Rd

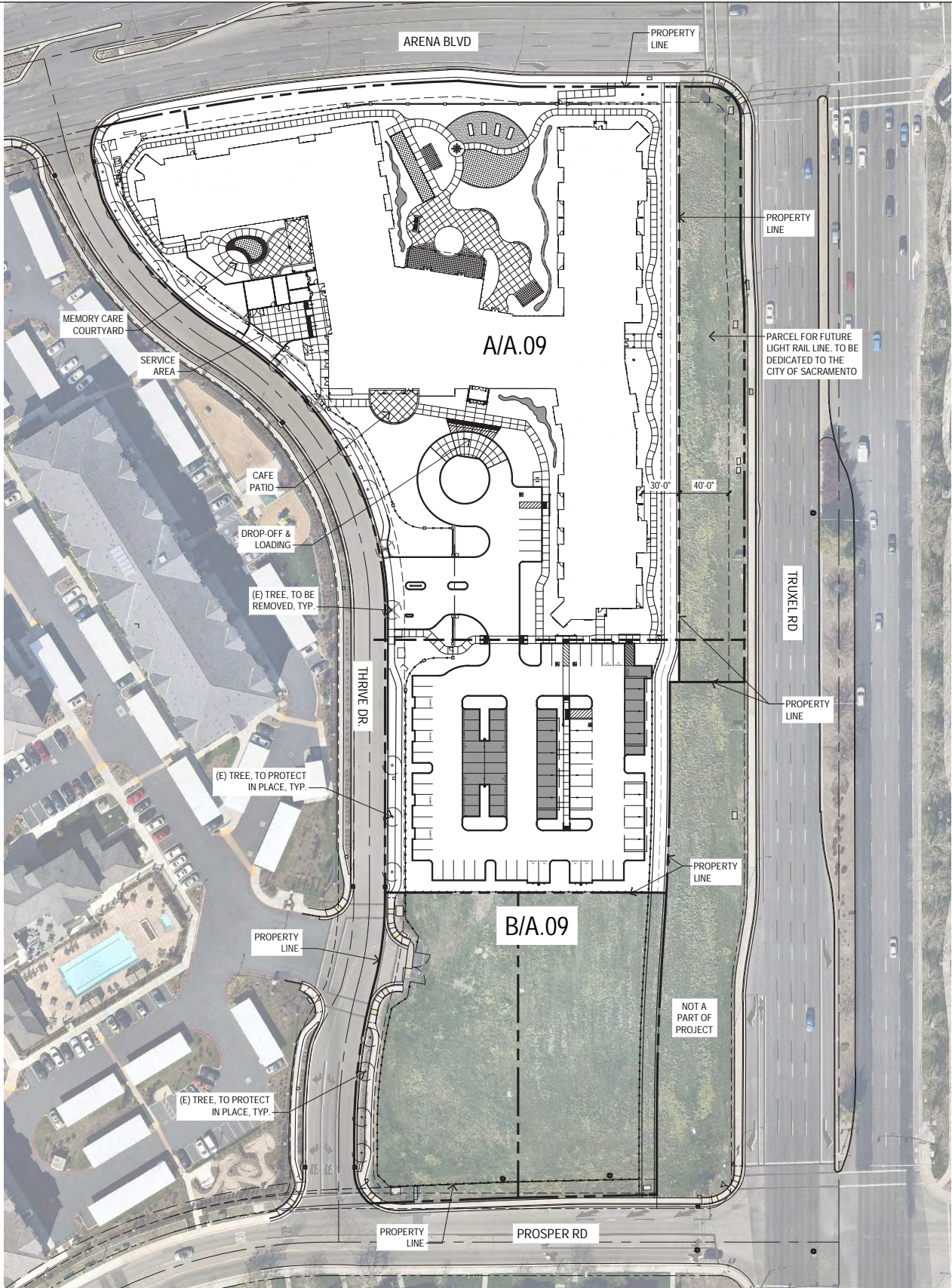
Innovator Dr



Source: Aerial (Maxar, 3/4/2021)

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Source: LPAS, INC. 2021

Tenfold Natomas RCFE 03099.00007.001 - Sacramento County, Annual

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

**Tenfold Natomas RCFE 03099.00007.001  
Sacramento County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	142.00	Dwelling Unit	4.58	157,500.00	379

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	3.5	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	6			<b>Operational Year</b>	2024
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	203.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Total of 142 units (118 assisted living, 24 memory care). Lot is 4.58 acres. Proposed building is 157,500 square feet. Default population.

Construction Phase - Construction phases arranged to reflect schedule given by applicant.

Off-road Equipment - Updated equipment per applicant.

Off-road Equipment - Updated construction per applicant.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	18.00	13.00
tblConstructionPhase	NumDays	230.00	310.00
tblConstructionPhase	NumDays	8.00	61.00

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tblConstructionPhase	NumDays	18.00	23.00
tblConstructionPhase	NumDays	5.00	10.00
tblLandUse	LandUseSquareFeet	142,000.00	157,500.00
tblLandUse	LotAcreage	8.88	4.58
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading

**2.0 Emissions Summary**

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

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0696	0.7247	0.5345	1.0500e-003	0.2649	0.0336	0.2985	0.1143	0.0309	0.1452	0.0000	92.2153	92.2153	0.0290	9.0000e-005	92.9662
2023	0.2578	2.1725	2.5226	4.8900e-003	0.2417	0.0998	0.3415	0.0780	0.0935	0.1716	0.0000	430.3135	430.3135	0.0857	6.8100e-003	434.4854
2024	1.0657	0.6550	0.8756	1.6500e-003	0.0349	0.0289	0.0638	9.3500e-003	0.0271	0.0365	0.0000	144.3973	144.3973	0.0281	2.2200e-003	145.7603
<b>Maximum</b>	<b>1.0657</b>	<b>2.1725</b>	<b>2.5226</b>	<b>4.8900e-003</b>	<b>0.2649</b>	<b>0.0998</b>	<b>0.3415</b>	<b>0.1143</b>	<b>0.0935</b>	<b>0.1716</b>	<b>0.0000</b>	<b>430.3135</b>	<b>430.3135</b>	<b>0.0857</b>	<b>6.8100e-003</b>	<b>434.4854</b>

**Mitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0696	0.7247	0.5345	1.0500e-003	0.1212	0.0336	0.1548	0.0520	0.0309	0.0829	0.0000	92.2151	92.2151	0.0290	9.0000e-005	92.9661
2023	0.2578	2.1725	2.5226	4.8900e-003	0.1637	0.0998	0.2635	0.0498	0.0935	0.1434	0.0000	430.3131	430.3131	0.0857	6.8100e-003	434.4850
2024	1.0657	0.6550	0.8756	1.6500e-003	0.0349	0.0289	0.0638	9.3500e-003	0.0271	0.0365	0.0000	144.3971	144.3971	0.0281	2.2200e-003	145.7602
<b>Maximum</b>	<b>1.0657</b>	<b>2.1725</b>	<b>2.5226</b>	<b>4.8900e-003</b>	<b>0.1637</b>	<b>0.0998</b>	<b>0.2635</b>	<b>0.0520</b>	<b>0.0935</b>	<b>0.1434</b>	<b>0.0000</b>	<b>430.3131</b>	<b>430.3131</b>	<b>0.0857</b>	<b>6.8100e-003</b>	<b>434.4850</b>

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	40.96	0.00	31.51	44.88	0.00	25.63	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	11-1-2022	1-31-2023	1.1384	1.1384
2	2-1-2023	4-30-2023	0.5835	0.5835
3	5-1-2023	7-31-2023	0.5645	0.5645
4	8-1-2023	10-31-2023	0.5651	0.5651
5	11-1-2023	1-31-2024	0.5540	0.5540
6	2-1-2024	4-30-2024	0.4838	0.4838
7	5-1-2024	7-31-2024	1.0951	1.0951
		Highest	1.1384	1.1384



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

**2.2 Overall Operational**

**Unmitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7577	0.0169	1.4638	8.0000e-005		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003	0.0000	2.3921	2.3921	2.3000e-003	0.0000	2.4495
Energy	7.2100e-003	0.0616	0.0262	3.9000e-004		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	122.5102	122.5102	9.6400e-003	2.3100e-003	123.4400
Mobile	0.1886	0.2454	1.7250	3.5800e-003	0.3681	2.8500e-003	0.3710	0.0984	2.6600e-003	0.1011	0.0000	330.9522	330.9522	0.0230	0.0167	336.5008
Stationary	2.0700e-003	5.7800e-003	5.2700e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9596	0.9596	1.3000e-004	0.0000	0.9630
Waste						0.0000	0.0000		0.0000	0.0000	26.3015	0.0000	26.3015	1.5544	0.0000	65.1610
Water						0.0000	0.0000		0.0000	0.0000	3.2733	6.1540	9.4273	0.0123	7.2400e-003	11.8912
<b>Total</b>	<b>0.9555</b>	<b>0.3297</b>	<b>3.2203</b>	<b>4.0600e-003</b>	<b>0.3681</b>	<b>0.0162</b>	<b>0.3844</b>	<b>0.0984</b>	<b>0.0161</b>	<b>0.1145</b>	<b>29.5749</b>	<b>462.9681</b>	<b>492.5430</b>	<b>1.6017</b>	<b>0.0262</b>	<b>540.4053</b>

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

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.7577	0.0169	1.4638	8.0000e-005		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003	0.0000	2.3921	2.3921	2.3000e-003	0.0000	2.4495
Energy	7.2100e-003	0.0616	0.0262	3.9000e-004		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	122.5102	122.5102	9.6400e-003	2.3100e-003	123.4400
Mobile	0.1886	0.2454	1.7250	3.5800e-003	0.3681	2.8500e-003	0.3710	0.0984	2.6600e-003	0.1011	0.0000	330.9522	330.9522	0.0230	0.0167	336.5008
Stationary	2.0700e-003	5.7800e-003	5.2700e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9596	0.9596	1.3000e-004	0.0000	0.9630
Waste						0.0000	0.0000		0.0000	0.0000	19.7262	0.0000	19.7262	1.1658	0.0000	48.8707
Water						0.0000	0.0000		0.0000	0.0000	2.6187	4.9232	7.5419	9.8100e-003	5.7900e-003	9.5129
<b>Total</b>	<b>0.9555</b>	<b>0.3297</b>	<b>3.2203</b>	<b>4.0600e-003</b>	<b>0.3681</b>	<b>0.0162</b>	<b>0.3844</b>	<b>0.0984</b>	<b>0.0161</b>	<b>0.1145</b>	<b>22.3448</b>	<b>461.7373</b>	<b>484.0821</b>	<b>1.2107</b>	<b>0.0248</b>	<b>521.7369</b>

	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
<b>Percent Reduction</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>24.45</b>	<b>0.27</b>	<b>1.72</b>	<b>24.41</b>	<b>5.53</b>	<b>3.45</b>

**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	11/1/2022	11/14/2022	5	10	
2	Grading	Grading	11/15/2022	2/7/2023	5	61	

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3	Building Construction	Building Construction	2/8/2023	4/16/2024	5	310
4	Paving	Paving	4/17/2024	5/17/2024	5	23
5	Architectural Coating	Architectural Coating	5/17/2024	6/4/2024	5	13

**Acres of Grading (Site Preparation Phase): 15**

**Acres of Grading (Grading Phase): 114.38**

**Acres of Paving: 0**

**Residential Indoor: 318,938; Residential Outdoor: 106,313; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (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	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	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	1	7.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Trenchers	1	7.00	78	0.50
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	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42

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Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	102.00	15.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

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

**3.2 Site Preparation - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0162	0.1701	0.1054	2.0000e-004		8.2400e-003	8.2400e-003		7.5800e-003	7.5800e-003	0.0000	17.6287	17.6287	5.7000e-003	0.0000	17.7712
<b>Total</b>	<b>0.0162</b>	<b>0.1701</b>	<b>0.1054</b>	<b>2.0000e-004</b>	<b>0.0983</b>	<b>8.2400e-003</b>	<b>0.1065</b>	<b>0.0505</b>	<b>7.5800e-003</b>	<b>0.0581</b>	<b>0.0000</b>	<b>17.6287</b>	<b>17.6287</b>	<b>5.7000e-003</b>	<b>0.0000</b>	<b>17.7712</b>

**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	3.1000e-004	2.0000e-004	2.5200e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6009	0.6009	2.0000e-005	2.0000e-005	0.6068
<b>Total</b>	<b>3.1000e-004</b>	<b>2.0000e-004</b>	<b>2.5200e-003</b>	<b>1.0000e-005</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>7.4000e-004</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.6009</b>	<b>0.6009</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.6068</b>

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**3.2 Site Preparation - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0442	0.0000	0.0442	0.0227	0.0000	0.0227	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0162	0.1701	0.1054	2.0000e-004		8.2400e-003	8.2400e-003		7.5800e-003	7.5800e-003	0.0000	17.6286	17.6286	5.7000e-003	0.0000	17.7712
<b>Total</b>	<b>0.0162</b>	<b>0.1701</b>	<b>0.1054</b>	<b>2.0000e-004</b>	<b>0.0442</b>	<b>8.2400e-003</b>	<b>0.0525</b>	<b>0.0227</b>	<b>7.5800e-003</b>	<b>0.0303</b>	<b>0.0000</b>	<b>17.6286</b>	<b>17.6286</b>	<b>5.7000e-003</b>	<b>0.0000</b>	<b>17.7712</b>

**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	3.1000e-004	2.0000e-004	2.5200e-003	1.0000e-005	7.3000e-004	0.0000	7.4000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6009	0.6009	2.0000e-005	2.0000e-005	0.6068
<b>Total</b>	<b>3.1000e-004</b>	<b>2.0000e-004</b>	<b>2.5200e-003</b>	<b>1.0000e-005</b>	<b>7.3000e-004</b>	<b>0.0000</b>	<b>7.4000e-004</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>2.0000e-004</b>	<b>0.0000</b>	<b>0.6009</b>	<b>0.6009</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.6068</b>

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

**3.3 Grading - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1630	0.0000	0.1630	0.0628	0.0000	0.0628	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0519	0.5536	0.4167	8.2000e-004		0.0253	0.0253		0.0233	0.0233	0.0000	71.6362	71.6362	0.0232	0.0000	72.2155
<b>Total</b>	<b>0.0519</b>	<b>0.5536</b>	<b>0.4167</b>	<b>8.2000e-004</b>	<b>0.1630</b>	<b>0.0253</b>	<b>0.1884</b>	<b>0.0628</b>	<b>0.0233</b>	<b>0.0861</b>	<b>0.0000</b>	<b>71.6362</b>	<b>71.6362</b>	<b>0.0232</b>	<b>0.0000</b>	<b>72.2155</b>

**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	1.2000e-003	7.8000e-004	9.8500e-003	3.0000e-005	2.8700e-003	2.0000e-005	2.8900e-003	7.6000e-004	1.0000e-005	7.8000e-004	0.0000	2.3495	2.3495	8.0000e-005	7.0000e-005	2.3727
<b>Total</b>	<b>1.2000e-003</b>	<b>7.8000e-004</b>	<b>9.8500e-003</b>	<b>3.0000e-005</b>	<b>2.8700e-003</b>	<b>2.0000e-005</b>	<b>2.8900e-003</b>	<b>7.6000e-004</b>	<b>1.0000e-005</b>	<b>7.8000e-004</b>	<b>0.0000</b>	<b>2.3495</b>	<b>2.3495</b>	<b>8.0000e-005</b>	<b>7.0000e-005</b>	<b>2.3727</b>

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**3.3 Grading - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0734	0.0000	0.0734	0.0283	0.0000	0.0283	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0519	0.5536	0.4167	8.2000e-004		0.0253	0.0253		0.0233	0.0233	0.0000	71.6362	71.6362	0.0232	0.0000	72.2154
<b>Total</b>	<b>0.0519</b>	<b>0.5536</b>	<b>0.4167</b>	<b>8.2000e-004</b>	<b>0.0734</b>	<b>0.0253</b>	<b>0.0987</b>	<b>0.0283</b>	<b>0.0233</b>	<b>0.0516</b>	<b>0.0000</b>	<b>71.6362</b>	<b>71.6362</b>	<b>0.0232</b>	<b>0.0000</b>	<b>72.2154</b>

**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	1.2000e-003	7.8000e-004	9.8500e-003	3.0000e-005	2.8700e-003	2.0000e-005	2.8900e-003	7.6000e-004	1.0000e-005	7.8000e-004	0.0000	2.3495	2.3495	8.0000e-005	7.0000e-005	2.3727
<b>Total</b>	<b>1.2000e-003</b>	<b>7.8000e-004</b>	<b>9.8500e-003</b>	<b>3.0000e-005</b>	<b>2.8700e-003</b>	<b>2.0000e-005</b>	<b>2.8900e-003</b>	<b>7.6000e-004</b>	<b>1.0000e-005</b>	<b>7.8000e-004</b>	<b>0.0000</b>	<b>2.3495</b>	<b>2.3495</b>	<b>8.0000e-005</b>	<b>7.0000e-005</b>	<b>2.3727</b>



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**3.3 Grading - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1420	0.0000	0.1420	0.0512	0.0000	0.0512	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0374	0.3899	0.3210	6.5000e-004		0.0173	0.0173		0.0160	0.0160	0.0000	56.8976	56.8976	0.0184	0.0000	57.3576
<b>Total</b>	<b>0.0374</b>	<b>0.3899</b>	<b>0.3210</b>	<b>6.5000e-004</b>	<b>0.1420</b>	<b>0.0173</b>	<b>0.1593</b>	<b>0.0512</b>	<b>0.0160</b>	<b>0.0672</b>	<b>0.0000</b>	<b>56.8976</b>	<b>56.8976</b>	<b>0.0184</b>	<b>0.0000</b>	<b>57.3576</b>

**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	8.9000e-004	5.5000e-004	7.2200e-003	2.0000e-005	2.2800e-003	1.0000e-005	2.2900e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.8068	1.8068	6.0000e-005	5.0000e-005	1.8238
<b>Total</b>	<b>8.9000e-004</b>	<b>5.5000e-004</b>	<b>7.2200e-003</b>	<b>2.0000e-005</b>	<b>2.2800e-003</b>	<b>1.0000e-005</b>	<b>2.2900e-003</b>	<b>6.1000e-004</b>	<b>1.0000e-005</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>1.8068</b>	<b>1.8068</b>	<b>6.0000e-005</b>	<b>5.0000e-005</b>	<b>1.8238</b>

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

**3.3 Grading - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0639	0.0000	0.0639	0.0231	0.0000	0.0231	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0374	0.3899	0.3210	6.5000e-004		0.0173	0.0173		0.0160	0.0160	0.0000	56.8975	56.8975	0.0184	0.0000	57.3576
<b>Total</b>	<b>0.0374</b>	<b>0.3899</b>	<b>0.3210</b>	<b>6.5000e-004</b>	<b>0.0639</b>	<b>0.0173</b>	<b>0.0812</b>	<b>0.0231</b>	<b>0.0160</b>	<b>0.0390</b>	<b>0.0000</b>	<b>56.8975</b>	<b>56.8975</b>	<b>0.0184</b>	<b>0.0000</b>	<b>57.3576</b>

**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	8.9000e-004	5.5000e-004	7.2200e-003	2.0000e-005	2.2800e-003	1.0000e-005	2.2900e-003	6.1000e-004	1.0000e-005	6.2000e-004	0.0000	1.8068	1.8068	6.0000e-005	5.0000e-005	1.8238
<b>Total</b>	<b>8.9000e-004</b>	<b>5.5000e-004</b>	<b>7.2200e-003</b>	<b>2.0000e-005</b>	<b>2.2800e-003</b>	<b>1.0000e-005</b>	<b>2.2900e-003</b>	<b>6.1000e-004</b>	<b>1.0000e-005</b>	<b>6.2000e-004</b>	<b>0.0000</b>	<b>1.8068</b>	<b>1.8068</b>	<b>6.0000e-005</b>	<b>5.0000e-005</b>	<b>1.8238</b>

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

**3.4 Building Construction - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1832	1.6758	1.8924	3.1400e-003		0.0815	0.0815		0.0767	0.0767	0.0000	270.0525	270.0525	0.0642	0.0000	271.6586
<b>Total</b>	<b>0.1832</b>	<b>1.6758</b>	<b>1.8924</b>	<b>3.1400e-003</b>		<b>0.0815</b>	<b>0.0815</b>		<b>0.0767</b>	<b>0.0767</b>	<b>0.0000</b>	<b>270.0525</b>	<b>270.0525</b>	<b>0.0642</b>	<b>0.0000</b>	<b>271.6586</b>

**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	2.2800e-003	0.0852	0.0257	3.3000e-004	0.0102	4.5000e-004	0.0107	2.9600e-003	4.3000e-004	3.3900e-003	0.0000	32.4108	32.4108	8.0000e-004	4.7600e-003	33.8479
Worker	0.0341	0.0211	0.2763	7.5000e-004	0.0873	4.6000e-004	0.0877	0.0232	4.3000e-004	0.0236	0.0000	69.1458	69.1458	2.2200e-003	2.0000e-003	69.7975
<b>Total</b>	<b>0.0364</b>	<b>0.1063</b>	<b>0.3020</b>	<b>1.0800e-003</b>	<b>0.0975</b>	<b>9.1000e-004</b>	<b>0.0984</b>	<b>0.0262</b>	<b>8.6000e-004</b>	<b>0.0270</b>	<b>0.0000</b>	<b>101.5566</b>	<b>101.5566</b>	<b>3.0200e-003</b>	<b>6.7600e-003</b>	<b>103.6455</b>

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

**3.4 Building Construction - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1832	1.6758	1.8924	3.1400e-003		0.0815	0.0815		0.0767	0.0767	0.0000	270.0522	270.0522	0.0642	0.0000	271.6582
<b>Total</b>	<b>0.1832</b>	<b>1.6758</b>	<b>1.8924</b>	<b>3.1400e-003</b>		<b>0.0815</b>	<b>0.0815</b>		<b>0.0767</b>	<b>0.0767</b>	<b>0.0000</b>	<b>270.0522</b>	<b>270.0522</b>	<b>0.0642</b>	<b>0.0000</b>	<b>271.6582</b>

**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	2.2800e-003	0.0852	0.0257	3.3000e-004	0.0102	4.5000e-004	0.0107	2.9600e-003	4.3000e-004	3.3900e-003	0.0000	32.4108	32.4108	8.0000e-004	4.7600e-003	33.8479
Worker	0.0341	0.0211	0.2763	7.5000e-004	0.0873	4.6000e-004	0.0877	0.0232	4.3000e-004	0.0236	0.0000	69.1458	69.1458	2.2200e-003	2.0000e-003	69.7975
<b>Total</b>	<b>0.0364</b>	<b>0.1063</b>	<b>0.3020</b>	<b>1.0800e-003</b>	<b>0.0975</b>	<b>9.1000e-004</b>	<b>0.0984</b>	<b>0.0262</b>	<b>8.6000e-004</b>	<b>0.0270</b>	<b>0.0000</b>	<b>101.5566</b>	<b>101.5566</b>	<b>3.0200e-003</b>	<b>6.7600e-003</b>	<b>103.6455</b>

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

**3.4 Building Construction - 2024**

**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	0.0567	0.5176	0.6224	1.0400e-003		0.0236	0.0236		0.0222	0.0222	0.0000	89.2619	89.2619	0.0211	0.0000	89.7896
<b>Total</b>	<b>0.0567</b>	<b>0.5176</b>	<b>0.6224</b>	<b>1.0400e-003</b>		<b>0.0236</b>	<b>0.0236</b>		<b>0.0222</b>	<b>0.0222</b>	<b>0.0000</b>	<b>89.2619</b>	<b>89.2619</b>	<b>0.0211</b>	<b>0.0000</b>	<b>89.7896</b>

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.2000e-004	0.0276	8.2200e-003	1.1000e-004	3.3800e-003	1.5000e-004	3.5300e-003	9.8000e-004	1.4000e-004	1.1200e-003	0.0000	10.5074	10.5074	2.6000e-004	1.5500e-003	10.9743
Worker	0.0105	6.1900e-003	0.0848	2.4000e-004	0.0288	1.5000e-004	0.0290	7.6700e-003	1.3000e-004	7.8100e-003	0.0000	22.1046	22.1046	6.6000e-004	6.1000e-004	22.3044
<b>Total</b>	<b>0.0112</b>	<b>0.0338</b>	<b>0.0931</b>	<b>3.5000e-004</b>	<b>0.0322</b>	<b>3.0000e-004</b>	<b>0.0325</b>	<b>8.6500e-003</b>	<b>2.7000e-004</b>	<b>8.9300e-003</b>	<b>0.0000</b>	<b>32.6120</b>	<b>32.6120</b>	<b>9.2000e-004</b>	<b>2.1600e-003</b>	<b>33.2787</b>

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

**3.4 Building Construction - 2024**

**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	0.0567	0.5176	0.6224	1.0400e-003		0.0236	0.0236		0.0222	0.0222	0.0000	89.2618	89.2618	0.0211	0.0000	89.7895
<b>Total</b>	<b>0.0567</b>	<b>0.5176</b>	<b>0.6224</b>	<b>1.0400e-003</b>		<b>0.0236</b>	<b>0.0236</b>		<b>0.0222</b>	<b>0.0222</b>	<b>0.0000</b>	<b>89.2618</b>	<b>89.2618</b>	<b>0.0211</b>	<b>0.0000</b>	<b>89.7895</b>

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.2000e-004	0.0276	8.2200e-003	1.1000e-004	3.3800e-003	1.5000e-004	3.5300e-003	9.8000e-004	1.4000e-004	1.1200e-003	0.0000	10.5074	10.5074	2.6000e-004	1.5500e-003	10.9743
Worker	0.0105	6.1900e-003	0.0848	2.4000e-004	0.0288	1.5000e-004	0.0290	7.6700e-003	1.3000e-004	7.8100e-003	0.0000	22.1046	22.1046	6.6000e-004	6.1000e-004	22.3044
<b>Total</b>	<b>0.0112</b>	<b>0.0338</b>	<b>0.0931</b>	<b>3.5000e-004</b>	<b>0.0322</b>	<b>3.0000e-004</b>	<b>0.0325</b>	<b>8.6500e-003</b>	<b>2.7000e-004</b>	<b>8.9300e-003</b>	<b>0.0000</b>	<b>32.6120</b>	<b>32.6120</b>	<b>9.2000e-004</b>	<b>2.1600e-003</b>	<b>33.2787</b>

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

**3.5 Paving - 2024**

**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	0.0101	0.0951	0.1405	2.2000e-004		4.5800e-003	4.5800e-003		4.2400e-003	4.2400e-003	0.0000	18.8374	18.8374	5.9200e-003	0.0000	18.9853
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0101</b>	<b>0.0951</b>	<b>0.1405</b>	<b>2.2000e-004</b>		<b>4.5800e-003</b>	<b>4.5800e-003</b>		<b>4.2400e-003</b>	<b>4.2400e-003</b>	<b>0.0000</b>	<b>18.8374</b>	<b>18.8374</b>	<b>5.9200e-003</b>	<b>0.0000</b>	<b>18.9853</b>

**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	6.2000e-004	3.6000e-004	4.9700e-003	1.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.2946	1.2946	4.0000e-005	4.0000e-005	1.3063
<b>Total</b>	<b>6.2000e-004</b>	<b>3.6000e-004</b>	<b>4.9700e-003</b>	<b>1.0000e-005</b>	<b>1.6900e-003</b>	<b>1.0000e-005</b>	<b>1.7000e-003</b>	<b>4.5000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.2946</b>	<b>1.2946</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.3063</b>

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

**3.5 Paving - 2024**

**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	0.0101	0.0951	0.1405	2.2000e-004		4.5800e-003	4.5800e-003		4.2400e-003	4.2400e-003	0.0000	18.8373	18.8373	5.9200e-003	0.0000	18.9853
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
<b>Total</b>	<b>0.0101</b>	<b>0.0951</b>	<b>0.1405</b>	<b>2.2000e-004</b>		<b>4.5800e-003</b>	<b>4.5800e-003</b>		<b>4.2400e-003</b>	<b>4.2400e-003</b>	<b>0.0000</b>	<b>18.8373</b>	<b>18.8373</b>	<b>5.9200e-003</b>	<b>0.0000</b>	<b>18.9853</b>

**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	6.2000e-004	3.6000e-004	4.9700e-003	1.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.2946	1.2946	4.0000e-005	4.0000e-005	1.3063
<b>Total</b>	<b>6.2000e-004</b>	<b>3.6000e-004</b>	<b>4.9700e-003</b>	<b>1.0000e-005</b>	<b>1.6900e-003</b>	<b>1.0000e-005</b>	<b>1.7000e-003</b>	<b>4.5000e-004</b>	<b>1.0000e-005</b>	<b>4.6000e-004</b>	<b>0.0000</b>	<b>1.2946</b>	<b>1.2946</b>	<b>4.0000e-005</b>	<b>4.0000e-005</b>	<b>1.3063</b>



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

**3.6 Architectural Coating - 2024**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1700e-003	7.9200e-003	0.0118	2.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6620
<b>Total</b>	<b>0.9867</b>	<b>7.9200e-003</b>	<b>0.0118</b>	<b>2.0000e-005</b>		<b>4.0000e-004</b>	<b>4.0000e-004</b>		<b>4.0000e-004</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>1.6596</b>	<b>1.6596</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.6620</b>

**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	3.5000e-004	2.1000e-004	2.8100e-003	1.0000e-005	9.5000e-004	0.0000	9.6000e-004	2.5000e-004	0.0000	2.6000e-004	0.0000	0.7318	0.7318	2.0000e-005	2.0000e-005	0.7384
<b>Total</b>	<b>3.5000e-004</b>	<b>2.1000e-004</b>	<b>2.8100e-003</b>	<b>1.0000e-005</b>	<b>9.5000e-004</b>	<b>0.0000</b>	<b>9.6000e-004</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>0.7318</b>	<b>0.7318</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.7384</b>

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**3.6 Architectural Coating - 2024**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.9855					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1700e-003	7.9200e-003	0.0118	2.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	1.6596	1.6596	9.0000e-005	0.0000	1.6620
<b>Total</b>	<b>0.9867</b>	<b>7.9200e-003</b>	<b>0.0118</b>	<b>2.0000e-005</b>		<b>4.0000e-004</b>	<b>4.0000e-004</b>		<b>4.0000e-004</b>	<b>4.0000e-004</b>	<b>0.0000</b>	<b>1.6596</b>	<b>1.6596</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.6620</b>

**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	3.5000e-004	2.1000e-004	2.8100e-003	1.0000e-005	9.5000e-004	0.0000	9.6000e-004	2.5000e-004	0.0000	2.6000e-004	0.0000	0.7318	0.7318	2.0000e-005	2.0000e-005	0.7384
<b>Total</b>	<b>3.5000e-004</b>	<b>2.1000e-004</b>	<b>2.8100e-003</b>	<b>1.0000e-005</b>	<b>9.5000e-004</b>	<b>0.0000</b>	<b>9.6000e-004</b>	<b>2.5000e-004</b>	<b>0.0000</b>	<b>2.6000e-004</b>	<b>0.0000</b>	<b>0.7318</b>	<b>0.7318</b>	<b>2.0000e-005</b>	<b>2.0000e-005</b>	<b>0.7384</b>

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**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.1886	0.2454	1.7250	3.5800e-003	0.3681	2.8500e-003	0.3710	0.0984	2.6600e-003	0.1011	0.0000	330.9522	330.9522	0.0230	0.0167	336.5008
Unmitigated	0.1886	0.2454	1.7250	3.5800e-003	0.3681	2.8500e-003	0.3710	0.0984	2.6600e-003	0.1011	0.0000	330.9522	330.9522	0.0230	0.0167	336.5008

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	369.20	416.06	447.30	993,216	993,216
Total	369.20	416.06	447.30	993,216	993,216

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted Living)	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

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**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	51.1572	51.1572	8.2800e-003	1.0000e-003	51.6630
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	51.1572	51.1572	8.2800e-003	1.0000e-003	51.6630
NaturalGas Mitigated	7.2100e-003	0.0616	0.0262	3.9000e-004		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	71.3530	71.3530	1.3700e-003	1.3100e-003	71.7770
NaturalGas Unmitigated	7.2100e-003	0.0616	0.0262	3.9000e-004		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	71.3530	71.3530	1.3700e-003	1.3100e-003	71.7770

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**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					
Congregate Care (Assisted Living)	1.3371e+006	7.2100e-003	0.0616	0.0262	3.9000e-004		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	71.3530	71.3530	1.3700e-003	1.3100e-003	71.7770
<b>Total</b>		<b>7.2100e-003</b>	<b>0.0616</b>	<b>0.0262</b>	<b>3.9000e-004</b>		<b>4.9800e-003</b>	<b>4.9800e-003</b>		<b>4.9800e-003</b>	<b>4.9800e-003</b>	<b>0.0000</b>	<b>71.3530</b>	<b>71.3530</b>	<b>1.3700e-003</b>	<b>1.3100e-003</b>	<b>71.7770</b>

**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					
Congregate Care (Assisted Living)	1.3371e+006	7.2100e-003	0.0616	0.0262	3.9000e-004		4.9800e-003	4.9800e-003		4.9800e-003	4.9800e-003	0.0000	71.3530	71.3530	1.3700e-003	1.3100e-003	71.7770
<b>Total</b>		<b>7.2100e-003</b>	<b>0.0616</b>	<b>0.0262</b>	<b>3.9000e-004</b>		<b>4.9800e-003</b>	<b>4.9800e-003</b>		<b>4.9800e-003</b>	<b>4.9800e-003</b>	<b>0.0000</b>	<b>71.3530</b>	<b>71.3530</b>	<b>1.3700e-003</b>	<b>1.3100e-003</b>	<b>71.7770</b>

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**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	552908	51.1572	8.2800e-003	1.0000e-003	51.6630
<b>Total</b>		<b>51.1572</b>	<b>8.2800e-003</b>	<b>1.0000e-003</b>	<b>51.6630</b>

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Congregate Care (Assisted Living)	552908	51.1572	8.2800e-003	1.0000e-003	51.6630
<b>Total</b>		<b>51.1572</b>	<b>8.2800e-003</b>	<b>1.0000e-003</b>	<b>51.6630</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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	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	0.7577	0.0169	1.4638	8.0000e-005		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003	0.0000	2.3921	2.3921	2.3000e-003	0.0000	2.4495
Unmitigated	0.7577	0.0169	1.4638	8.0000e-005		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003	0.0000	2.3921	2.3921	2.3000e-003	0.0000	2.4495

**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	0.0986					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6151					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0440	0.0169	1.4638	8.0000e-005		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003	0.0000	2.3921	2.3921	2.3000e-003	0.0000	2.4495
<b>Total</b>	<b>0.7577</b>	<b>0.0169</b>	<b>1.4638</b>	<b>8.0000e-005</b>		<b>8.1100e-003</b>	<b>8.1100e-003</b>		<b>8.1100e-003</b>	<b>8.1100e-003</b>	<b>0.0000</b>	<b>2.3921</b>	<b>2.3921</b>	<b>2.3000e-003</b>	<b>0.0000</b>	<b>2.4495</b>

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

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0986					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.6151					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	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
Landscaping	0.0440	0.0169	1.4638	8.0000e-005		8.1100e-003	8.1100e-003		8.1100e-003	8.1100e-003	0.0000	2.3921	2.3921	2.3000e-003	0.0000	2.4495
<b>Total</b>	<b>0.7577</b>	<b>0.0169</b>	<b>1.4638</b>	<b>8.0000e-005</b>		<b>8.1100e-003</b>	<b>8.1100e-003</b>		<b>8.1100e-003</b>	<b>8.1100e-003</b>	<b>0.0000</b>	<b>2.3921</b>	<b>2.3921</b>	<b>2.3000e-003</b>	<b>0.0000</b>	<b>2.4495</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy



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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.5419	9.8100e-003	5.7900e-003	9.5129
Unmitigated	9.4273	0.0123	7.2400e-003	11.8912

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	9.25187 / 5.8327	9.4273	0.0123	7.2400e-003	11.8912
<b>Total</b>		<b>9.4273</b>	<b>0.0123</b>	<b>7.2400e-003</b>	<b>11.8912</b>

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**7.2 Water by Land Use**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Congregate Care (Assisted Living)	7.4015 / 4.66616	7.5419	9.8100e-003	5.7900e-003	9.5129
<b>Total</b>		<b>7.5419</b>	<b>9.8100e-003</b>	<b>5.7900e-003</b>	<b>9.5129</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	19.7262	1.1658	0.0000	48.8707
Unmitigated	26.3015	1.5544	0.0000	65.1610

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**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	129.57	26.3015	1.5544	0.0000	65.1610
<b>Total</b>		<b>26.3015</b>	<b>1.5544</b>	<b>0.0000</b>	<b>65.1610</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Congregate Care (Assisted Living)	97.1775	19.7262	1.1658	0.0000	48.8707
<b>Total</b>		<b>19.7262</b>	<b>1.1658</b>	<b>0.0000</b>	<b>48.8707</b>

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	8	315	0.73	Diesel

**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**10.1 Stationary Sources**

**Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	2.0700e-003	5.7800e-003	5.2700e-003	1.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	0.9596	0.9596	1.3000e-004	0.0000	0.9630
<b>Total</b>	<b>2.0700e-003</b>	<b>5.7800e-003</b>	<b>5.2700e-003</b>	<b>1.0000e-005</b>		<b>3.0000e-004</b>	<b>3.0000e-004</b>		<b>3.0000e-004</b>	<b>3.0000e-004</b>	<b>0.0000</b>	<b>0.9596</b>	<b>0.9596</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.9630</b>

**11.0 Vegetation**

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

**Tenfold Natomas RCFE 03099.00007.001**

**Sacramento County, Winter**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Congregate Care (Assisted Living)	142.00	Dwelling Unit	4.58	157,500.00	379

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	3.5	<b>Precipitation Freq (Days)</b>	58
<b>Climate Zone</b>	6			<b>Operational Year</b>	2024
<b>Utility Company</b>	Pacific Gas and Electric Company				
<b>CO2 Intensity (lb/MWhr)</b>	203.98	<b>CH4 Intensity (lb/MWhr)</b>	0.033	<b>N2O Intensity (lb/MWhr)</b>	0.004

**1.3 User Entered Comments & Non-Default Data**

Project Characteristics -

Land Use - Total of 142 units (118 assisted living, 24 memory care). Lot is 4.58 acres. Proposed building is 157,500 square feet. Default population.

Construction Phase - Construction phases arranged to reflect schedule given by applicant.

Off-road Equipment - Updated equipment per applicant.

Off-road Equipment - Updated construction per applicant.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	18.00	13.00
tblConstructionPhase	NumDays	230.00	310.00
tblConstructionPhase	NumDays	8.00	61.00

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

tblConstructionPhase	NumDays	18.00	23.00
tblConstructionPhase	NumDays	5.00	10.00
tblLandUse	LandUseSquareFeet	142,000.00	157,500.00
tblLandUse	LotAcreage	8.88	4.58
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading

**2.0 Emissions Summary**

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

**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					
2022	3.3038	34.0570	25.1013	0.0494	19.8092	1.6479	21.4571	10.1428	1.5161	11.6589	0.0000	4,793.5150	4,793.5150	1.5080	4.9800e-003	4,832.7006
2023	2.8363	28.9232	24.3185	0.0494	8.1856	1.2855	9.4711	3.5714	1.1827	4.7540	0.0000	4,789.6458	4,789.6458	1.5077	0.0655	4,828.7130
2024	152.7921	14.3558	18.6341	0.0359	0.8663	0.6210	1.4872	0.2318	0.5841	0.8159	0.0000	3,473.6551	3,473.6551	0.6325	0.0633	3,508.3313
<b>Maximum</b>	<b>152.7921</b>	<b>34.0570</b>	<b>25.1013</b>	<b>0.0494</b>	<b>19.8092</b>	<b>1.6479</b>	<b>21.4571</b>	<b>10.1428</b>	<b>1.5161</b>	<b>11.6589</b>	<b>0.0000</b>	<b>4,793.5150</b>	<b>4,793.5150</b>	<b>1.5080</b>	<b>0.0655</b>	<b>4,832.7006</b>

**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					
2022	3.3038	34.0570	25.1013	0.0494	8.9978	1.6479	10.6457	4.5865	1.5161	6.1025	0.0000	4,793.5150	4,793.5150	1.5080	4.9800e-003	4,832.7006
2023	2.8363	28.9232	24.3185	0.0494	3.7797	1.2855	5.0653	1.6326	1.1827	2.8153	0.0000	4,789.6458	4,789.6458	1.5077	0.0655	4,828.7130
2024	152.7921	14.3558	18.6341	0.0359	0.8663	0.6210	1.4872	0.2318	0.5841	0.8159	0.0000	3,473.6551	3,473.6551	0.6325	0.0633	3,508.3313
<b>Maximum</b>	<b>152.7921</b>	<b>34.0570</b>	<b>25.1013</b>	<b>0.0494</b>	<b>8.9978</b>	<b>1.6479</b>	<b>10.6457</b>	<b>4.5865</b>	<b>1.5161</b>	<b>6.1025</b>	<b>0.0000</b>	<b>4,793.5150</b>	<b>4,793.5150</b>	<b>1.5080</b>	<b>0.0655</b>	<b>4,832.7006</b>

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	52.73	0.00	46.94	53.74	0.00	43.50	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	4.2626	0.1349	11.7103	6.2000e-004		0.0649	0.0649		0.0649	0.0649	0.0000	21.0944	21.0944	0.0202	0.0000	21.6004
Energy	0.0395	0.3376	0.1437	2.1500e-003		0.0273	0.0273		0.0273	0.0273		430.9765	430.9765	8.2600e-003	7.9000e-003	433.5376
Mobile	1.1565	1.6608	11.6825	0.0223	2.4204	0.0181	2.4386	0.6453	0.0169	0.6622		2,275.8746	2,275.8746	0.1735	0.1225	2,316.7146
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>5.4586</b>	<b>2.1333</b>	<b>23.5364</b>	<b>0.0251</b>	<b>2.4204</b>	<b>0.1103</b>	<b>2.5308</b>	<b>0.6453</b>	<b>0.1091</b>	<b>0.7544</b>	<b>0.0000</b>	<b>2,727.9455</b>	<b>2,727.9455</b>	<b>0.2020</b>	<b>0.1304</b>	<b>2,771.8526</b>



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

**2.2 Overall Operational**

**Mitigated Operational**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	4.2626	0.1349	11.7103	6.2000e-004		0.0649	0.0649		0.0649	0.0649	0.0000	21.0944	21.0944	0.0202	0.0000	21.6004
Energy	0.0395	0.3376	0.1437	2.1500e-003		0.0273	0.0273		0.0273	0.0273		430.9765	430.9765	8.2600e-003	7.9000e-003	433.5376
Mobile	1.1565	1.6608	11.6825	0.0223	2.4204	0.0181	2.4386	0.6453	0.0169	0.6622		2,275.8746	2,275.8746	0.1735	0.1225	2,316.7146
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
<b>Total</b>	<b>5.4586</b>	<b>2.1333</b>	<b>23.5364</b>	<b>0.0251</b>	<b>2.4204</b>	<b>0.1103</b>	<b>2.5308</b>	<b>0.6453</b>	<b>0.1091</b>	<b>0.7544</b>	<b>0.0000</b>	<b>2,727.9455</b>	<b>2,727.9455</b>	<b>0.2020</b>	<b>0.1304</b>	<b>2,771.8526</b>

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

**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	11/1/2022	11/14/2022	5	10	
2	Grading	Grading	11/15/2022	2/7/2023	5	61	
3	Building Construction	Building Construction	2/8/2023	4/16/2024	5	310	
4	Paving	Paving	4/17/2024	5/17/2024	5	23	

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

5	Architectural Coating	Architectural Coating	5/17/2024	6/4/2024	5	13
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**Acres of Grading (Site Preparation Phase): 15**

**Acres of Grading (Grading Phase): 114.38**

**Acres of Paving: 0**

**Residential Indoor: 318,938; Residential Outdoor: 106,313; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (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	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	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	1	7.00	367	0.48
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Trenchers	1	7.00	78	0.50
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	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38

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

Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
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	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	102.00	15.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

**3.1 Mitigation Measures Construction**

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

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

**3.2 Site Preparation - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	3.2398	34.0121	21.0850	0.0401		1.6471	1.6471		1.5153	1.5153		3,886.453 1	3,886.453 1	1.2570		3,917.877 1
<b>Total</b>	<b>3.2398</b>	<b>34.0121</b>	<b>21.0850</b>	<b>0.0401</b>	<b>19.6570</b>	<b>1.6471</b>	<b>21.3041</b>	<b>10.1025</b>	<b>1.5153</b>	<b>11.6178</b>		<b>3,886.453 1</b>	<b>3,886.453 1</b>	<b>1.2570</b>		<b>3,917.877 1</b>

**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	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
Worker	0.0640	0.0449	0.5117	1.2800e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		129.1212	129.1212	4.9700e-003	4.3300e-003	130.5371
<b>Total</b>	<b>0.0640</b>	<b>0.0449</b>	<b>0.5117</b>	<b>1.2800e-003</b>	<b>0.1521</b>	<b>8.2000e-004</b>	<b>0.1530</b>	<b>0.0404</b>	<b>7.6000e-004</b>	<b>0.0411</b>		<b>129.1212</b>	<b>129.1212</b>	<b>4.9700e-003</b>	<b>4.3300e-003</b>	<b>130.5371</b>

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

**3.2 Site Preparation - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8457	0.0000	8.8457	4.5461	0.0000	4.5461			0.0000			0.0000
Off-Road	3.2398	34.0121	21.0850	0.0401		1.6471	1.6471		1.5153	1.5153	0.0000	3,886.453 1	3,886.453 1	1.2570		3,917.877 1
<b>Total</b>	<b>3.2398</b>	<b>34.0121</b>	<b>21.0850</b>	<b>0.0401</b>	<b>8.8457</b>	<b>1.6471</b>	<b>10.4927</b>	<b>4.5461</b>	<b>1.5153</b>	<b>6.0614</b>	<b>0.0000</b>	<b>3,886.453 1</b>	<b>3,886.453 1</b>	<b>1.2570</b>		<b>3,917.877 1</b>

**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	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
Worker	0.0640	0.0449	0.5117	1.2800e-003	0.1521	8.2000e-004	0.1530	0.0404	7.6000e-004	0.0411		129.1212	129.1212	4.9700e-003	4.3300e-003	130.5371
<b>Total</b>	<b>0.0640</b>	<b>0.0449</b>	<b>0.5117</b>	<b>1.2800e-003</b>	<b>0.1521</b>	<b>8.2000e-004</b>	<b>0.1530</b>	<b>0.0404</b>	<b>7.6000e-004</b>	<b>0.0411</b>		<b>129.1212</b>	<b>129.1212</b>	<b>4.9700e-003</b>	<b>4.3300e-003</b>	<b>130.5371</b>

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

**3.3 Grading - 2022**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.0106	0.0000	8.0106	3.5249	0.0000	3.5249			0.0000			0.0000
Off-Road	3.0535	32.5665	24.5128	0.0480		1.4904	1.4904		1.3711	1.3711		4,645.0256	4,645.0256	1.5023		4,682.5830
<b>Total</b>	<b>3.0535</b>	<b>32.5665</b>	<b>24.5128</b>	<b>0.0480</b>	<b>8.0106</b>	<b>1.4904</b>	<b>9.5010</b>	<b>3.5249</b>	<b>1.3711</b>	<b>4.8961</b>		<b>4,645.0256</b>	<b>4,645.0256</b>	<b>1.5023</b>		<b>4,682.5830</b>

**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	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
Worker	0.0736	0.0517	0.5884	1.4700e-003	0.1750	9.5000e-004	0.1759	0.0464	8.7000e-004	0.0473		148.4894	148.4894	5.7100e-003	4.9800e-003	150.1177
<b>Total</b>	<b>0.0736</b>	<b>0.0517</b>	<b>0.5884</b>	<b>1.4700e-003</b>	<b>0.1750</b>	<b>9.5000e-004</b>	<b>0.1759</b>	<b>0.0464</b>	<b>8.7000e-004</b>	<b>0.0473</b>		<b>148.4894</b>	<b>148.4894</b>	<b>5.7100e-003</b>	<b>4.9800e-003</b>	<b>150.1177</b>

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

**3.3 Grading - 2022**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6048	0.0000	3.6048	1.5862	0.0000	1.5862			0.0000			0.0000
Off-Road	3.0535	32.5665	24.5128	0.0480		1.4904	1.4904		1.3711	1.3711	0.0000	4,645.0256	4,645.0256	1.5023		4,682.5830
<b>Total</b>	<b>3.0535</b>	<b>32.5665</b>	<b>24.5128</b>	<b>0.0480</b>	<b>3.6048</b>	<b>1.4904</b>	<b>5.0952</b>	<b>1.5862</b>	<b>1.3711</b>	<b>2.9574</b>	<b>0.0000</b>	<b>4,645.0256</b>	<b>4,645.0256</b>	<b>1.5023</b>		<b>4,682.5830</b>

**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	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
Worker	0.0736	0.0517	0.5884	1.4700e-003	0.1750	9.5000e-004	0.1759	0.0464	8.7000e-004	0.0473		148.4894	148.4894	5.7100e-003	4.9800e-003	150.1177
<b>Total</b>	<b>0.0736</b>	<b>0.0517</b>	<b>0.5884</b>	<b>1.4700e-003</b>	<b>0.1750</b>	<b>9.5000e-004</b>	<b>0.1759</b>	<b>0.0464</b>	<b>8.7000e-004</b>	<b>0.0473</b>		<b>148.4894</b>	<b>148.4894</b>	<b>5.7100e-003</b>	<b>4.9800e-003</b>	<b>150.1177</b>

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

**3.3 Grading - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.0106	0.0000	8.0106	3.5249	0.0000	3.5249			0.0000			0.0000
Off-Road	2.7677	28.8775	23.7740	0.0480		1.2846	1.2846		1.1819	1.1819		4,645.8398	4,645.8398	1.5026		4,683.4038
<b>Total</b>	<b>2.7677</b>	<b>28.8775</b>	<b>23.7740</b>	<b>0.0480</b>	<b>8.0106</b>	<b>1.2846</b>	<b>9.2952</b>	<b>3.5249</b>	<b>1.1819</b>	<b>4.7068</b>		<b>4,645.8398</b>	<b>4,645.8398</b>	<b>1.5026</b>		<b>4,683.4038</b>

**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	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
Worker	0.0686	0.0457	0.5445	1.4200e-003	0.1750	9.0000e-004	0.1759	0.0464	8.3000e-004	0.0472		143.8060	143.8060	5.1700e-003	4.6100e-003	145.3093
<b>Total</b>	<b>0.0686</b>	<b>0.0457</b>	<b>0.5445</b>	<b>1.4200e-003</b>	<b>0.1750</b>	<b>9.0000e-004</b>	<b>0.1759</b>	<b>0.0464</b>	<b>8.3000e-004</b>	<b>0.0472</b>		<b>143.8060</b>	<b>143.8060</b>	<b>5.1700e-003</b>	<b>4.6100e-003</b>	<b>145.3093</b>



Tenfold Natomas RCFE 03099.00007.001 - Sacramento County, Winter

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

**3.3 Grading - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.6048	0.0000	3.6048	1.5862	0.0000	1.5862			0.0000			0.0000
Off-Road	2.7677	28.8775	23.7740	0.0480		1.2846	1.2846		1.1819	1.1819	0.0000	4,645.8398	4,645.8398	1.5026		4,683.4038
<b>Total</b>	<b>2.7677</b>	<b>28.8775</b>	<b>23.7740</b>	<b>0.0480</b>	<b>3.6048</b>	<b>1.2846</b>	<b>4.8894</b>	<b>1.5862</b>	<b>1.1819</b>	<b>2.7681</b>	<b>0.0000</b>	<b>4,645.8398</b>	<b>4,645.8398</b>	<b>1.5026</b>		<b>4,683.4038</b>

**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	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
Worker	0.0686	0.0457	0.5445	1.4200e-003	0.1750	9.0000e-004	0.1759	0.0464	8.3000e-004	0.0472		143.8060	143.8060	5.1700e-003	4.6100e-003	145.3093
<b>Total</b>	<b>0.0686</b>	<b>0.0457</b>	<b>0.5445</b>	<b>1.4200e-003</b>	<b>0.1750</b>	<b>9.0000e-004</b>	<b>0.1759</b>	<b>0.0464</b>	<b>8.3000e-004</b>	<b>0.0472</b>		<b>143.8060</b>	<b>143.8060</b>	<b>5.1700e-003</b>	<b>4.6100e-003</b>	<b>145.3093</b>

Tenfold Natomas RCFE 03099.00007.001 - Sacramento County, Winter

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

**3.4 Building Construction - 2023**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>		<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**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	0.0000
Vendor	0.0194	0.7465	0.2261	2.8600e-003	0.0904	3.9200e-003	0.0943	0.0260	3.7500e-003	0.0298		306.7960	306.7960	7.5400e-003	0.0451	320.4087
Worker	0.3042	0.2025	2.4145	6.3100e-003	0.7759	3.9900e-003	0.7799	0.2058	3.6700e-003	0.2095		637.7483	637.7483	0.0230	0.0205	644.4150
<b>Total</b>	<b>0.3236</b>	<b>0.9490</b>	<b>2.6406</b>	<b>9.1700e-003</b>	<b>0.8663</b>	<b>7.9100e-003</b>	<b>0.8742</b>	<b>0.2318</b>	<b>7.4200e-003</b>	<b>0.2393</b>		<b>944.5444</b>	<b>944.5444</b>	<b>0.0305</b>	<b>0.0655</b>	<b>964.8237</b>

Tenfold Natomas RCFE 03099.00007.001 - Sacramento County, Winter

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

**3.4 Building Construction - 2023**

**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
<b>Total</b>	<b>1.5728</b>	<b>14.3849</b>	<b>16.2440</b>	<b>0.0269</b>		<b>0.6997</b>	<b>0.6997</b>		<b>0.6584</b>	<b>0.6584</b>	<b>0.0000</b>	<b>2,555.2099</b>	<b>2,555.2099</b>	<b>0.6079</b>		<b>2,570.4061</b>

**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	0.0000
Vendor	0.0194	0.7465	0.2261	2.8600e-003	0.0904	3.9200e-003	0.0943	0.0260	3.7500e-003	0.0298		306.7960	306.7960	7.5400e-003	0.0451	320.4087
Worker	0.3042	0.2025	2.4145	6.3100e-003	0.7759	3.9900e-003	0.7799	0.2058	3.6700e-003	0.2095		637.7483	637.7483	0.0230	0.0205	644.4150
<b>Total</b>	<b>0.3236</b>	<b>0.9490</b>	<b>2.6406</b>	<b>9.1700e-003</b>	<b>0.8663</b>	<b>7.9100e-003</b>	<b>0.8742</b>	<b>0.2318</b>	<b>7.4200e-003</b>	<b>0.2393</b>		<b>944.5444</b>	<b>944.5444</b>	<b>0.0305</b>	<b>0.0655</b>	<b>964.8237</b>

Tenfold Natomas RCFE 03099.00007.001 - Sacramento County, Winter

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

**3.4 Building Construction - 2024**

**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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
<b>Total</b>	<b>1.4716</b>	<b>13.4438</b>	<b>16.1668</b>	<b>0.0270</b>		<b>0.6133</b>	<b>0.6133</b>		<b>0.5769</b>	<b>0.5769</b>		<b>2,555.6989</b>	<b>2,555.6989</b>	<b>0.6044</b>		<b>2,570.8077</b>

**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	0.0000
Vendor	0.0185	0.7319	0.2191	2.8000e-003	0.0904	3.8600e-003	0.0942	0.0260	3.6900e-003	0.0297		300.9913	300.9913	7.3300e-003	0.0443	314.3731
Worker	0.2846	0.1802	2.2482	6.1000e-003	0.7759	3.7900e-003	0.7797	0.2058	3.4900e-003	0.2093		616.9649	616.9649	0.0208	0.0190	623.1506
<b>Total</b>	<b>0.3032</b>	<b>0.9121</b>	<b>2.4673</b>	<b>8.9000e-003</b>	<b>0.8663</b>	<b>7.6500e-003</b>	<b>0.8739</b>	<b>0.2318</b>	<b>7.1800e-003</b>	<b>0.2390</b>		<b>917.9562</b>	<b>917.9562</b>	<b>0.0282</b>	<b>0.0633</b>	<b>937.5237</b>

Tenfold Natomas RCFE 03099.00007.001 - Sacramento County, Winter

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

**3.4 Building Construction - 2024**

**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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
<b>Total</b>	<b>1.4716</b>	<b>13.4438</b>	<b>16.1668</b>	<b>0.0270</b>		<b>0.6133</b>	<b>0.6133</b>		<b>0.5769</b>	<b>0.5769</b>	<b>0.0000</b>	<b>2,555.6989</b>	<b>2,555.6989</b>	<b>0.6044</b>		<b>2,570.8077</b>

**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	0.0000
Vendor	0.0185	0.7319	0.2191	2.8000e-003	0.0904	3.8600e-003	0.0942	0.0260	3.6900e-003	0.0297		300.9913	300.9913	7.3300e-003	0.0443	314.3731
Worker	0.2846	0.1802	2.2482	6.1000e-003	0.7759	3.7900e-003	0.7797	0.2058	3.4900e-003	0.2093		616.9649	616.9649	0.0208	0.0190	623.1506
<b>Total</b>	<b>0.3032</b>	<b>0.9121</b>	<b>2.4673</b>	<b>8.9000e-003</b>	<b>0.8663</b>	<b>7.6500e-003</b>	<b>0.8739</b>	<b>0.2318</b>	<b>7.1800e-003</b>	<b>0.2390</b>		<b>917.9562</b>	<b>917.9562</b>	<b>0.0282</b>	<b>0.0633</b>	<b>937.5237</b>

Tenfold Natomas RCFE 03099.00007.001 - Sacramento County, Winter

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

**3.5 Paving - 2024**

**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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685		1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8814</b>	<b>8.2730</b>	<b>12.2210</b>	<b>0.0189</b>		<b>0.3987</b>	<b>0.3987</b>		<b>0.3685</b>	<b>0.3685</b>		<b>1,805.6205</b>	<b>1,805.6205</b>	<b>0.5673</b>		<b>1,819.8039</b>

**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	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
Worker	0.0558	0.0353	0.4408	1.2000e-003	0.1521	7.4000e-004	0.1529	0.0404	6.8000e-004	0.0410		120.9735	120.9735	4.0900e-003	3.7300e-003	122.1864
<b>Total</b>	<b>0.0558</b>	<b>0.0353</b>	<b>0.4408</b>	<b>1.2000e-003</b>	<b>0.1521</b>	<b>7.4000e-004</b>	<b>0.1529</b>	<b>0.0404</b>	<b>6.8000e-004</b>	<b>0.0410</b>		<b>120.9735</b>	<b>120.9735</b>	<b>4.0900e-003</b>	<b>3.7300e-003</b>	<b>122.1864</b>

Tenfold Natomas RCFE 03099.00007.001 - Sacramento County, Winter

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

**3.5 Paving - 2024**

**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	0.8814	8.2730	12.2210	0.0189		0.3987	0.3987		0.3685	0.3685	0.0000	1,805.6205	1,805.6205	0.5673		1,819.8039
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
<b>Total</b>	<b>0.8814</b>	<b>8.2730</b>	<b>12.2210</b>	<b>0.0189</b>		<b>0.3987</b>	<b>0.3987</b>		<b>0.3685</b>	<b>0.3685</b>	<b>0.0000</b>	<b>1,805.6205</b>	<b>1,805.6205</b>	<b>0.5673</b>		<b>1,819.8039</b>

**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	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
Worker	0.0558	0.0353	0.4408	1.2000e-003	0.1521	7.4000e-004	0.1529	0.0404	6.8000e-004	0.0410		120.9735	120.9735	4.0900e-003	3.7300e-003	122.1864
<b>Total</b>	<b>0.0558</b>	<b>0.0353</b>	<b>0.4408</b>	<b>1.2000e-003</b>	<b>0.1521</b>	<b>7.4000e-004</b>	<b>0.1529</b>	<b>0.0404</b>	<b>6.8000e-004</b>	<b>0.0410</b>		<b>120.9735</b>	<b>120.9735</b>	<b>4.0900e-003</b>	<b>3.7300e-003</b>	<b>122.1864</b>

Tenfold Natomas RCFE 03099.00007.001 - Sacramento County, Winter

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

**3.6 Architectural Coating - 2024**

**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	151.6183					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
<b>Total</b>	<b>151.7991</b>	<b>1.2188</b>	<b>1.8101</b>	<b>2.9700e-003</b>		<b>0.0609</b>	<b>0.0609</b>		<b>0.0609</b>	<b>0.0609</b>		<b>281.4481</b>	<b>281.4481</b>	<b>0.0159</b>		<b>281.8443</b>

**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	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
Worker	0.0558	0.0353	0.4408	1.2000e-003	0.1521	7.4000e-004	0.1529	0.0404	6.8000e-004	0.0410		120.9735	120.9735	4.0900e-003	3.7300e-003	122.1864
<b>Total</b>	<b>0.0558</b>	<b>0.0353</b>	<b>0.4408</b>	<b>1.2000e-003</b>	<b>0.1521</b>	<b>7.4000e-004</b>	<b>0.1529</b>	<b>0.0404</b>	<b>6.8000e-004</b>	<b>0.0410</b>		<b>120.9735</b>	<b>120.9735</b>	<b>4.0900e-003</b>	<b>3.7300e-003</b>	<b>122.1864</b>



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

**3.6 Architectural Coating - 2024**

**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	151.6183					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
<b>Total</b>	<b>151.7991</b>	<b>1.2188</b>	<b>1.8101</b>	<b>2.9700e-003</b>		<b>0.0609</b>	<b>0.0609</b>		<b>0.0609</b>	<b>0.0609</b>	<b>0.0000</b>	<b>281.4481</b>	<b>281.4481</b>	<b>0.0159</b>		<b>281.8443</b>

**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	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
Worker	0.0558	0.0353	0.4408	1.2000e-003	0.1521	7.4000e-004	0.1529	0.0404	6.8000e-004	0.0410		120.9735	120.9735	4.0900e-003	3.7300e-003	122.1864
<b>Total</b>	<b>0.0558</b>	<b>0.0353</b>	<b>0.4408</b>	<b>1.2000e-003</b>	<b>0.1521</b>	<b>7.4000e-004</b>	<b>0.1529</b>	<b>0.0404</b>	<b>6.8000e-004</b>	<b>0.0410</b>		<b>120.9735</b>	<b>120.9735</b>	<b>4.0900e-003</b>	<b>3.7300e-003</b>	<b>122.1864</b>

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

**4.0 Operational Detail - Mobile**

**4.1 Mitigation Measures Mobile**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.1565	1.6608	11.6825	0.0223	2.4204	0.0181	2.4386	0.6453	0.0169	0.6622		2,275.8746	2,275.8746	0.1735	0.1225	2,316.7146
Unmitigated	1.1565	1.6608	11.6825	0.0223	2.4204	0.0181	2.4386	0.6453	0.0169	0.6622		2,275.8746	2,275.8746	0.1735	0.1225	2,316.7146

**4.2 Trip Summary Information**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Congregate Care (Assisted Living)	369.20	416.06	447.30	993,216	993,216
Total	369.20	416.06	447.30	993,216	993,216

**4.3 Trip Type Information**

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Congregate Care (Assisted Living)	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

**4.4 Fleet Mix**

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Congregate Care (Assisted Living)	0.542485	0.056811	0.183752	0.130945	0.025591	0.005989	0.013266	0.009393	0.000917	0.000565	0.025954	0.000983	0.003351

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

**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	0.0395	0.3376	0.1437	2.1500e-003		0.0273	0.0273		0.0273	0.0273		430.9765	430.9765	8.2600e-003	7.9000e-003	433.5376
NaturalGas Unmitigated	0.0395	0.3376	0.1437	2.1500e-003		0.0273	0.0273		0.0273	0.0273		430.9765	430.9765	8.2600e-003	7.9000e-003	433.5376

**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					
Congregate Care (Assisted Living)	3663.3	0.0395	0.3376	0.1437	2.1500e-003		0.0273	0.0273		0.0273	0.0273		430.9765	430.9765	8.2600e-003	7.9000e-003	433.5376
<b>Total</b>		<b>0.0395</b>	<b>0.3376</b>	<b>0.1437</b>	<b>2.1500e-003</b>		<b>0.0273</b>	<b>0.0273</b>		<b>0.0273</b>	<b>0.0273</b>		<b>430.9765</b>	<b>430.9765</b>	<b>8.2600e-003</b>	<b>7.9000e-003</b>	<b>433.5376</b>

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

**5.2 Energy by Land Use - NaturalGas**

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					
Congregate Care (Assisted Living)	3.6633	0.0395	0.3376	0.1437	2.1500e-003		0.0273	0.0273		0.0273	0.0273		430.9765	430.9765	8.2600e-003	7.9000e-003	433.5376
<b>Total</b>		<b>0.0395</b>	<b>0.3376</b>	<b>0.1437</b>	<b>2.1500e-003</b>		<b>0.0273</b>	<b>0.0273</b>		<b>0.0273</b>	<b>0.0273</b>		<b>430.9765</b>	<b>430.9765</b>	<b>8.2600e-003</b>	<b>7.9000e-003</b>	<b>433.5376</b>

**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	4.2626	0.1349	11.7103	6.2000e-004		0.0649	0.0649		0.0649	0.0649	0.0000	21.0944	21.0944	0.0202	0.0000	21.6004
Unmitigated	4.2626	0.1349	11.7103	6.2000e-004		0.0649	0.0649		0.0649	0.0649	0.0000	21.0944	21.0944	0.0202	0.0000	21.6004

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

**6.2 Area by SubCategory**

**Unmitigated**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.3705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.3521	0.1349	11.7103	6.2000e-004		0.0649	0.0649		0.0649	0.0649		21.0944	21.0944	0.0202		21.6004
<b>Total</b>	<b>4.2626</b>	<b>0.1349</b>	<b>11.7103</b>	<b>6.2000e-004</b>		<b>0.0649</b>	<b>0.0649</b>		<b>0.0649</b>	<b>0.0649</b>	<b>0.0000</b>	<b>21.0944</b>	<b>21.0944</b>	<b>0.0202</b>	<b>0.0000</b>	<b>21.6004</b>

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

**6.2 Area by SubCategory**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.5400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	3.3705					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	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
Landscaping	0.3521	0.1349	11.7103	6.2000e-004		0.0649	0.0649		0.0649	0.0649		21.0944	21.0944	0.0202		21.6004
<b>Total</b>	<b>4.2626</b>	<b>0.1349</b>	<b>11.7103</b>	<b>6.2000e-004</b>		<b>0.0649</b>	<b>0.0649</b>		<b>0.0649</b>	<b>0.0649</b>	<b>0.0000</b>	<b>21.0944</b>	<b>21.0944</b>	<b>0.0202</b>	<b>0.0000</b>	<b>21.6004</b>

**7.0 Water Detail**

**7.1 Mitigation Measures Water**

Apply Water Conservation Strategy

**8.0 Waste Detail**

**8.1 Mitigation Measures Waste**

Institute Recycling and Composting Services

**9.0 Operational Offroad**

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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**EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied**

**10.0 Stationary Equipment**

**Fire Pumps and Emergency Generators**

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	8	315	0.73	Diesel

**Boilers**

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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**User Defined Equipment**

Equipment Type	Number
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**10.1 Stationary Sources**

**Unmitigated/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	
Equipment Type	lb/day										lb/day						
Emergency Generator - Diesel (300 - 600 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
<b>Total</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>			<b>0.0000</b>

**11.0 Vegetation**