

**NOTICE OF INTENT TO ADOPT A MITIGATED NEGATIVE DECLARATION**

**Notice** is hereby given that, as Lead Agency, the City of Roseville, Development Services Department, Planning Division has prepared an Initial Study leading to a **Mitigated Negative Declaration** for the project referenced below. This Mitigated Negative Declaration is available for public review and comment.

**Project Title/File#:** NRSP PCL M-31 – Mourier M31 Apartments; File #PL19-0317

**Project Location:** 9000 Woodcreek Oaks Boulevard, Roseville, Placer County, CA; APN 471-010-008-000

**Project Owner:** Steve Schnable, Mourier Land Investment Corp.

**Project Applicant:** David Cobbs, Baker Williams Engineering Group

**Project Planner:** Kinarik Shallow, Associate Planner

**Project Description:** The proposed project is an 80-unit apartment complex on a 4.16-acre parcel with associated parking, lighting, and landscaping. The project includes a Design Review Permit to review the project site and proposed buildings, a Conditional Use Permit to allow a multi-family residential use in the Community Commercial zone district, and a Tree Permit to encroach into the protected zone of a native oak tree.

**Document Review and Availability:** The public review and comment period begins on April 24, 2020 and ends on May 14, 2020. The **Mitigated Negative Declaration** may be reviewed online at

<https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8774505>

**Written comments on the adequacy of the Mitigated Negative Declaration may be submitted to Kinarik Shallow, Associate Planner, at [kshallow@roseville.ca.us](mailto:kshallow@roseville.ca.us) and must be received no later than 5:00 pm on May 14, 2020. Due to the currently in place Placer County Stay at Home Directive, physical correspondence will not be able to be considered during the review period.**

This project will be scheduled for a public hearing before the City's Planning Commission. At this hearing, the Planning Commission will consider the Mitigated Negative Declaration and associated project entitlements. A separate notice will be published once a hearing is scheduled.

Greg Bitter  
Planning Manager

Dated: April 22, 2020

Publish: April 24, 2020

## MITIGATED NEGATIVE DECLARATION

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**Project Applicant:** David Cobbs, Baker Williams Engineering Group  
**Property Owner:** Steve Schnable, Mourier Land Investment Corp.  
**Lead Agency Contact Person:** Kinarik Shallow, Associate Planner - City of Roseville; (916) 746-1309  
**Date:** April 22, 2020

### Project Description:

The proposed project is an 80-unit apartment complex on a 4.16-acre parcel with associated parking, lighting, and landscaping. The project includes a Design Review Permit to review the project site and proposed buildings, a Conditional Use Permit to allow a multi-family residential use in the Community Commercial zone district, and a Tree Permit to encroach into the protected zone of a native oak tree.

### DECLARATION

The Planning Manager has determined that the above project will not have significant effects on the environment and therefore does not require preparation of an Environmental Impact Report. The determination is based on the attached initial study and the following findings:

- A. *The project will not have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare or threatened species, reduce the number or restrict the range of rare or endangered plants or animals or eliminate important examples of the major periods of California history or prehistory.*
- B. *The project will not have the potential to achieve short-term, to the disadvantage of long-term, environmental goals.*
- C. *The project will not have impacts, which are individually limited, but cumulatively considerable.*
- D. *The project will not have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly.*
- E. *No substantial evidence exists that the project may have a significant effect on the environment.*
- F. *The project incorporates all applicable mitigation measures identified in the attached initial study.*
- G. *This Mitigated Negative Declaration reflects the independent judgment of the lead agency.*

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## INITIAL STUDY & ENVIRONMENTAL CHECKLIST

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<b>Project Location:</b>	9000 Woodcreek Oaks Boulevard, Roseville, Placer County, CA; APN 481-010-008-000
<b>Project Description:</b>	The proposed project is an 80-unit apartment complex on a 4.16-acre parcel with associated parking, lighting, and landscaping. The project includes a Design Review Permit to review the project site and proposed buildings, a Conditional Use Permit to allow a multi-family residential use in the Community Commercial zone district, and a Tree Permit to encroach into the protected zone of a native oak tree.
<b>Project Applicant:</b>	David Cobbs, Baker Williams Engineering Group
<b>Property Owner:</b>	Steve Schnable, Mourier Land Investment Corp.
<b>Lead Agency Contact:</b>	Kinarik Shallow, Associate Planner; Phone (916) 746-1309

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This initial study has been prepared to identify and assess the anticipated environmental impacts of the above described project application. The document relies on previous environmental documents (see Attachments) and site-specific studies prepared to address in detail the effects or impacts associated with the project. Where documents were submitted by consultants working for the applicant, City staff reviewed such documents in order to determine whether, based on their own professional judgment and expertise, staff found such documents to be credible and persuasive. Staff has only relied on documents that reflect their independent judgment, and has not accepted at face value representations made by consultants for the applicant.

This document has been prepared to satisfy the California Environmental Quality Act (CEQA), (Public Resources Code, Section 21000 et seq.) and the State CEQA Guidelines (14 CCR 15000 et seq.). CEQA requires that all state and local government agencies consider the environmental consequences of projects over which they have discretionary authority before acting on those projects.

The initial study is a public document used by the decision-making lead agency to determine whether a project may have a significant effect on the environment. If the lead agency finds substantial evidence that any aspect of the project, either individually or cumulatively, may have a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the lead agency is required to prepare an EIR. If the agency finds no substantial evidence that the project or any of its aspects may cause a significant effect on the environment, a negative declaration shall be prepared. If in the course of analysis, the agency recognizes that the project may have a significant impact on the environment, but that by incorporating specific mitigation measures to which the applicant agrees, the impact will be reduced to a less than significant effect, a mitigated negative declaration shall be prepared.

## Table of Contents

<b>Project Description .....</b>	<b>3</b>
<b>City of Roseville Mitigation Ordinances, Guidelines, and Standards.....</b>	<b>4</b>
<b>Other Environmental Documents Relied Upon .....</b>	<b>5</b>
<b>Explanation of Initial Study Checklist .....</b>	<b>5</b>
<b>Initial Study Checklist</b>	
<b>I. Aesthetics .....</b>	<b>6</b>
<b>II. Agricultural &amp; Forestry Resources .....</b>	<b>8</b>
<b>III. Air Quality .....</b>	<b>9</b>
<b>IV. Biological Resources .....</b>	<b>11</b>
<b>V. Cultural Resources .....</b>	<b>16</b>
<b>VI. Energy .....</b>	<b>17</b>
<b>VII. Geology and Soils .....</b>	<b>18</b>
<b>VIII. Greenhouse Gases .....</b>	<b>20</b>
<b>IX. Hazards and Hazardous Materials .....</b>	<b>22</b>
<b>X. Hydrology and Water Quality .....</b>	<b>25</b>
<b>XI. Land Use and Planning .....</b>	<b>27</b>
<b>XII. Mineral Resources .....</b>	<b>28</b>
<b>XIII. Noise .....</b>	<b>29</b>
<b>XIV. Population and Housing .....</b>	<b>32</b>
<b>XV. Public Services .....</b>	<b>34</b>
<b>XVI. Recreation .....</b>	<b>35</b>
<b>XVII. Transportation .....</b>	<b>35</b>
<b>XVIII. Tribal Cultural Resources .....</b>	<b>38</b>
<b>XIX. Utilities and Service Systems .....</b>	<b>41</b>
<b>XX. Wildfire .....</b>	<b>43</b>
<b>XXI. Mandatory Findings of Significance .....</b>	<b>44</b>
<b>Environmental Determination .....</b>	<b>46</b>
<b>Attachments .....</b>	<b>46</b>

## PROJECT DESCRIPTION

### Project Location

The 4.16-acre project site is located at 9000 Woodcreek Oaks Boulevard (APN 481-010-008-000), within the City's North Roseville Specific Plan (NRSP) area (Figure 1).

**Figure 1: Project Location**



### Background

An Environmental Impact Report (EIR) was prepared for the NRSP to examine the impacts of the Specific Plan buildout (SCH #96112014, adopted August 6, 1997). This addressed the major cumulative impacts of developing the Specific Plan as a whole, including the subject property (Parcel M-31). The NRSP describes this parcel as an unusual shape resulting from the alignment of Woodcreek Oaks Boulevard. The site has not been developed; however, a portion of the site was used by JMC Homes as a temporary storage yard for construction supplies with an onsite construction trailer from 2002 to 2010 to support the construction of NRSP and WRSP projects (file #AP 01-63).

### Environmental Setting

The property has frontage on Woodcreek Oaks Boulevard, which is a four-lane arterial roadway with a center median. The project site is currently undeveloped and is comprised mostly of annual grasslands. The southern portion of the parcel has been disturbed from the prior storage yard that occupied the site. Streetlights, utility poles, and fully constructed sidewalks exist along Woodcreek Oaks Boulevard. Overhead power lines traverse

the property along the eastern property line. The site overlooks the south branch of Pleasant Grove Creek and the Pleasant Grove Creek Open Space (Parcel WN-51) to the south, which is located within the 100-year floodplain and consists of native oak trees. A ±30-foot landscape easement planned for a bike trail separates the project site from a vacant low-density residential parcel to the east (Campus Oaks Master Plan area); the landscape easement and residential parcel are both located within the City's North Industrial Planning Area (NIPA & Campus Oaks Master Plan). To the northwest is Woodcreek Oaks Boulevard with low-density residential uses beyond.

**Table 1: Adjacent Zoning and Land Use**

Location	Zoning	General Plan Land Use	Actual Use of Property
Site	Community Commercial (CC)	Community Commercial (CC)	Vacant
North	Woodcreek Oaks Boulevard with Single-Family Residential/Development Standards-North Roseville Specific Plan (R1/DS-NR) beyond	Low Density Residential (LDR-4.5)	Single-family Residential
South	Open Space (OS)	Open Space (OS)	Open Space
East	Park and Recreation (PR)	Park and Recreation (PR)	Landscape Easement
West	Woodcreek Oaks Boulevard with R1/DS-NR beyond	LDR-4.5	Single-family Residential

### Proposed Project

The proposed project is an 80-unit apartment complex consisting of four, three-story buildings, a community building with an outdoor pool, and associated lighting, landscaping, and parking. Vehicular access to the site will be provided by a new driveway off Woodcreek Oaks Boulevard, which will provide both ingress and egress for the site. A second egress-only driveway will be constructed off Woodcreek Oaks Boulevard, approximately 200 feet north of the main entrance. The project entitlements include a Design Review Permit to review the project site and proposed buildings, a Conditional Use Permit to allow a multi-family residential use in the CC zone district, and a Tree Permit to allow up to 15 percent encroachment into the protected zone of a native oak tree located immediately south of the site in the open space.

### **CITY OF ROSEVILLE MITIGATION ORDINANCES, GUIDELINES, AND STANDARDS**

For projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified, CEQA Guidelines section 15183(f) allows a lead agency to rely on previously adopted development policies or standards as mitigation for the environmental effects, when the standards have been adopted by the City, with findings based on substantial evidence, that the policies or standards will substantially mitigate environmental effects, unless substantial new information shows otherwise (CEQA Guidelines §15183(f)). The City of Roseville adopted CEQA Implementing Procedures (Implementing Procedures) which are consistent with this CEQA Guidelines section. The current version of the Implementing Procedures were adopted in April 2008, along with Findings of Fact, as Resolution 08-172. The below regulations and ordinances were found to provide uniform mitigating policies and standards, and are applicable

to development projects. The City's Mitigating Policies and Standards are referenced, where applicable, in the Initial Study Checklist.

- City of Roseville 2035 General Plan
- City of Roseville Zoning Ordinance (RMC Title 19)
- City of Roseville Improvement Standards (Resolution 02-37)
- City of Roseville Construction Standards (Resolution 01-208)
- Subdivision Ordinance (RMC Title 18)
- Noise Regulation (RMC Ch.9.24)
- Flood Damage Prevention Ordinance (RMC Ch.9.80)
- Drainage Fees (Dry Creek [RMC Ch.4.49] and Pleasant Grove Creek [RMC Ch.4.48])
- West Placer Stormwater Quality Design Manual (Resolution 16-152)
- Urban Stormwater Quality Management and Discharge Control Ordinance (RMC Ch. 14.20)
- Traffic Mitigation Fee (RMC Ch.4.44)
- Highway 65 Joint Powers Authority Improvement Fee (Resolution 2008-02)
- South Placer Regional Transportation Authority Transportation and Air Quality Mitigation Fee (Resolution 09-05)
- Tree Preservation Ordinance (RMC Ch.19.66)
- Community Design Guidelines (Resolution 95-347)
- Specific Plan Design Guidelines:
  - North Roseville Specific Plan and Design Guidelines (Resolution 00-432)

## **OTHER ENVIRONMENTAL DOCUMENTS RELIED UPON**

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- Amoruso Ranch Specific Plan Final Environmental Impact Report
- North Roseville Specific Plan Environmental Impact Report (SCH #96112014, adopted August 6, 1997)

Pursuant to CEQA Guidelines Section 15183, any project which is consistent with the development densities established by zoning, a Community Plan, or a General Plan for which an EIR was certified shall not require additional environmental review, except as may be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. The Amoruso Ranch Specific Plan EIR updated the City's General Plan to 2035, and updated Citywide analyses of traffic, water supply, water treatment, wastewater treatment, and waste disposal. The proposed project is consistent with the adopted land use designations examined within the environmental documents listed above. This Initial Study focuses on effects particular to the specific project site, impacts which were not analyzed within the EIR, and impacts which may require revisiting due to substantial new information. When applicable, the topical sections within the Initial Study summarize the findings within the environmental documents listed above. The analysis, supporting technical materials, and findings of the environmental document are incorporated by reference, and are available for review at the Civic Center, 311 Vernon Street, Roseville, CA.

## **EXPLANATION OF INITIAL STUDY CHECKLIST**

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The California Environmental Quality Act (CEQA) Guidelines recommend that lead agencies use an Initial Study Checklist to determine potential impacts of the proposed project on the physical environment. The Initial Study Checklist provides a list of questions concerning a comprehensive array of environmental issue areas potentially affected by this project. This section of the Initial Study incorporates a portion of Appendix G Environmental

Checklist Form, contained in the CEQA Guidelines. Within each topical section (e.g. Air Quality) a description of the setting is provided, followed by the checklist responses, thresholds used, and finally a discussion of each checklist answer.

There are four (4) possible answers to the Environmental Impacts Checklist on the following pages. Each possible answer is explained below:

- 1) A “Potentially Significant Impact” is appropriate if there is enough relevant information and reasonable inferences from the information that a fair argument based on substantial evidence can be made to support a conclusion that a substantial, or potentially substantial, adverse change may occur to any of the physical conditions within the area affected by the project. When one or more “Potentially significant Impact” entries are made, an EIR is required.
- 2) A “Less Than Significant With Mitigation” answer is appropriate when the lead agency incorporates mitigation measures to reduce an impact from “Potentially Significant” to “Less than Significant.” For example, floodwater impacts could be reduced from a potentially-significant level to a less-than-significant level by relocating a building to an area outside of the floodway. The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less-than-significant level. Mitigation measures are identified as MM followed by a number.
- 3) A “Less Than significant Impact” answer is appropriate if there is evidence that one or more environmental impacts may occur, but the impacts are determined to be less than significant, or the application of development policies and standards to the project will reduce the impact(s) to a less-than-significant level. For instance, the application of the City’s Improvement Standards reduces potential erosion impacts to a less-than-significant level.
- 4) A “No Impact” answer is appropriate where it can be demonstrated that the impact does not have the potential to adversely affect the environment. For instance, a project in the center of an urbanized area with no agricultural lands on or adjacent to the project area clearly would not have an adverse effect on agricultural resources or operations. A brief explanation is required for all answers except “No Impact” answers that are adequately supported by the information sources cited in the Initial Study. Where a “No Impact” answer is adequately supported by the information sources cited in the Initial Study, further narrative explanation is not required. A “No Impact” answer is explained when it is based on project-specific factors as well as generous standards.

All answers must take account of the whole action involved, including off- and on-site, indirect, direct, construction, and operation impacts, except as provided for under State CEQA Guidelines.

## INITIAL STUDY CHECKLIST

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### I. Aesthetics

The project site is located in a typical urbanized setting within a commercially zoned area of the City. Public views of the site are from Woodcreek Oaks Boulevard, which is an arterial roadway, and its adjacent sidewalks. The parcel is triangular in shape and is adjacent to a landscape easement to the east that is planned for a bike trail, an open space parcel to the south, and Woodcreek Oaks Boulevard to the northwest with low density residential uses beyond.

Except as provided in Public Resources Code Section 21099, would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?			X	

**Thresholds of Significance and Regulatory Setting:**

The significance of an environmental impact cannot always be determined through the use of a specific, quantifiable threshold. CEQA Guidelines Section 15064(b) affirms this by the statement “an ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting.” This is particularly true of aesthetic impacts. As an example, a proposed parking lot in a dense urban center would have markedly different visual effects than a parking lot in an open space area. For the purpose of this study, the significance thresholds are as stated in CEQA Guidelines Appendix G, as shown in a–d of the checklist below. The Findings of the Implementing Procedures indicate that compliance with the Zoning Ordinance (e.g. building height, setbacks, etc), Subdivision Ordinance (RMC Ch. 18), Community Design Guidelines (Resolution 95-347), and applicable Specific Plan Policies and/or Specific Plan Design Guidelines will prevent significant impacts in urban settings as it relates to items a and b, below.

**Discussion of Checklist Answers:**

a–b) There are no designated or eligible scenic vistas or scenic highways within or adjacent to the City of Roseville.

c) The project site is in an urban setting and is surrounded by a landscape easement to the east that is planned for a bike trail, an open space parcel to the south, and Woodcreek Oaks Boulevard to the northwest with low density residential uses beyond. The City of Roseville has adopted Community Design Guidelines (CDG) to establish common design elements and expectations for development within the City. The CDG includes provisions related to architectural design, site design and landscape design, to enhance the visual character of the urban environment. The project has been reviewed by City staff and was found to be consistent with the goals and policies of the CDG and applicable zoning regulations. As such, the aesthetic impacts of the project are less than significant.

d) The project involves nighttime lighting to provide for the security and safety of project residents. However, the project is already located within an urbanized setting with many existing lighting sources. Lighting for the project is conditioned to comply with City standards (i.e., Community Design Guidelines) to limit the height of light standards and to require cut-off lenses and glare shields to minimize light and glare impacts. The project will not create a new source of substantial light. None of the project elements are highly reflective, and therefore the project will not contribute to an increased source of glare. Impacts of the project are less than significant.

**II. Agricultural & Forestry Resources**

The State Department of Conservation oversees the Farmland Mapping and Monitoring Program, which was established to document the location, quality, and quantity of agricultural lands, and the conversion of those lands over time. The primary land use classifications on the maps generated through this program are: Urban and Built Up Land, Grazing Land, Farmland of Local Importance, Unique Farmland, Farmland of Statewide Importance, and Prime Farmland. According to the current California Department of Conservation Placer County Important Farmland Map (2012), the majority of the City of Roseville is designated as Urban and Built Up Land and most of the open space areas of the City are designated as Grazing Land. There are a few areas designated as Farmland of Local Importance and two small areas designated as Unique Farmland located on the western side of the City along Baseline Road. The current Williamson Act Contract map (2013/2014) produced by the Department of Conservation shows that there are no Williamson Act contracts within the City, and only one (on PFE Road) that is adjacent to the City. None of the land within the City is considered forest land by the Board of Forestry and Fire Protection.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

**Thresholds of Significance and Regulatory Setting:**

Unique Farmland, Farmland of Statewide Importance, and Prime Farmland are called out as protected farmland categories within CEQA Guidelines Appendix G. Neither the City nor the State has adopted quantified significance thresholds related to impacts to protected farmland categories or to agricultural and forestry resources. For the purpose of this study, the significance thresholds are as stated in CEQA Guidelines Appendix G, as shown in a–e of the checklist above.

**Discussion of Checklist Answers:**

a–e) The project site is not used for agricultural purposes, does not include agricultural zoning, is not within or adjacent to one of the areas of the City designated as a protected farmland category on the Placer County Important Farmland map, is not within or adjacent to land within a Williamson Act Contract, and is not considered forest land. Given the foregoing, the proposed project will have no impact on agricultural resources.

**III. Air Quality**

The City of Roseville, along with the south Placer County area, is located in the Sacramento Valley Air Basin (SVAB). The SVAB is within the Sacramento Federal Ozone Non-Attainment Area. Under the Clean Air Act, Placer County has been designated a "serious non-attainment" area for the federal 8-hour ozone standard, "non-attainment" for the state ozone standard, and a "non-attainment" area for the federal and state PM<sub>10</sub> standard (particulate matter less than 10 microns in diameter). Within Placer County, the Placer County Air Pollution Control District (PCAPCD) is responsible for ensuring that emission standards are not violated.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

### Thresholds of Significance and Regulatory Setting:

In responding to checklist items a, b, and d, project-related air emissions would have a significant effect if they would result in concentrations that either violate an ambient air quality standard or contribute to an existing air quality violation. To assist in making this determination, the PCAPCD adopted thresholds of significance, which were developed by considering both the health-based ambient air quality standards and the attainment strategies outlined in the State Implementation Plan. The PCAPCD-recommended significance threshold for reactive organic gases (ROG) and nitrogen oxides (NO<sub>x</sub>) is 82 pounds daily during construction and 55 pounds daily during operation, and for particulate matter (PM) is 82 pounds per day during both construction and operation. For all other constituents, significance is determined based on the concentration-based limits in the Federal and State Ambient Air Quality Standards. Toxic Air Contaminants (TAC) are also of public health concern, but no thresholds or standards are provided because they are considered to have no safe level of exposure. Analysis of TAC is based on the *Air Quality and Land Use Handbook – A Community Health Perspective* (April 2005, California Air Resources Board), which lists TAC sources and recommended buffer distances from sensitive uses. For checklist item c, the PCAPCD's *CEQA Air Quality Handbook (Handbook)* recommends that the same thresholds used for the project analysis be used for the cumulative impact analysis.

With regard to checklist item d, there are no quantified significance thresholds for exposure to objectionable odors. Significance is determined after taking into account multiple factors, including screening distances from odor sources (as found in the PCAPCD CEQA Handbook), the direction and frequency of prevailing winds, the time of day when odors are present, and the nature and intensity of the odor source.

### Discussion of Checklist Answers:

a-b) Analyses are not included for sulfur dioxide, lead, and other constituents because there are no mass emission thresholds; these are concentration-based limits in the Federal and State Ambient Air Quality Standards which require substantial, point-source emissions (e.g. refineries, concrete plants, etc) before exceedance will occur, and the SVAB is in attainment for these constituents. Likewise, carbon monoxide is not analyzed because the SVAB is in attainment for this constituent, and it requires high localized concentrations

(called carbon monoxide “hot spots”) before the ambient air quality standard would be exceeded. “Hot spots” are typically associated with heavy traffic congestion occurring at high-volume roadway intersections. The Amoruso Ranch EIR analysis of Citywide traffic indicated that 198 out of 226 signalized intersections would operate at level of service C or better—that is, they will not experience heavy traffic congestion. It further indicated that analyses of existing CO concentrations at the most congested intersections in Roseville show that CO levels are well below federal and state ambient air quality standards. The discussions below focus on emissions of ROG, NO<sub>x</sub>, or PM. A project-level analysis has been prepared to determine whether the project will, on a singular level, exceed the established thresholds.

PCAPCD recommends that lead agencies use the California Emissions Estimator Model (CalEEMod) to quantify a project’s construction and operational emissions for criteria air pollutants (NO<sub>x</sub>, ROG, and PM). The results are then compared to the significance thresholds established by the district, as detailed above. However, according to PCAPCD’s published screening table, apartment projects consisting of less than 911 will not result in NO<sub>x</sub> emissions that exceed 55 lbs/day, and therefore modeling is not required. Typically, NO<sub>x</sub> emissions are substantially higher than ROG and PM<sub>10</sub>; therefore, it can be assumed that projects that do not exceed the NO<sub>x</sub> threshold will not exceed the ROG and PM<sub>10</sub> thresholds, and will not result in a significant impact related to operational emissions. The project proposes the construction of an apartment complex consisting of 80 units, which is well below PCAPCD’s modeled example. Thus, the project is not expected to result in construction or operational emissions that would exceed the district’s thresholds for significance.

c) As described in section a–b, the project will not contribute significant project-level criteria air pollutant emissions. Consistent with the analysis methodology outlined in the Significance Thresholds and Regulatory Setting section, cumulative impacts are less than significant.

d) Diesel fumes from construction equipment and delivery trucks are often found to be objectionable; however, construction is temporary and diesel emissions are minimal and regulated. Typical urban projects such as residences and retail businesses generally do not result in substantial objectionable odors when operated in compliance with City Ordinances (e.g. proper trash disposal and storage). The Project is a typical urban development that lacks any characteristics that would cause the generation of substantial unpleasant odors. Thus, construction and operation of the proposed project would not result in the creation of objectionable odors affecting a substantial number of people. A review of the project surroundings indicates that there are no substantial odor-generating uses near the project site; the project location meets the recommended screening distances from odor-generators provided by the PCAPCD. Impacts related to odors are less than significant.

#### **IV. Biological Resources**

The project site is currently undeveloped and is comprised mostly of annual grasslands. The southern portion of the parcel has been disturbed from the prior storage yard that occupied the site. The site overlooks the south branch of Pleasant Grove Creek and the Pleasant Grove Creek Park (Parcel WN-51) to the south, which is located within the 100-year floodplain and consists of native oak trees. There are no existing wetland features on the site.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			X	
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

**Thresholds of Significance and Regulatory Setting:**

There is no ironclad definition of significance as it relates to biological resources. Thus, the significance of impacts to biological resources is defined by the use of expert judgment supported by facts, and relies on the policies, codes, and regulations adopted by the City and by regulatory agencies which relate to biological resources (as cited and described in the Discussion of Checklist Answers section). Thresholds for assessing the significance of environmental impacts are based on the CEQA Guidelines checklist items a–f, above. Consistent with CEQA Guidelines Section 15065, a project may have a significant effect on the environment if:

The project has the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; [or] substantially reduce the number or restrict the range of an endangered, rare or threatened species . . .

Various agencies regulate impacts to the habitats and animals addressed by the CEQA Guidelines checklist. These include the United States Fish and Wildlife Service, National Oceanic and Atmospheric Administration–Fisheries, United States Army Corps of Engineers, Central Valley Regional Water Quality Control Board, and California Department of Fish and Wildlife. The primary regulations affecting biological resources are described in the sections below.

Checklist item a addresses impacts to special status species. A “special status” species is one which has been identified as having relative scarcity and/or declining populations. Special status species include those formally listed as threatened or endangered, those proposed for formal listing, candidates for federal listing, and those classified as species of special concern. Also included are those species considered to be “fully protected” by the California Department of Fish and Wildlife (California Fish and Wildlife), those granted “special animal” status for tracking and monitoring purposes, and those plant species considered to be rare, threatened, or endangered in California by the California Native Plant Society (CNPS). The primary regulatory protections for special status species are within the Federal Endangered Species Act, California Endangered Species Act, California Fish and Game Code, and the Federal Migratory Bird Treaty Act (MBTA).

Checklist item b addresses all “sensitive natural communities” that may be affected by local, state, or federal regulations/policies while checklist item c focuses specifically on one type of such a community: federally-protected wetlands. Focusing first on wetlands, there are two questions to be posed in examining wet habitats: the first is whether the wetted area meets the technical definition of a wetland, making it subject to checklist item b, and the second is whether the wetland is subject to federal jurisdiction, making it subject to checklist item c.

The 1987 Army Corps Wetlands Delineation Manual is used to determine whether an area meets the technical criteria for a wetland. A delineation verification by the Army Corps verifies the size and condition of the wetlands and other waters in question, and determines the extent of government jurisdiction as it relates to Section 404 of the Federal Clean Water Act and Section 401 of the State Clean Water Act.

The Clean Water Act protects all “navigable waters”, which are defined as traditional navigable waters that are or were used for commerce, or may be used for interstate commerce; tributaries of covered waters; and wetlands adjacent to covered waters, including tributaries. Non-navigable waters are called isolated wetlands, and are not subject to either the Federal or State Clean Water Act. Thus, isolated wetlands are not subject to federal wetland protection regulations. However, in addition to the Clean Water Act, the State also has jurisdiction over impacts to surface waters through the Porter-Cologne Water Quality Control Act (Porter-Cologne), which does not require that waters be “navigable”. For this reason, isolated wetlands are regulated by the State of California pursuant to Porter-Cologne. The City of Roseville General Plan also provides protection for wetlands, including isolated wetlands, pursuant to the General Plan Open Space and Conservation Element. Federal, State and City regulations/policies all seek to achieve no net loss of wetland acreage, values, or function.

Aside from wetlands, checklist item b also addresses other “sensitive natural communities,” which includes any habitats protected by local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. The City of Roseville General Plan Open Space and Conservation Element includes policies for the protection of riparian areas (streamside habitat) and floodplain areas; these are Vegetation and Wildlife section Policies 2 and 3. Policy 4 also directs preservation of additional area around stream corridors and floodplain if there is sensitive woodland, grassland, or other habitat which could be made part of a contiguous open space area. Other than wetlands, which were already discussed, US Fish and Wildlife and California Department of Fish and Wildlife habitat protections generally result from species protections, and are thus addressed via checklist item a.

For checklist item d, there are no regulations specific to the protection of migratory corridors. This item is addressed by an analysis of the habitats present in the vicinity and analyzing the probable effects on access to those habitats which will result from a project.

The City of Roseville Tree Preservation ordinance (RMC Ch.19.66) requires protection of native oak trees, and compensation for oak tree removal. The Findings of the Implementing Procedures indicate that compliance with the City of Roseville Tree Preservation ordinance (RMC Ch.19.66) will prevent significant impacts related to loss of native oak trees, referenced by item e, above.

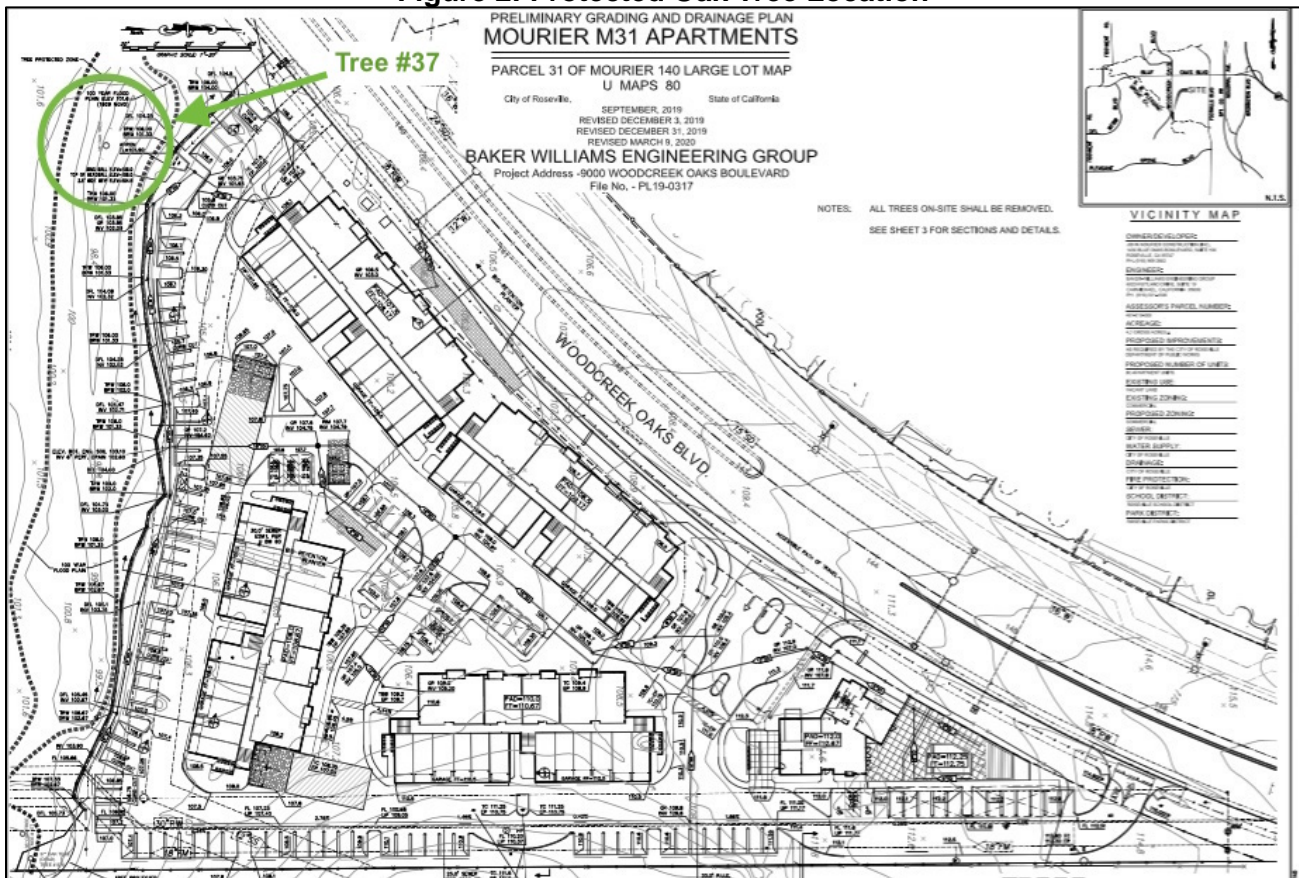
Regarding checklist item f, there are no adopted Habitat Conservation Plans within the City of Roseville.

#### **Discussion of Checklist Answers:**

a) The project site is currently undeveloped and is isolated from other habitat and is approximately 2.98 acres in size. While the property could provide refuge for common, small burrowing mammals or reptile species found in urban environments, it is too small and isolated to provide habitat for larger animals or predators. Birds of prey could forage incidentally on the site; however, the site is too isolated and small to provide any substantial or vital habitat. The North Roseville Specific Plan (NRSP) EIR did not identify any rare or endangered wildlife species that inhabited the project site. Although the site lacks habitat, there are trees adjacent to the site that provide suitable habitat for nesting birds. Construction activities have potential to disrupt offsite nesting species. **Mitigation Measure BIO-1** is required to ensure that special status migratory birds and raptors are not harmed. Ground disturbing activities shall not occur during the active nesting season, if it is necessary to conduct such activities during the nesting season, preconstruction surveys and mitigation as described in **Mitigation Measure BIO-1**, would be required. With implementation of the measure, impacts to special status species are less than significant.

- b) There were no sensitive natural communities observed or identified on the site, and thus the project will have no impact with regard to this criterion.
- c) No potential wetlands have been identified or observed on the site, nor has the site been known historically to support wetlands. Since the site does not contain wetlands, there is no impact with regard to this criterion.
- d) The City includes an interconnected network of open space corridors and preserves located throughout the City, to ensure that the movement of wildlife is not substantially impeded as the City develops. The development of the project site will not negatively impact these existing and planned open space corridors, nor is the project site located in an area that has been designated by the City, United States Fish and Wildlife, or California Department of Fish and Wildlife as vital or important for the movement of wildlife or the use of native wildlife nursery sites.
- e) There are no biological resources on the project site that are protected by City policies or ordinances. An Arborist Report for the project identified one off-site native oak tree (35" DBH Blue Oak) located in the open space to the south that would be impacted by development activities including excavation for retaining wall footings and drainage improvements (see Attachment 2 and Figure 2 below). Although the tree will not be removed, encroachment into the protected zone of this tree is considered a regulated activity subject to issuance of a Tree Permit. The encroachment percentage represents the direct impact to the tree's roots. The proposed encroachment is a maximum of 15 percent, which is considered minimal and will not result in subsequent decline of the tree or create a public safety hazard. If approved, the Tree Permit would contain measures to compensate for oak tree encroachment. Any deviation from the approved permit would require a Tree Permit Modification, which would require approval by the City. Compliance with the City's Tree Preservation Ordinance will ensure impacts are less than significant.

**Figure 2: Protected Oak Tree Location**



f) There are no Habitat Conservation Plans; Natural Community Conservation Plans; or other approved local, regional, or state habitat conservation plans that apply to the project site.

**V. Cultural Resources**

As described within the Open Space and Conservation Element of the City of Roseville General Plan, the Roseville region was within the territory of the Nisenan (also Southern Maidu or Valley Maidu). Two large permanent Nisenan habitation sites have been identified and protected within the City’s open space (in Maidu Park). Numerous smaller cultural resources, such as midden deposits and bedrock mortars, have also been recorded in the City. The gold rush which began in 1848 marked another settlement period, and evidence of Roseville’s ranching and mining past are still found today. Historic features include rock walls, ditches, low terraces, and other remnants of settlement and activity. A majority of documented sites within the City are located in areas designated for open space uses.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of an historic resource pursuant to Section 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			X	
c) Disturb any human remains, including those interred outside of dedicated cemeteries?			X	

**Thresholds of Significance and Regulatory Setting:**

The significance of impacts to cultural resources is based directly on the CEQA Guidelines checklist items a–e listed above. The Archaeological, Historic, and Cultural Resources section of the City of Roseville General Plan also directs the proper evaluation of and, when feasible, protection of significant resources (Policies 1 and 2). There are also various federal and State regulations regarding the treatment and protection of cultural resources, including the National Historic Preservation Act and the Antiquities Act (which regulate items of significance in history), Section 7050.5 of the California Health and Safety Code, Section 5097.9 of the California Public Resources Code (which regulates the treatment of human remains) and Section 21073 et seq. of the California Public Resources Code (regarding Tribal Cultural Resources). The CEQA Guidelines also contains specific sections, other than the checklist items, related to the treatment of effects on historic resources.

Pursuant to the CEQA Guidelines, if it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2 (a), (b), and (c)). A *historical resource* is a resource listed, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR)

(Section 21084.1); a resource included in a local register of historical resources (Section 15064.5(a)(2)); or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (Section 15064.5 (a)(3)). Public Resources Code Section 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR.

**Discussion of Checklist Answers:**

a–c) No cultural resources are known to exist on the project site per the NRSP EIR; however, standard mitigation measures apply which are designed to reduce impacts to cultural resources, should any be found on-site. The measure requires an immediate cessation of work, and contact with the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the North Roseville Specific Plan EIR; project-specific impacts are less than significant.

**VI. Energy**

Roseville Electric provides electrical power in the City and Pacific Gas and Electric (PG&E) provides natural gas. The City purchases wholesale electrical power from both the Western Area Power Administration (WAPA), which is generated by the federal government’s Central Valley Project, which produces 100 percent hydroelectric energy sources from a system of dams, reservoirs, and power plants within central and northern California. In addition, up to 50 percent of the City’s power is generated at the City-owned Roseville Energy Park (REP). The REP is a 160 megawatt natural-gas-fired power plant that uses a combined cycle gas turbine technology. The City also owns the 48 megawatt combustion-turbine Roseville Power Plant 2 (REP 2), which is used for peaking energy. The City’s electric power mix varies from year-to-year, but according to the most recent Citywide energy analysis (the Amoruso Ranch Environmental Impact Report), the mix in 2013/2014 was 25% eligible renewable (geothermal, small hydroelectric, and wind), 14% hydroelectric, 48% natural gas, and 13% from other sources (power purchased by contract).

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

**Thresholds of Significance and Regulatory Setting:**

Established in 2002, California’s Renewable Portfolio Standard (RPS) currently requires that 33 percent of electricity retail sales by served by renewable energy resources by 2020, and 50 percent by 2030. The City published a Renewables Portfolio Standard Procurement Plan in June 2018, and continues to comply with the RPS reporting and requirements and standards. There are no numeric significance thresholds to define “wasteful, inefficient, or unnecessary” energy consumption, and therefore significance is based on CEQA Guidelines checklist items a and b, above, and by the use of expert judgment supported by facts, relying on the

policies, codes, and regulations adopted by the City and by regulatory agencies which relate to energy. The analysis considers compliance with regulations and standards, project design as it relates to energy use (including transportation energy), whether the project will result in a substantial unplanned demand on the City’s energy resources, and whether the project will impede the ability of the City to meet the RPS standards.

**Discussion of Checklist Answers:**

a-b) The project would consume energy both during project construction and during project operation. During construction, fossil fuels, electricity, and natural gas would be used by construction vehicles and equipment. However, the energy consumed during construction would be temporary, and would not represent a significant demand on available resources. There are no unusual project characteristics that would necessitate the use of construction equipment or methods that would be less energy-efficient or which would be wasteful.

The completed project would consume energy related to building operation, exterior lighting, landscape irrigation and maintenance, and vehicle trips to and from the use. In accordance with California Energy Code Title 24, the project would be required to meet the Building Energy Efficiency Standards. This includes standards for water and space heating and cooling equipment; insulation for doors, pipes, walls, and ceilings; and appliances, to name a few. The project would also be eligible for rebates and other financial incentives from both the electric and gas providers for the purchase of energy-efficient appliances and systems, which would further reduce the operational energy demand of the project. The project was distributed to both PG&E and Roseville Electric for comments, and was found to conform to the standards of both providers; energy supplies are available to serve the project. Thus, impacts are less than significant.

**VII. Geology and Soils**

As described in the Safety Element of the City of Roseville General Plan, there are three inactive faults (Volcano Hill, Linda Creek, and an unnamed fault) in the vicinity, but there are no known active seismic faults within Placer County. The last seismic event recorded in the South Placer area occurred in 1908, and is estimated to have been at least a 4.0 on the Richter Scale. Due to the geographic location and soil characteristics within the City, the General Plan indicates that soil liquefaction, landslides, and subsidence are not a significant risk in the area.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:			X	
i) Ruptures of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located in a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

#### Thresholds of Significance and Regulatory Setting:

The significance of impacts related to geology and soils is based directly on the CEQA Guidelines checklist items a–e listed above. Regulations applicable to this topic include the Alquist-Priolo Act, which addresses earthquake safety in building permits, and the Seismic Hazards Mapping Act, which requires the state to gather and publish data on the location and risk of seismic faults.

The Findings of the Implementing Procedures indicate that compliance with the Flood Damage Prevention Ordinance (RMC Ch.9.80) and Design/Construction Standards (Resolution 07-107) will prevent significant impacts related to checklist item b. The Ordinance and standards include permit requirements for construction and development in erosion-prone areas and ensure that grading activities will not result in significant soil erosion

or loss of topsoil. The use of septic tanks or alternative waste systems is not permitted in the City of Roseville, and therefore no analysis of criterion e is necessary.

### Discussion of Checklist Answers:

a) The project will not expose people or structures to potential substantial adverse effects involving seismic shaking, ground failure or landslides.

i-iii) According to United States Geological Service mapping and literature, active faults are largely considered to be those which have had movement within the last 10,000 years (within the Holocene or Historic time periods)<sup>1</sup> and there are no major active faults in Placer County. The California Geological Survey has prepared a map of the state which shows the earthquake shaking potential of areas throughout California based primarily on an area's distance from known active faults. The map shows that the City lies in a relatively low-intensity ground-shaking zone. Commercial, institutional, and residential buildings as well as all related infrastructure are required, in conformance with Chapter 16, *Structural Design Requirements*, Division IV, *Earthquake Design* of the California Building Code, to lessen the exposure to potentially damaging vibrations through seismic-resistant design. In compliance with the Code, all structures in the Project area would be well-built to withstand ground shaking from possible earthquakes in the region; impacts are less than significant.

iv) Landslides typically occur where soils on steep slopes become saturated or where natural or manmade conditions have taken away supporting structures and vegetation. The existing and proposed slopes of the project site are not steep enough to present a hazard during development or upon completion of the project. In addition, measures would be incorporated during construction to shore minor slopes and prevent potential earth movement. Therefore, impacts associated with landslides are less than significant.

b) Grading activities will result in the disruption, displacement, compaction and over-covering of soils associated with site preparation (grading and trenching for utilities). Grading activities for the project will be limited to the project site. Grading activities require a grading permit from the Engineering Division. The grading permit is reviewed for compliance with the City's Improvement Standards, including the provision of proper drainage, appropriate dust control, and erosion control measures. Grading and erosion control measures will be incorporated into the required grading plans and improvement plans. Therefore, the impacts associated with disruption, displacement, and compaction of soils associated with the project are less than significant.

c, d) A review of the Natural Resources Conservation Service Soil Survey for Placer County, accessed via the Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/>), indicates that the soils on the site are Cometa-Fiddyment complex, 1 to 5 percent slopes, Ramona sandy loam, 2 to 9 percent slopes, and Xerofluvents, frequently flooded, none of which are listed as geologically unstable or sensitive. Therefore, the project has no impacts related to this criteria.

f) No paleontological resources are known to exist on the project site per the NRSP EIR; however, standard mitigation measures apply which are designed to reduce impacts to such resources, should any be found on-site. The measure requires an immediate cessation of work, and contact with the appropriate agencies to address the resource before work can resume. With these measures in place, project-specific impacts are less than significant.

### VIII. Greenhouse Gases

Greenhouse gases trap heat in the earth's atmosphere. The principal greenhouse gases (GHGs) that enter the atmosphere because of human activities are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), and

<sup>1</sup> United States Geological Survey, <http://earthquake.usgs.gov/learn/glossary/?term=active%20fault>, Accessed January 2016

fluorinated gases. As explained by the United States Environmental Protection Agency<sup>2</sup>, global average temperature has increased by more than 1.5 degrees Fahrenheit since the late 1800s, and most of the warming of the past half century has been caused by human emissions. The City has taken proactive steps to reduce greenhouse gas emissions, which include the introduction of General Plan policies to reduce emissions, changes to City operations, and climate action initiatives.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

**Thresholds of Significance and Regulatory Setting:**

In Assembly Bill 32 (the California Global Warming Solutions Act), signed by Governor Schwarzenegger of California in September 2006, the legislature found that climate change resulting from global warming was a threat to California, and directed that “the State Air Resources Board design emissions reduction measures to meet the statewide emissions limits for greenhouse gases . . .”. The target established in AB 32 was to reduce emissions to 1990 levels by the year 2020. CARB subsequently prepared the *Climate Change Scoping Plan* (Scoping Plan) for California, which was approved in 2008. The Scoping Plan provides the outline for actions to reduce California’s GHG emissions. CARB’s updated August 2011 Scoping Plan calculated a reduction needed of 21.7% from future “Business As Usual” (BAU) conditions in the year 2020. The current Scoping Plan (adopted May 2014) indicates that statewide emissions of GHG in 1990 amounted to 431 million metric tons, and that the 2020 “Business As Usual” (BAU) scenario is estimated as 509<sup>3</sup> million metric tons, which would require a reduction of 15.3% from 2020 BAU. In addition to this, Senate Bill 32 was signed by the Governor on September 8, 2016, to establish a reduction target of 40 percent below 1990 levels by 2030. The Air Resources Board is currently updating the Scoping Plan to reflect this target.

The Placer County Air Pollution Control District (PCAPCD) recommends that thresholds of significance for GHG be related to AB 32 reduction goals, and has adopted thresholds of significance which take into account the 2030 reduction target. The thresholds include a de minimis and a bright-line maximum threshold. Any project emitting less than 1,100 metric tons of carbon dioxide equivalents per year (MT CO<sub>2</sub>e/yr) during construction or operation results in less than significant impacts. The PCAPCD considers any project with emissions greater than the bright-line cap of 10,000 MT CO<sub>2</sub>e/yr to have significant impacts. For projects exceeding the de minimum threshold but below the bright-line threshold, comparison to the appropriate efficiency threshold is recommended. The significance thresholds are shown in Table 2 below.

<sup>2</sup> <http://www3.epa.gov/climatechange/science/overview.html>, Accessed January 2016

<sup>3</sup> Includes Pavey and Renewables Portfolio Standard reduction

**Table 2: GHG Significance Thresholds**

Bright-line Threshold 10,000 MT CO <sub>2</sub> e/yr			
Residential Efficiency (MT CO <sub>2</sub> e/capita <sup>1</sup> )		Non-Residential Efficiency (MT CO <sub>2</sub> e/ksf <sup>2</sup> )	
Urban	Rural	Urban	Rural
4.5	5.5	26.5	27.3
De Minimis Threshold 1,100 MT CO <sub>2</sub> e/yr			
1. Per Capita = per person			
2. Per ksf = per 1,000 square feet of building			

**Discussion of Checklist Answers:**

a–b) Buildout of the project would contribute to increases of GHG emissions that are associated with global climate change during construction and operation. CalEEMod (version 2016.3.1) was used to model the project’s construction related GHG emissions (CO<sub>2</sub>e). Construction related GHG emissions occur at one point in time and are, therefore, not typically expected to significantly contribute to climate change. Climate change is a cumulative effect that occurs over time, and emissions increase on a year-to-year basis due to increases in developed area and other factors. However, the proposed project’s construction related GHG has been estimated and compared to the PCAPCD thresholds. The project’s maximum construction related emissions is 277.74 MT CO<sub>2</sub>e in the most active construction year, which is below the de minimis threshold of 1,100 MT CO<sub>2</sub>e.

The PCAPCD’s CEQA Air Quality Handbook contains a screening table used to determine if a commercial project will exceed the long-term operational GHG emissions significance threshold (Table 2-6: Corresponding Size of a Project for De Minimis Level of 1,100 MT CO<sub>2</sub>e/yr). The screening table identifies that apartment projects consisting of 115 units or less are considered to have a less-than-significant impact related to long-term operational GHG emissions. The project proposes a total of 80 units, which is well below the published threshold of significance. Thus, project-generated GHG emissions would not conflict with, and are consistent with, the State goals listed in AB32 and policies and regulation adopted by the California Air Resources Board pursuant to AB32. Impacts are less than significant.

**IX. Hazards and Hazardous Materials**

There are no hazardous cleanup sites of record within 1,000 feet of the site according to both the State Water Resources Control Envirostor database (<http://geotracker.waterboards.ca.gov/>) and the Department of Toxic Substances Control Envirostor database (<http://www.envirostor.dtsc.ca.gov/public/>). The project is not located on a site where existing hazardous materials have been identified, and the project does not have the potential to expose individuals to hazardous materials.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Create a significant hazard to the public or the environment though reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?				X

### Thresholds of Significance and Regulatory Setting:

The significance of impacts related to hazardous materials is based directly on the CEQA Guidelines checklist items a–h listed above. A material is defined as hazardous if it appears on a list of hazardous materials prepared by a federal, state or local regulatory agency, or if it has characteristics defined as hazardous by such an agency. The determination of significance based on the above criteria depends on the probable frequency and severity of consequences to people who might be exposed to the health hazard, and the degree to which Project design or existing regulations would reduce the frequency of or severity of exposure. As an example, products commonly used for household cleaning are classified as hazardous when transported in large quantities, but one would not conclude that the presence of small quantities of household cleaners at a home would pose a risk to a school located within ¼-mile.

Many federal and State agencies regulate hazards and hazardous substances, including the United States Environmental Protection Agency (US EPA), California Department of Toxic Substances Control (DTSC), Central Valley Regional Water Quality Control Board (Regional Water Board), and the California Occupational Safety and Health Administration (CalOSHA). The state has been granted primacy (primary responsibility for oversight) by the US EPA to administer and enforce hazardous waste management programs. State regulations also have detailed planning and management requirements to ensure that hazardous materials are handled, stored, and disposed of properly to reduce human health risks. California regulations pertaining to hazardous waste management are published in the California Code of Regulations (see 8 CCR, 22 CCR, and 23 CCR).

The project is not within an airport land use plan or within two miles of a public or public use airport. Therefore, no further discussion is provided for items e.

### Discussion of Checklist Answers:

a, b) Standard construction activities would require the use of hazardous materials such as fuels, oils, lubricants, glues, paints and paint thinners, soaps, bleach, and solvents. These are common household and commercial materials routinely used by both businesses and average members of the public. The materials only pose a hazard if they are improperly used, stored, or transported either through upset conditions (e.g. a vehicle accident) or mishandling. In addition to construction use, the operational project would result in the use of common hazardous materials as well, including bleach, solvents, and herbicides. Regulations pertaining to the transport of materials are codified in 49 Code of Federal Regulations 171–180, and transport regulations are enforced and monitored by the California Department of Transportation and by the California Highway Patrol. Specifications for storage on a construction site are contained in various regulations and codes, including the California Code of Regulations, the Uniform Fire Code, and the California Health and Safety Code. These same codes require that all hazardous materials be used and stored in the manner specified on the material packaging. In addition, compliance with state and federal standards governing gas stations, including the PCAPCD's permitting requirements for such uses, would ensure that the project does not result in significant impacts related to hazards and hazardous materials. Existing regulations and programs are sufficient to ensure that potential impacts as a result of the use or storage of hazardous materials are reduced to less than significant levels.

c) The project is not located within a ¼-mile of an existing or proposed school, and thus there is no impact with respect to this criterion.

d) The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5<sup>4</sup>; therefore, no impact will occur.

f) This project is located within an area currently receiving City emergency services and development of the site has been anticipated and incorporated into emergency response plans. As such, the project will cause a less

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<sup>4</sup> <http://www.calepa.ca.gov/SiteCleanup/CorteseList/SectionA.htm>

than significant impact to the City's Emergency Response or Management Plans. Furthermore, the project will be required to comply with all local, State and federal requirements for the handling of hazardous materials, which will ensure less-than-significant impacts. These will require the following programs:

- A Risk Management and Prevention Program (RMPP) is required of uses that handle toxic and/or hazardous materials in quantities regulated by the California Health and Safety Code and/or the City.
- Businesses that handle toxic or hazardous materials are required to complete a Hazardous Materials Management Program (HMMP) pursuant to local, State, or federal requirements.

g) The California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating Wildland Fire Hazard Severity zones. The City is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility. The project site is in an urban area, and therefore would not expose people to any risk from wildland fire. There would be no impact with regard to this criterion.

**X. Hydrology and Water Quality**

As described in the Open Space and Conservation Element of the City of Roseville General Plan, the City is located within the Pleasant Grove Creek Basin and the Dry Creek Basin. Pleasant Grove Creek and its tributaries drain most of the western and central areas of the City and Dry Creek and its tributaries drain the remainder of the City. Most major stream areas in the City are located within designated open space.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
i. result in substantial erosion or siltation on or off-site;			X	
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater systems or provide substantial additional sources of polluted runoff; or			X	
iv. impede or redirect flood flows?				X
d) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	
e) In flood hazard, tsunami, or seiches zones, risk release of pollutants due to project inundation?				X

### Thresholds of Significance and Regulatory Setting:

The significance of impacts related to hydrology and water quality is based directly on the CEQA Guidelines checklist items a–e listed above. For checklist item a, c (i), d, and e, the Findings of the Implementing Procedures indicate that compliance with the City of Roseville Design/Construction Standards (Resolution 07-107), Urban Stormwater Quality Management and Discharge Control Ordinance (RMC Ch. 14.20), and Stormwater Quality Design Manual (Resolution 16-152) will prevent significant impacts related to water quality or erosion. The standards require preparation of an erosion and sediment control plan for construction activities and includes designs to control pollutants within post-construction urban water runoff. Likewise, it is indicated that the Drainage Fees for the Dry Creek and Pleasant Grove Watersheds (RMC Ch.4.48) and City of Roseville Design/Construction Standards (Resolution 07-107) will prevent significant impacts related to checklist items c (ii) and c (iii). The ordinance and standards require the collection of drainage fees to fund improvements that mitigate potential flooding impacts, and require the design of a water drainage system that will adequately convey anticipated stormwater flows without increasing the rate or amount of surface runoff. These same ordinances and standards prevent impacts related to groundwater (items a and d), because developers are required to treat and detain all stormwater onsite using stormwater swales and other methods which slow flows and preserve infiltration. Finally, it is indicated that compliance with the Flood Damage Prevention Ordinance (RMC Ch. 9.80) will prevent significant impacts related to items c (iv) and e. The Ordinance includes standard requirements for all new construction, including regulation of development with the potential to impede or redirect flood flows, and

prohibits development within flood hazard areas. Impacts from tsunamis and seiches were screened out of the analysis (item e) because the project is not located near a water body or other feature that would pose a risk of such an event.

### **Discussion of Checklist Answers:**

a, c (i), d, e) The project will involve the disturbance of on-site soils and the construction of impervious surfaces, such as asphalt paving. Disturbing the soil can allow sediment to be mobilized by rain or wind, and cause displacement into waterways. To address this and other issues, the developer is required to receive approval of a grading permit and/or improvement plants prior to the start of construction. The permit or plans are required to incorporate mitigation measures for dust and erosion control. In addition, the City has a National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Permit issued by the Central Valley Regional Water Quality Control Board which requires the City to reduce pollutants in stormwater to the maximum extent practicable. The City does this, in part, by means of the City's 2016 Design/Construction Standards, which require preparation and implementation of a Stormwater Pollution Prevention Plan. All permanent stormwater quality control measures must be designed to comply with the City's Manual for Stormwater Quality Control Standards for New Development, the City's 2016 Design/Construction Standards, Urban Stormwater Quality Management and Discharge Control Ordinance, and Stormwater Quality Design Manual. For these reasons, impacts related to water quality are less than significant.

b, d) The project does not involve the installation of groundwater wells. The City maintains wells to supplement surface water supplies during multiple dry years, but the effect of groundwater extraction on the aquifer was addressed in the Water Supply Assessment of the Amoruso Ranch Specific Plan EIR, which included a Citywide water analysis. As discussed in Section XVIII (Utilities and Service Systems) of this Initial Study, the anticipated water demand of the project site is currently based on a commercial use, which has a lower water demand when compared to a High Density Residential use. Thus, the project incorporates Water Efficient Landscaping to reduce the project water demand to levels that are less than the City's allocated water demand for the project site. Thus, project impacts related to groundwater extraction are less than significant. Furthermore, all permanent stormwater quality control measures must be designed to comply with the Stormwater Quality Design Manual, which requires the use of bioswales and other onsite detention and infiltration methods. These standards ensure that stormwater will continue to infiltrate into the groundwater aquifer.

c (ii and iii)) The project has been reviewed by City Engineering staff for conformance with City ordinances and standards. The project includes adequate and appropriate facilities to ensure no net increase in the amount or rate of stormwater runoff from the site, and which will adequately convey stormwater flows.

c (iv) and e) The project has been reviewed by City Engineering staff for conformance with City ordinances and standards. The project is not located within either the Federal Emergency Management Agency floodplain or the City's Regulatory Floodplain (defined as the floodplain which will result from full buildout of the City). Therefore, the project will not impede or redirect flood flows, nor will it be inundated. The proposed project is located within an area of flat topography and is not near a waterbody or other feature which could cause a seiche or tsunami. There would be no impact with regard to these criterion.

## **XI. Land Use and Planning**

The project site is located within the North Roseville Specific Plan (NRSP), and has a General Plan land use designation and zoning designation of Community Commercial (CC).

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

**Thresholds of Significance and Regulatory Setting:**

The significance of impacts related to land use is based directly on the CEQA Guidelines checklist items a–c listed above. Consistency with applicable City General Plan policies, Improvement Standards, and design standards is already required and part of the City’s processing of permits and plans, so these requirements do not appear as mitigation measures. Land use regulations applicable to the site include the City’s General Plan 2035, the Zoning Ordinance, and the NRSP. The NRSP contains general design guidelines and policies for development within the NRSP as a whole.

**Discussion of Checklist Answers:**

a) The project area has been planned for development, including adequate roads, pedestrian paths, and bicycle paths to provide connections within the community. The project involves frontage improvements including new driveways, sidewalks, and pedestrian connections. As such, the project will not physically divide an established community.

b) As part of project review, staff considered consistency with all City policies and regulations, including those that are intended to avoid an environmental effect, and found the project to be consistent.

**XII. Mineral Resources**

The Surface Mining and Reclamation Act (SMARA) of 1975 requires the State Geologist to classify land into Mineral Resource Zones (MRZ’s) based on the known or inferred mineral resource potential of that land. The California Division of Mines and Geology (CDMG) was historically responsible for the classification and designation of areas containing—or potentially containing—significant mineral resources, though that responsibility now lies with the California Geological Survey (CGS). CDMG published Open File Report 95-10, which provides the mineral classification map for Placer County. A detailed evaluation of mineral resources has not been conducted within the City limits, but MRZ’s have been identified. There are four broad MRZ categories (MRZ-1 through MRZ-4), and only MRZ-2 represents an area of known significant mineral resources. The City of Roseville General Plan EIR included Exhibit 4.1-3, depicting the location of MRZ’s in the City limits. There is only one small MRZ-2 designation area, located at the far eastern edge of the City.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

**Thresholds of Significance and Regulatory Setting:**

The significance of impacts related to mineral resources is based directly on the CEQA Guidelines checklist items a and b listed above.

**Discussion of Checklist Answers:**

a–b) The project site is not in the area of the City known to include any mineral resources that would be of local, regional, or statewide importance; therefore, the project has no impacts on mineral resources.

**XIII. Noise**

The project site is located in an urbanized area and is surrounded by open space and commercial uses, which typically do not generate substantial noise volumes. The nearest sensitive receptors are the existing residential developments located to the west of the project site, across Woodcreek Oaks Boulevard, as well as future residential developments located in the Campus Oaks Master Plan to the east of the project site. According to the General Plan, the project site is within the 60 dB L<sub>dn</sub> noise contour for existing and future roadways (City of Roseville 2015, Figure IX-1 and Figure IX-2).

Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) Generation of excessive ground borne vibration of ground borne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

**Thresholds of Significance and Regulatory Setting:**

Standards for transportation noise and non-transportation noise affecting existing or proposed land uses are established within the City of Roseville General Plan Noise Element Table IX-1 and IX-3, and these standards are used as the thresholds to determine the significance of impacts related to items a and c. The significance of other noise impacts is based directly on the CEQA Guidelines checklist items b and c listed above. The Findings of the Implementing Procedures indicate that compliance with the City Noise Regulation (RMC Ch. 9.24) will prevent significant non-transportation noise as it relates to items a and b. The Ordinance establishes noise exposure standards that protect noise-sensitive receptors from a variety of noise sources, including non-transportation/fixed noise, amplified sound, industrial noise, and events on public property. The project is not within an airport land use plan, within two miles of a public or public use airport and there are also no private airstrips in the vicinity of the project area. Therefore, item c has been ruled out from further analysis.

**Discussion of Checklist Answers:**

a) The City of Roseville General Plan Noise Element includes Policy 7, which requires proposed fixed noise sources to be mitigated so as not to exceed the noise level performance standards contained within Noise Element Table IX-3. These standards are included in Table 3 below. Fixed noise sources are defined as noises that come from a specified area, while moving noise sources are from transportation facilities (roadway noise, train noise, etc.); the proposed project will generate fixed noise.

**Table 3: Noise Element Table IX-3**

PERFORMANCE STANDARDS FOR NON-TRANSPORTATION NOISE SOURCES OR PROJECTS AFFECTED BY NON-TRANSPORTATION NOISE SOURCES (As Measured at the Property Line of Noise-Sensitive Uses)		
Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly $L_{eq}$ , dB	50	45
Maximum level, dB	70	65
<p><sup>1</sup> For municipal power plants consisting primarily of broadband, steady state noise sources, the hourly (Leq) noise standard may be increased up to 10 dB(A), but not exceed 55 dB(A) Hourly Leq dB.</p> <p>Each of the noise levels specified above should be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).</p> <p>No standards have been included for interior noise levels. Standard construction practices should, with exterior noise levels identified, result in acceptable interior noise levels.</p>		

The proposed project is a multi-family residential apartment complex consisting of 80 units. The project includes a community building with an outdoor common area and pool, which is highlighted in green in Figure 3 on the following page. The outdoor common area and Buildings 4 and 5 are located approximately 25 feet from Woodcreek Oaks Boulevard. An Environmental Noise Assessment was prepared for the project by Bollard Acoustical Consultants, Inc. (BAC) and is included as Attachment 3. The assessment evaluates noise levels associated with traffic on Woodcreek Oaks Boulevard and compares these levels against the applicable City of Roseville standards for acceptable exterior and interior noise exposure for residential uses. The assessment concluded that the project would be exposed to future traffic noise exposure in excess of the applicable exterior noise level standards. As such, the following noise mitigation measures are recommended for this project:

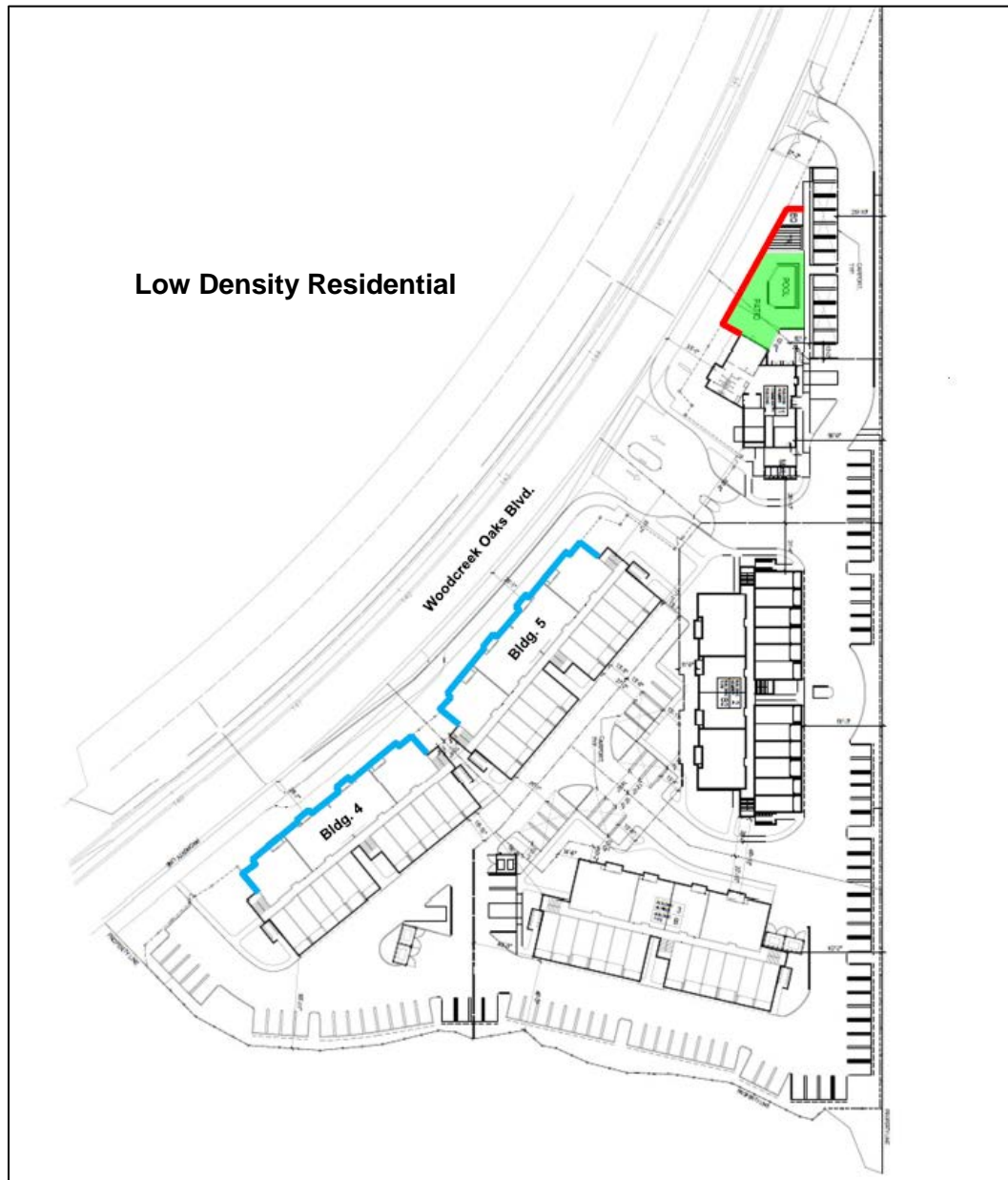
**Mitigation Measure NOI-1:** A solid noise barrier measuring a minimum of 6-feet in height shall be constructed at the pool/patio area adjacent to Woodcreek Oaks Boulevard. Suitable materials for the solid noise barrier include masonry and precast concrete panels. Glass can also be an effective barrier material in areas where preservation of views is desired. Other materials may be acceptable but should be reviewed by an acoustical consultant prior to use.

**Mitigation Measure NOI-2:** All upper-floor window and sliding glass door assemblies of residences of Buildings 4 and 5 from which Woodcreek Oaks Boulevard would be visible (i.e., north, south and westfacing) should be upgraded to a minimum STC rating of 32.

**Mitigation Measure NOI-3:** Mechanical ventilation (air conditioning) shall be provided for all residences in this development to allow the occupants to close doors and windows as desired to achieve compliance with the applicable interior noise level criteria.

Figure 3, below, identifies the location of the recommended noise barrier along the pool/patio area in red and the location of Buildings 4 and 5 is shown in blue. With mitigation, impacts will be less than significant.

Figure 3: Noise Exhibit



b) Surrounding uses may experience short-term increases in groundborne vibration, groundborne noise, and airborne noise levels during construction. However, these increases would only occur for a short period of time. When conducted during daytime hours, construction activities are exempt from Noise Ordinance standards, but the standards do apply to construction occurring during nighttime hours. While the noise generated may be a minor nuisance, the City Noise Regulation standards are designed to ensure that impacts are not unduly intrusive. Based on this, the impact is less than significant.

#### XIV. Population and Housing

The project site is located within the City's North Roseville Specific Plan (NRSP) area, is zoned Community Commercial and has a land use designation of Community Commercial. The City of Roseville General Plan

Table II-4 identifies the total number of residential units and population anticipated as a result of buildout of the City, and the Specific Plan likewise includes unit allocations and population projections for the Plan Area.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

**Thresholds of Significance and Regulatory Setting:**

The significance of impacts related to population and housing is based directly on the CEQA Guidelines checklist items a–c listed above.

**Discussion of Checklist Answers:**

a) The CEQA Guidelines identify several ways in which a project could have growth-inducing impacts (Public Resources Code Section 15126.2), either directly or indirectly. Growth-inducement may be the result of fostering economic growth, fostering population growth, providing new housing, or removing barriers to growth. Growth inducement may be detrimental, beneficial, or of no impact or significance under CEQA. An impact is only deemed to occur when it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be shown that the growth will significantly affect the environment in some other way. The project requires a Conditional Use Permit to allow for development of a multi-family residential use in the Community Commercial zone. The project will add residential units where were not contemplated in the City’s General Plan. While the project will result in some level of growth, the City has existing capacity and infrastructure to accommodate the increase. The project will not result in additional infrastructure that will lead to additional growth and the project will not negatively affect the City’s ability to provide public services. Therefore, impacts related to growth inducement are less than significant.

b) The project site is currently vacant and no housing exists on the project site; there would be no impact with respect to this criterion.

**XV. Public Services**

Fire protection, police protection, park services, and library services are provided by the City. The project is located within the Roseville Elementary School District and the Roseville Joint Union High School District.

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?			X	

**Thresholds of Significance and Regulatory Setting:**

The significance of impacts related to public services is based directly on the CEQA Guidelines checklist items a–e listed above. The EIR for the Amoruso Ranch Specific Plan, which updated Citywide analyses, addressed the level of public services which would need to be provided in order to serve planned growth in the community. The project is consistent with the existing land use designations. In addition, the project has been routed to the various public service agencies, both internal and external, to ensure that the project meets the agencies’ design standards (where applicable) and to provide an opportunity to recommend appropriate conditions of approval.

a) Existing City codes and regulations require adequate water pressure in the water lines, and construction must comply with the Uniform Fire and Building Codes used by the City of Roseville. Additionally, the applicant is required to pay a fire service construction tax, which is used for purchasing capital facilities for the Fire Department. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

b) Sales taxes and property taxes resulting from development will add revenue to the General Fund, which provides funding for police services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

c) Project applicants are required to pay school impact fees at a rate determined by the local school districts. School fees will be collected prior to the issuance of building permits, consistent with City requirements. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

d) Future park and recreation sites and facilities have already been identified as part of the Specific Plan process. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

e) Sales taxes and property taxes resulting from development will add revenue to the General Fund, which provides funding for the library system and other such facilities and services. In addition, the City charges fees to end-users for other services, such as garbage and greenwaste collection, in order to fund those

services. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

**XVI. Recreation**

The project is located approximately 300 feet north of the south branch of Pleasant Grove Creek trail. Blue Oaks Park is located approximately 0.4-mile to the southwest of the site and Adam V. Baquera Park is located approximately 0.5-mile west of the site, across Woodcreek Oaks Boulevard. A future Class 1 bike trail is also planned to the east of the site.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

**Thresholds of Significance and Regulatory Setting:**

The significance of impacts related to recreation services is based directly on the CEQA Guidelines checklist items a–b listed above.

**Discussion of Checklist Answers:**

a) The project could result in a minor increase in the use of the existing parks within the vicinity, but not beyond the facilities’ anticipated usage. The minor increase would not result in a physical deterioration of the nearby facilities. Existing codes, regulations, funding agreements, and facilities plans are sufficient to ensure less than significant impacts.

b) Park sites and other recreational facilities were identified within the NRSP, and the plan-level impacts of developing those facilities were addressed within the Final EIR for the Specific Plan. No additional facilities are required as a result of this project. The project will not cause any unforeseen or new impacts related to the construction or expansion of recreational facilities.

**XVII. Transportation**

The project site has frontage on Woodcreek Oaks Boulevard, which is a four-lane major arterial with transit facilities in the City of Roseville. The project frontage along Woodcreek Oaks Boulevard is improved with sidewalks, curb, and gutter. Ingress and egress for the project will be provided by a new driveway off Woodcreek

Oaks Boulevard along with a new right-turn pocket lane. A second egress-only driveway will be constructed approximately 200 feet north of the entrance to the site. The existing landscape median in Woodcreek Oaks Boulevard will be modified to allow for left turn movements into and out of the site for vehicles traveling southbound.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

**Thresholds of Significance and Regulatory Setting:**

CEQA Guidelines Section 15064.3 indicates that a project's effect on automobile delay cannot be considered a significant impact, and directs transportation system analysis to focus on vehicle miles traveled (VMT), per checklist item b. However, the CEQA Guidelines also include consistency with a program, plan, or policy addressing transportation systems as an area of potential environmental effects (checklist item a). The City has adopted the following plans, ordinances, or policies applicable to this checklist item: Pedestrian Master Plan, Bicycle Master Plan, Short-Range Transit Plan, and General Plan Circulation Element. The project is evaluated for consistency with these plans and the policies contained within them, which includes an analysis of delay as a potential policy impact. The Circulation Element of the General Plan establishes Level of Service C or better as an acceptable operating condition at all signalized intersections during a.m. and p.m. peak hours. Exceptions to this policy may be made by the City Council, but a minimum of 70% of all signalized intersections must maintain LOS C. The Findings of the Implementing Procedures indicate that compliance with the Traffic Mitigation Fee (RMC Ch. 4.44) will fund roadway projects and improvements necessary to maintain the City's Level of Service standards for projects consistent with the General Plan and related Specific Plan. An existing plus project conditions (short-term) traffic impact study may be required for projects with unique trip generation or distribution characteristics, in areas of local traffic constraints, or to study the proposed project access. A cumulative plus project conditions (long-term) study is required if a project is inconsistent with the General Plan or Specific Plan and would generate more than 50 pm peak-hour trips. The guidelines for traffic study preparation are found in the City of Roseville Design and Construction Standards–Section 4.

For checklist item b, the CEQA Guidelines Section 15064.3 establishes a detailed process for evaluating the significance of transportation impacts. In accordance with this section, the analysis must focus on the generation of VMT. Projects within one-half mile of either an existing major transit stop<sup>5</sup> or a stop along an existing high quality transit corridor<sup>6</sup> should be presumed to have less than significant impacts, as should any project which will decrease VMT when compared with the existing conditions. VMT may be analyzed qualitatively if existing models or methods are not available to estimate VMT for a particular project; this will generally be appropriate for discussions of construction traffic VMT.

Impacts with regard to items c and d are assessed based on the expert judgment of the City Engineer and City Fire Department, as based upon facts and consistency with the City's Design and Construction Standards.

### Discussion of Checklist Answers:

a) The City of Roseville has adopted a Pedestrian Master Plan, Bicycle Master Plan, and Short-Range Transit Plan. The project was reviewed for consistency with these documents. The surrounding pedestrian, transit, and bicycle facilities have already been constructed and the project will not decrease the performance or safety of those facilities. The project will provide pedestrian connections to the existing sidewalks along Woodcreek Oaks Boulevard and to the planned Class I bike trail to the east. The project is consistent with these plans; impacts are less than significant.

A trip generation estimate was prepared by the City's Engineering Division in order to compare the project's anticipated p.m. peak hour trips to the City's modeled trips. Table 4, below, represents the anticipated trip generation for buildout of Transportation Analysis Zone 919 with and without implementation of the project.

**Table 4: Project Trip Generation Estimate  
Traffic Analysis Zone 919**

Use	Units / Square Feet (sf)	Model Trip Rate	PM Peak Trips
<b>2035 Build Out</b>			
Single-Family Dwelling (SFD)	2	0.69	1
Retail	45,000 sf	2.46	111
<b>Existing</b>			
SFD	0	0.69	0
Retail	0	2.46	0
<b>Proposed</b>			
Multi-Family Dwelling (MFD)	80	0.52	42
<b>2035 Build Out</b>			<b>112</b>
<b>Existing Plus Project</b>			<b>42</b>
<b>Total</b>			<b>-70</b>

With the addition of the project's p.m. peak hour trips to the existing condition, the resulting trip generation of 42 peak trips is 70 trips less than what was anticipated for the TAZ. Therefore, a long-term traffic study was not

<sup>5</sup> A site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. (Public Resources Code Section 21064.3)

<sup>6</sup> A corridor with fixed route bus service at service intervals of 15 minutes or less during peak commute hours.

required given the project does not result in 50 p.m. peak hour trips nor does it exceed the number of trips anticipated in the General Plan. Impacts are less than significant.

b) Traffic analyses focus on the number of trips traveling in specified areas during peak periods, in order to quantify impacts as specific intersections. However, there is no direct relationship between the number of trips and the amount of VMT generated by a use. Although the City of Roseville currently has no VMT standards, the project is expected to be consistent with the intent of implementing the VMT metric due to the proximity to existing transit stops. For example, the site is located within one-half mile of five existing bus routes along Woodcreek Oaks Boulevard. The site is also located within one-half mile of an existing shopping center at the southwest corner of Blue Oaks Boulevard and Woodcreek Oaks Boulevard, which consists of a grocery store, personal service use types, retail, and restaurant uses. In addition, the project is located within one-half mile of a planned commercial development at the southeast corner of Blue Oaks Boulevard and Woodcreek Oaks Boulevard that will consist of similar uses.

The project site is located in close proximity to bikeways and sidewalks, which would encourage alternative modes of transportation. Furthermore, the project provides for pedestrian walkways throughout the site, which would improve the pedestrian network on-site and in the project area. Therefore, impacts with respect to this criterion will be less than significant.

c,d) The project has been reviewed by the City Engineering and City Fire Department staff, and has been found to be consistent with the City’s Design Standards. Furthermore, standard conditions of approval added to all City project require compliance with Fire Codes and other design standards. Compliance with existing regulations ensure that impacts are less than significant.

**XVIII. Tribal Cultural Resources**

As described within the Open Space and Conservation Element of the City of Roseville General Plan, the Roseville region was within the territory of the Nisenan (also Southern Maidu or Valley Maidu). Two large permanent Nisenan habitation sites have been identified and protected within the City’s open space (in Maidu Park). Numerous smaller cultural resources, such as midden deposits and bedrock mortars, have also been recorded in the City. A majority of documented sites within the City are located in areas designated for open space uses.

Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

**Thresholds of Significance and Regulatory Setting:**

In addition to archeological resources, tribal cultural resources are also given particular treatment. Tribal cultural resources are defined in Public Resources Code Section 21074, as either 1) a site, feature, place, geographically-defined cultural landscape, sacred place, or object with cultural value to a California Native American Tribe, that is listed or eligible for listing on the California Register or Historical Resources, or on a local register of historical resources or as 2) a resource determined by the lead agency, supported by substantial evidence, to be significant according to the historical register criteria in Public Resources Code section 5024.1(c), and considering the significance of the resource to a California Native American Tribe.

**Discussion of Checklist Answers:**

a) The NRSP EIR included a historic and cultural resources study, which concluded there were no listed or eligible sites documented in the project area. However, the NRSP EIR includes standard mitigation measures, which are designed to reduce impacts to any previously undiscovered resources should any be found on site. Language included in the measure requires an immediate cessation of work, and the requirement to contact the appropriate agencies to address the resource before work can resume. The project will not result in any new impacts beyond those already discussed and disclosed in the NRSP EIR; therefore, project-specific impacts are less than significant.

b) Notice of the proposed project was mailed to tribes which had requested such notice pursuant to Assembly Bill 52 (AB 52) on January 2, 2020. A request for consultation was received from the United Auburn Indian Community (UAIC) on January 7, 2020. City staff met with tribal representatives at the project site and no resources were found to exist on the site. The UAIC concluded consultation with a recommendation that standard mitigation measures be made a requirement of the project to reduce impacts to resources, should any be found on-site. These mitigation measures require pre-construction inspections, contractor awareness training, and outline post-review discovery procedures including an immediate cessation of work, and contact with the appropriate agencies to address the resource before work can resume. With mitigation, impacts are less than significant.

**TCR-1: Pre-Construction Inspections.** A minimum of seven days prior to beginning earthwork, clearing and grubbing, or other soil disturbing activities, the applicant shall notify lead agency representative of the proposed earthwork start-date. The lead agency representative will contact the United Auburn Indian Community (UAIC)

with the proposed earthwork start-date and a UAIC Tribal Representative or Tribal Monitor shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days, or as appropriate for the type and size of project, of groundbreaking activity. During this inspection, a UAIC Tribal Representative or Tribal Monitor may provide an on-site meeting for construction personnel information on TCRs and workers awareness brochure.

If any TCRs, such as bone or shell, or isolated artifacts are encountered during this initial inspection, or during any subsequent construction activities, work shall be suspended within 100 feet of the find and the measures included in the Inadvertent Discoveries Mitigation Measure shall be implemented. Preservation in place is the preferred alternative under CEQA and UAIC protocols, and every effort must be made to preserve the resources in place, including through project redesign.

The contractor shall implement any measures deemed by CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize significant effects to the resources, including the use of a paid Native American Monitor whenever work is occurring within 100 feet of the find.

**TCR-2: Contractor Awareness Training.** The Construction Manager shall ensure that a Contractor Awareness Training Program is delivered to train equipment operators about cultural resources and tribal cultural resources. The program shall be designed to inform construction personnel about: federal and state regulations pertaining to cultural resources and tribal cultural resources; the subsurface indicators of resources that shall require a work stoppage; procedures for notifying the City of any occurrences; and project-specific requirements; and enforcement of penalties and repercussions for non-compliance with the program.

The training shall be prepared by a qualified professional archaeologist and reviewed by City for approval, and may be provided in an audio-visual format, such as a DVD. The Construction Manager shall provide culturally affiliated tribes that consulted on the project the option of attending the initial training in person and/or providing additional materials germane to the unanticipated discovery of tribal cultural resources for incorporation into the training.

The training program shall be required for all construction supervisors, forepersons, and operators of ground-disturbing equipment, and all personnel shall be required to sign a training roster and display a hard hat sticker that is visible to City inspectors. The construction manager is responsible for ensuring that all required personnel receive the training. The Construction Manager shall provide a copy of the signed training roster to the City as proof of compliance.

**TCR-3: Inadvertent Discoveries.** If any TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find. The appropriate tribal representatives from culturally affiliated tribes shall be immediately notified.

Work at the discovery location cannot resume until it is determined, in consultation with culturally affiliated tribes, that the find is not a TCR, or that the find is a TCR and all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied. Preservation in place is the preferred alternative under CEQA and UAIC protocols, and every effort must be made to preserve the resources in place, including through project redesign.

The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary.

**XIX. Utilities and Service Systems**

Water and sewer services will be provided by the City of Roseville. There are existing utilities such as water, sewer, and storm drain lines within Woodcreek Oaks Boulevard. Development on the site will require new connections to these facilities. Storm water will be collected on-site and transferred via pipe into an off-site storm drain system. Solid waste will be collected by the City of Roseville’s Refuse Department. The City of Roseville will provide electric service to the site, while natural gas will be provided by PG&E. Comcast will provide cable. The project has been reviewed by the City’s Engineering Division, Environmental Utilities, Roseville Electric and PG&E. Adequate services are available for the project.

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project’s projected demand in addition of the provider’s existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

**Thresholds of Significance and Regulatory Setting:**

The significance of impacts related to utilities and service systems is based directly on the CEQA Guidelines checklist items a–g listed above.

**Discussion of Checklist Answers:**

a) The major utility infrastructure to serve this area is already installed, which includes a looped sewer line and looped water line system in the streets surrounding the site, and stormwater lines. Minor additional infrastructure will be constructed within the project site to tie the project into the major systems, but these facilities will be constructed in locations where site development is already occurring as part of the overall project; there are no additional substantial impacts specific or particular to the minor infrastructure improvements.

b) The City of Roseville 2015 Urban Water Management Plan (UWMP), adopted May 2016, estimates water demand and supply for the City through the year 2040, based on existing land use designations and population projections. In addition, the Amoruso Ranch Water Supply Assessment (AR WSA, Appendix E of the Amoruso Ranch FEIR), dated May 2016, estimates water demand and supply for ultimate General Plan buildout. The UWMP indicates that existing water supply sources are sufficient to meet all near term needs, estimating an annual water demand of 45,475 acre-feet per year (AFY) by the year 2020 and existing surface and recycled water supplies in the amount of 70,421 AFY. The AR WSA estimates a Citywide buildout demand of 64,370 AFY when including recycled water, and of 59,657 AFY of potable water. The AR WSA indicates that surface water supply is sufficient to meet demand during normal rainfall years, but is insufficient during single- and multiple-dry years. However, the City’s UWMP establishes mandatory water conservation measures and the use of groundwater to offset reductions in surface water supplies. Both the UWMP and AR WSA indicate that these measures, in combination with additional purchased water sources, will ensure that supply meets projected demand.

A technical memo was prepared for the project to analyze the water demand of the project (Attachment 4). The proposed apartment complex is considered a High Density Residential (HDR) use, which has a higher water demand factor when compared to the CC land use. The water demand factor for the existing CC designation is 2,598 gallons per day per acre (GPD/ac) resulting in an annual demand of 12.11 acre feet per year (AF/yr). The water demand factor for the proposed HDR use is 177 GPD/ac resulting in an annual demand of 15.86 AF/yr. Assuming compliance with the City’s Water Efficient Landscape Ordinance results in a reduction of GPD bringing the proposed annual usage to 10.89 AF/yr, which is 1.22 AF/yr less than the City’s planned usage for the site. Thus, sufficient water supplies are available to serve the project from existing sources and no new or expanded entitlements are needed. Impacts are less than significant.

c) The proposed project would be served by the Pleasant Grove Wastewater Treatment Plant (PGWWTP). The Central Valley Regional Water Quality Control Board (RWQCB) regulates water quality and quantity of effluent discharged from the City’s wastewater treatment facilities. The Pleasant Grove WWTP has the capacity to treat 12 million gallons per day (mgd) and is currently treating 7.0 mgd. The volume of wastewater generated by the proposed project could be accommodated by the facility; the proposed project will not contribute to an exceedance of applicable wastewater treatment requirements. The impact would be less than significant.

d,e) The Western Placer Waste Management Authority is the regional agency handling recycling and waste disposal for Roseville and surrounding areas. The regional waste facilities include a Material Recovery Facility (MRF) and the Western Regional Sanitary Landfill (WRSL). Currently, the WRSL is permitted to accept up to 1,900 tons of municipal solid waste per day. According to the solid waste analysis of the Amoruso Ranch Specific Plan FEIR, under current projected development conditions the WRSL has a projected lifespan extending through 2058. There is sufficient existing capacity to serve the proposed project. Though the project will contribute incrementally to an eventual need to find other means of waste disposal, this impact of City buildout has already been disclosed and mitigation applied as part of each Specific Plan the City has approved, including the most recent Amoruso Ranch Specific Plan. All residences and business in the City pay fees for solid waste collection, a portion of which is collected to fund eventual solid waste disposal expansion. The project will not result in any new impacts associated with major infrastructure. Environmental Utilities staff has reviewed the project for consistency with policies, codes, and regulations related to waste disposal and waste reduction regulations and policies and has found that the project design is in compliance.

**XX. Wildfire**

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope				X

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
instability, or drainage changes?				

**Thresholds of Significance and Regulatory Setting:**

The significance of impacts related to utilities and service systems is based directly on the CEQA Guidelines checklist items a–d listed above. The California Department of Forestry and Fire Protection (CAL FIRE) is the state agency responsible for wildland fire protection and management. As part of that task, CAL FIRE maintains maps designating Wildland Fire Hazard Severity zones. The City is not located within a Very High Fire Hazard Severity Zone, and is not in a CAL FIRE responsibility area; fire suppression is entirely within local responsibility.

**Discussion of Checklist Answers:**

a–d) Checklist questions a–d above do not apply, because the project site is not within a Very High Fire Hazard Severity Zone and is not in a CAL FIRE responsibility area.

**XXI. Mandatory Findings of Significance**

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, threatened or rare species, or eliminate important examples of the major periods of California history or prehistory?			X	
b) Does the project have impacts which are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a			X	

Environmental Issue	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)				
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

**Significance Criteria and Regulatory Setting:**

The significance of impacts related to mandatory findings of significance is based directly on the CEQA Guidelines checklist items a–c listed above.

**Discussion of Checklist Answers:**

a–c) Long term environmental goals are not impacted by the proposed project. The cumulative impacts do not deviate beyond what was contemplated in the NRSP EIR, and mitigation measures have already been incorporated. With implementation of the City’s Mitigating Ordinances, Guidelines, and Standards and best management practices, mitigation measures described in this chapter, and permit conditions, the proposed project will not have a significant impact on the habitat of any plant or animal species. Based on the foregoing, the proposed project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of any wildlife species, or create adverse effects on human beings.

## **ENVIRONMENTAL DETERMINATION:**

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*In reviewing the site specific information provided for this project and acting as Lead Agency, the City of Roseville, Development Services Department, Planning Division has analyzed the potential environmental impacts created by this project and determined that with mitigation the impacts are less than significant. As demonstrated in the initial study checklist, there are no “project specific significant effects which are peculiar to the project or site” that cannot be reduced to less than significant effects through mitigation (CEQA Section 15183) and therefore an EIR is **not** required. Therefore, **on the basis of the foregoing initial study:***

[ X ] I find that the proposed project COULD, but with mitigation agreed to by the applicant, clearly will not have a significant effect on the environment and a *MITIGATED NEGATIVE DECLARATION* has been prepared.

Initial Study Prepared by:

*Kinarik Shallow*

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Kinarik Shallow, Associate Planner  
City of Roseville, Development Services – Planning Division

## **Attachments:**

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1. Mitigation Monitoring & Reporting Program
2. Arborist Report
3. Noise Study
4. Technical Memo for Water Demand
5. CalEEMod Results



DEVELOPMENT SERVICES DEPARTMENT – PLANNING DIVISION

311 Vernon Street, Roseville, CA 95678 (916) 774-5276

**MITIGATION MONITORING AND REPORTING PROGRAM**

<b>Project Title/File Number:</b>	NRSP PCL M-31 – Mourier M31 Apartments; File #PL19-0317
<b>Project Location:</b>	9000 Woodcreek Oaks Boulevard, Roseville, Placer County, CA; APN 481-010-008-000
<b>Project Description:</b>	The proposed project is an 80-unit apartment complex on a 4.16-acre parcel with associated parking, lighting, and landscaping. The project includes a Design Review Permit to review the project site and proposed buildings, a Conditional Use Permit to allow a multi-family residential use in the Community Commercial zone district, and a Tree Permit to encroach into the protected zone of a native oak tree.
<b>Environmental Document</b>	Mitigated Negative Declaration
<b>Project Applicant:</b>	David Cobbs, Baker Williams Engineering Group
<b>Property Owner:</b>	Steve Schnable, Mourier Land Investment Corp.
<b>Lead Agency Contact Person:</b>	Kinarik Shallow, Associate Planner, 916-746-1309

Section 21081.6 of the California Public Resources Code requires public agencies to "adopt a reporting and monitoring program for the changes to the project which it has adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment." This Mitigation Monitoring and Reporting Program has been adopted for the purpose of avoiding environmental impacts

MONITORING PROCESS: Existing monitoring mechanisms are in place that assist the City of Roseville in meeting the intent of CEQA. These existing monitoring mechanisms eliminate the need to develop new monitoring processes for each mitigation measure. These mechanisms include grading plan review and approval, improvement/building plan review and approval and on-site inspections by City Departments. Given that these monitoring processes are requirements of the project, they are not included in the mitigation monitoring program.

It shall be the responsibility of the project applicant/owner to provide written notification to the City using the Mitigation Verification Cover Sheet and Forms, in a timely manner, of the completion of each Mitigation Measure as identified on the following pages. The City will verify that the project is in compliance with the adopted Mitigation Monitoring and Reporting Program. Any non-compliance will be reported by the City to the applicant/owner, and it shall be the project applicant's/owner's responsibility to rectify the situation by bringing the project into compliance. The purpose of this program is to ensure diligent and good faith compliance with the Mitigation Measures which have been adopted as part of the project.

**TABLE OF MITIGATION MEASURES**

Mitigation Measure	Implementation	Timing	Reviewing Party	Documents to be Submitted to City	Staff Use Only
<p><b>BIO-1: Avoid nesting sites</b></p> <p>To ensure that fully protected bird and raptor species are not injured or disturbed by construction in the vicinity of nesting habitat, the project applicant shall implement the following measures:</p> <p>(a) When feasible, all tree removal shall occur between August 30 and February 15 to avoid the breeding season of any raptor species that could be using the area, and to discourage hawks from nesting in the vicinity of an upcoming construction area. This period may be modified with the authorization of the CDFW; or</p> <p>(b) Prior to the beginning of mass grading, including grading for major infrastructure improvements, during the period between February 15 and August 30, all trees and potential burrowing owl habitat within 350 feet of any grading or earthmoving activity shall be surveyed for active raptor nests or burrows by a qualified biologist no more than 30 days prior to disturbance. If active raptor nests or burrows are found, and the site is within 350 feet of potential construction activity, a fence shall be erected around the tree or burrow(s) at a distance of up to 350 feet, depending on the species, from the edge of the canopy to prevent construction disturbance and intrusions on the nest area. The appropriate buffer shall be determined by the City in consultation with CDFW.</p> <p>(c) No construction vehicles shall be permitted within restricted areas (i.e., raptor protection zones), unless directly related to the management or protection of the legally protected species.</p> <p>(d) In the event that a nest is abandoned, despite efforts to minimize disturbance, and if the nestlings are still alive, the developer shall contact CDFW and, subject to CDFW approval, fund the recovery and hacking (controlled release of captive reared young) of the nestling(s).</p> <p>(e) If a legally protected species nest is located in a tree designated for removal, the removal shall be deferred until after August 30th, or until the adults and young of the year are no longer dependent on the nest site as determined by a qualified biologist.</p> <p>(f) The project applicant, in consultation with the CDFW, shall conduct a pre-construction survey within the phases of the project site that are scheduled for construction activities. The survey shall be conducted by a qualified biologist to determine if burrowing owls are occupying the project site. The survey shall be conducted no more than three weeks prior to grading of the project site.</p> <p>If the above survey does not identify burrowing owls on the project site, then no further mitigation would be required. However, should burrowing owls be found on the project site, the following measures shall be required:</p> <p>(g) The applicant shall avoid all potential burrowing owl burrows that may be disturbed by project construction during the breeding season between February 15 and August 30 (the period when nest burrows are typically occupied by adults with eggs or young). Avoidance shall include the establishment of a 350-foot diameter non-disturbance buffer zone around any occupied burrows. The buffer zone shall be delineated by highly visible temporary construction fencing. Disturbance of any occupied burrows shall only occur outside of the breeding season (August 30 through February 15).</p> <p>Based on approval by the CDFW, preconstruction and nonbreeding season exclusion measures may be implemented to preclude burrowing owl occupation of the project site prior to project-related disturbance (such as grading). Burrowing owls may be passively excluded from burrows in the construction area by placing one-way doors in the burrows according to current CDFW protocol. The one-way doors must be in place for a minimum of three days. All burrows that may be occupied by burrowing owls, regardless of whether they exhibit signs of occupation, must be cleared. Burrows that have been cleared through the use of the one-way doors shall then be closed or backfilled to prevent owls from entering the burrow. The one-way doors shall not be used more than two weeks before construction to ensure that owls do not recolonize the area of construction.</p>	<p>Results of preconstruction surveys shall be submitted prior to the issuance of a grading permit or Improvement Plans. Applicable construction restrictions shall be reflected within plans.</p>	<p><i>Pre-Construction and Construction:</i> Surveys required prior to construction. If surveys are positive for birds, then remainder of mitigation steps are required prior to construction.</p> <p>Add as note on Improvement Plans.</p>	<p>Planning and Engineering</p>	<p>Nesting bird surveys</p>	
<p><b>NOI-1:</b> A solid noise barrier measuring a minimum of 6-feet in height shall be constructed at the pool/patio area adjacent to Woodcreek Oaks Boulevard. Suitable materials for the solid noise barrier include masonry and precast concrete panels. Glass can also be an effective</p>	<p>Project plans will be reviewed for compliance.</p>	<p><i>Pre-Construction:</i> Prior to issuance of Improvement Plans and/or Building Permits</p>	<p>Planning, Engineering, and Building</p>	<p>None</p>	

barrier material in areas where preservation of views is desired. Other materials may be acceptable but should be reviewed by an acoustical consultant prior to use.					
<b>NOI-2:</b> All upper-floor window and sliding glass door assemblies of residences of Buildings 4 and 5 from which Woodcreek Oaks Boulevard would be visible (i.e., north, south and westfacing) should be upgraded to a minimum STC rating of 32.	Project plans will be reviewed for compliance.	<i>Pre-Construction:</i> Prior to issuance of Building Permits	Planning and Building	None	
<b>NOI-3:</b> Mechanical ventilation (air conditioning) shall be provided for all residences in this development to allow the occupants to close doors and windows as desired to achieve compliance with the applicable interior noise level criteria.	Project plans will be reviewed for compliance.	<i>Pre-Construction:</i> Prior to issuance of Building Permits	Planning and Building	None	
<b>TCR-1: Pre-Construction Inspections</b> A minimum of seven days prior to beginning earthwork, clearing and grubbing, or other soil disturbing activities, the applicant shall notify lead agency representative of the proposed earthwork start-date. The lead agency representative will contact the United Auburn Indian Community (UAIC) with the proposed earthwork start-date and a UAIC Tribal Representative or Tribal Monitor shall be invited to inspect the project site, including any soil piles, trenches, or other disturbed areas, within the first five days, or as appropriate for the type and size of project, of groundbreaking activity. During this inspection, a UAIC Tribal Representative or Tribal Monitor may provide an on-site meeting for construction personnel information on TCRs and workers awareness brochure. If any TCRs, such as bone or shell, or isolated artifacts are encountered during this initial inspection, or during any subsequent construction activities, work shall be suspended within 100 feet of the find and the measures included in the Inadvertent Discoveries Mitigation Measure shall be implemented. Preservation in place is the preferred alternative under CEQA and UAIC protocols, and every effort must be made to preserve the resources in place, including through project redesign. The contractor shall implement any measures deemed by CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize significant effects to the resources, including the use of a paid Native American Monitor whenever work is occurring within 100 feet of the find.	The applicant shall notify the Planning Division of the pre-construction meeting date.	Prior to construction.  <i>Add as note on Improvement Plans.</i>	Planning and Engineering	None	
<b>TCR-2: Contractor Awareness Training</b> The Construction Manager shall ensure that a Contractor Awareness Training Program is delivered to train equipment operators about cultural resources and tribal cultural resources. The program shall be designed to inform construction personnel about: federal and state regulations pertaining to cultural resources and tribal cultural resources; the subsurface indicators of resources that shall require a work stoppage; procedures for notifying the City of any occurrences; and project-specific requirements; and enforcement of penalties and repercussions for non-compliance with the program. The training shall be prepared by a qualified professional archaeologist and reviewed by City for approval, and may be provided in an audio-visual format, such as a DVD. The Construction Manager shall provide culturally affiliated tribes that consulted on the project the option of attending the initial training in person and/or providing additional materials germane to the unanticipated discovery of tribal cultural resources for incorporation into the training. The training program shall be required for all construction supervisors, forepersons, and operators of ground-disturbing equipment, and all personnel shall be required to sign a training roster and display a hard hat sticker that is visible to City inspectors. The construction manager is responsible for ensuring that all required personnel receive the training. The Construction Manager shall provide a copy of the signed training roster to the City as proof of compliance.	Project Applicant/ Contractor/ UAIC/ Tribal Representative	Prior to and during construction.  <i>Add as note on Improvement Plans and Building Plans.</i>	Planning and Engineering	Training Roster	
<b>TCR-3: Inadvertent Discoveries</b> If any TCRs are discovered during ground disturbing construction activities, all work shall cease within 100 feet of the find. The appropriate tribal representatives from culturally affiliated tribes shall be immediately notified. Work at the discovery location cannot resume until it is determined, in consultation with culturally affiliated tribes, that the find is not a TCR, or that the find is a TCR and all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied. Preservation in place is the preferred alternative under CEQA and UAIC protocols, and every effort must be made to preserve the resources in place, including through project redesign.	This condition shall be reflected in all construction and building plans, and construction site workers shall be advised by the site manager of this measure.	<i>Construction:</i> Measure applies if resources are discovered during construction.  <i>Add as note on Improvement Plans and Building Plans.</i>	Planning, Engineering, and Building	None	

The contractor shall implement any measures deemed by the CEQA lead agency to be necessary and feasible to preserve in place, avoid, or minimize impacts to the resource, including, but not limited to, facilitating the appropriate tribal treatment of the find, as necessary.



MITIGATION VERIFICATION SUBMITTAL COVER SHEET

Project Title/Planning File #
Project Address
Property Owner
Planning Division Contact

SUMMARY OF VERIFICATION MATERIALS INCLUDED IN THIS SUBMITTAL

Table with 3 columns: Mitigation Measure, Supporting Attachments Included, Date Complete. Contains 8 empty rows for data entry.

I HAVE ATTACHED THE FOLLOWING REQUIRED ITEMS:

- Table of Applicable Mitigation Measures
Mitigation Verification Form(s)
Specific supporting documentation required by measure(s), if applicable (e.g. biologist's report)

I hereby certify under penalty of perjury under the laws of the State of California that I am the property owner or an agent of the property owner and am authorized to submit this Mitigation Verification Form. I also certify that the above-listed mitigation measures have been completed in the manner required, and that all of the information in this submittal is true and correct, to the best of my knowledge:

Signature and Date
Print Name
Contact Number

# MITIGATION VERIFICATION FORM

Mitigation Measure \_\_\_\_\_

Description of Monitoring and Verification Work Performed. The following information is a required part of the description: dates, personnel names or titles, and the stage/phase of construction work. Additional notes sheets may be attached, if necessary, or the below may simply reference a separate attachment that provides the required information.

# INSTRUCTIONS

## COVER SHEET:

A Cover Sheet for the project/development is prepared by City staff, with the top portion filled out. Each time Mitigation Verification Forms(s) are being submitted, a Cover Sheet completed by the Developer, Contractor, or Designee is required. An example of a completed summary table is provided below. The signature on the Cover Sheet must be *original wet ink*.

## EXAMPLE MITIGATION VERIFICATION SUBMITTAL COVER SHEET

<b>Project Title/Planning File #</b>	New Coffee Shop, PL15-0000
<b>Project Address</b>	10 Justashort Street
<b>Property Owner</b>	Jane Owner
<b>Planning Division Contact</b>	Joe Planner, Associate Planner, (916) 774-####

### SUMMARY OF VERIFICATION MATERIALS INCLUDED IN THIS SUBMITTAL

Mitigation Measure	Supporting Attachments Included	Date Complete
MM-3	Copy of survey report signed by biologist	5/10/2016
MM-4	All information included in Mitigation Verification Form	5/12/2016
MM-5	E-mail from Air District approving Dust Control Plan	5/05/2016

## MITIGATION VERIFICATION FORM:

A Mitigation Verification Form is provided by City staff, along with the Cover Sheet and Table of Applicable Mitigation Measures. A form is filled in and submitted for each mitigation measure by the Developer, Contractor, or Designee. The form needs only the mitigation number to be filled in, along with the Description of Monitoring and Verification Work Performed. Multiple forms may be submitted simultaneously, under one cover sheet. It is also permissible to submit a form for each part of a measure, on separate dates. For instance, in the example measure MM-4 in the table above, the actual mitigation requires informing construction workers *and* retaining a qualified archeologist if resources are uncovered. Thus, a developer may submit a form in May certifying that construction workers have been informed, and also submit a second copy of the form in July because resources were discovered and additional actions had to be undertaken.

Each mitigation measure specifies the type of supporting documentation required; this must be submitted in order for the City to accept the mitigation as complete. An example of a completed Mitigation Verification Form is provided below.

## **EXAMPLE** **MITIGATION VERIFICATION FORM**

### Mitigation Measure MM3

Description of Monitoring and Verification Work Performed. The following information is a required part of the description: dates, personnel names or titles, and the stage/phase of construction work. Additional notes sheets may be attached, if necessary, or the below may simply reference a separate attachment that provides the required information.

The mitigation measure text is included on the Improvement Plans General Notes page (Improvement Plan EN15-0001). On May 4, 2016, prior to any ground-disturbing activities (the pre-construction phase), a site meeting was held. At this meeting, workers on the site were informed of the potential to unearth remains, and were instructed to cease work and notify their supervisor immediately if any resources were observed.

# ACORN

ARBORICULTURAL SERVICES INC.



## ARBORIST REPORT ADDEMDUM

March 19, 2020

JMC Homes  
1430 Blue Oaks Blvd., Suite 190  
Roseville, CA 95747

Attn: Ryan Biziewski

### Re: M31, 9000 Woodcreek Oaks Blvd. Project Site; Drain Outfall

This Arborist Report Addendum covers the proposed drain outfall north of the offsite blue oak (*Quercus douglasii*) numbered 37. There has been a concern about the outfall location at the northern edge of the protected zone of this tree.

The current drainage from the site flows into to an east / west swale outside of and through the protected zone of the tree. After examining the topography within the protected zone, the proposed outfall location will have little appreciable difference to that drainage pattern. The only discernible difference will be sheet flow from the outfall to the swale, which to a degree currently exists.

The impact to this tree from the proposed location of this outfall can be considered negligible.

If you have any questions or require clarification, please feel free to contact me.

A handwritten signature in black ink that reads "Wayne McKee". The signature is written in a cursive, flowing style.

Wayne McKee  
ISA Certified Arborist WE 0959A, 1992  
ISA Tree Risk Assessment Qualified, 2017  
B S Forestry, Humboldt State University, 1983

cc: Lisa Mattos; Baker Williams Engineering Group, by email



## ARBORIST REPORT

JMC Homes  
1430 Blue Oaks Blvd., Suite 190  
Roseville, CA 95747

February 18, 2020

Attn: Ryan Biziewski

### Re: 9000 Woodcreek Oaks Blvd. Project Site

This report covers the 2 native oaks south of the above referenced site. They are located near the southwest and southeast corners of the project. The trees have been numbered with square stamped aluminum tags. Following is the tree data, impact assessment and mitigative measure recommendations.

**Tree # 37** (southwest corner) also numbered 45

**Blue Oak** (*Quercus douglasii*); **DBH** 35-inches; **Dripline radius** 45-feet

**Root Crown** - Poor to fair, evidence of *Ganoderma lucidum* on the northeast side.

**Trunk** - Fair **Limbs** - Fair **Foliage** - Dormant **Structure** - Fair **Vigor** - Fair

**Dripline environment:** Grasses with a natural east /west swale east of the trunk

**Notable Characteristics:** Above average amount of deadwood, existing wrought iron fence 38-foot northeast of the trunk

**Impacts:** Construction of a retaining wall with fill material in the location of the existing wrought iron fence. Installation of a drain inlet and 8-inch storm drain just beyond the fence.

This encroachment amounts to 15-percent of the Protected Zone and can be considered minor.

**Mitigative measure recommendations:** Install tree protective fencing at the northern portion of the Protected Zone Radius of 46 feet and at the limit of grading. Properly root prune any roots greater than ½-inch in diameter severed during the excavation for the drain inlet and storm drain.

**Tree # 38** (southeast corner)

**Blue Oak** (*Quercus douglasii*); **DBH** 31-inches; **Dripline radius** 27-feet

**Root Crown** - Poor to fair **Trunk** - Poor to fair **Limbs** - Poor **Foliage** - dormant

**Structure** - Poor **Vigor** - Fair **Dripline environment:** Grasses, existing wrought iron fence 10-foot northeast and a 36-inch diameter 20-foot tall dead blue oak snag 13-foot northeast the trunk.

**Notable Characteristics:** Callusing basal and lower trunk wounds north and west sides to 2-feet above grade with minor decay. All of the primary branches have failed decades ago with moderate to significant internal decay and hollowing 10 to 15-feet above grade in the remaining portions. The crown is comprised of sprouts arising from the remaining branches with low risk of failure.

**Impacts:** None. All of the construction activities will occur outside the Protection Zone Radius of 28-feet. **Mitigative measure recommendations:** Install tree protective fencing at the northern portion of the Protected Zone Radius.

If you have any questions or require clarification, please feel free to contact me.

A handwritten signature in black ink, appearing to read 'Wayne McKee', written in a cursive style.

Wayne McKee

ISA Certified Arborist WE 0959A, 1992

ISA Tree Risk Assessment Qualified, 2017

B S Forestry, Humboldt State University, 1983

TREE CONDITION RATING CRITERIA

RATING TERM	ROOT CROWN	TRUNK	LIMBS	FOLIAGE	STRUCTURE	VIGOR
Good	No apparent injuries, decay, cavities or evidence of hollowing; no anchoring roots exposed; no indications of infestation or disease	No apparent injuries, decay, cavities or evidence of hollowing; no codominant attachments or multiple trunk attachments are observed; no indications of infestation or disease	No apparent injuries, decay, cavities or evidence of hollowing; below average amount of dead limbs or twigs; no major limb failures or included bark; callus growth is vigorous	Leaf size, color and density are typical for the species; buds are normal in size, viable, abundant and uniform throughout the canopy; annual seasonal growth increments are average or above average; no insect or disease infestations/infections evident	No apparent structural defects; no weak crotches; no excessively weighted branches and no significant cavities or decay	Tree appears healthy and has little or no significant deadwood; foliage is normal and healthy
Fair	Small to moderate injuries, decay, cavities or hollowing may be evident but are not currently affecting the overall structure; some evidence of infestation or disease may be present but is not currently affecting the tree's structure	Small to moderate injuries, decay, cavities or hollowing may be evident; codominant branching or multiple trunk attachments or minor bark inclusion may be observed; some infestation or disease may be present but not currently affecting the tree's structure	Small to moderate injuries, decay or cavities may be present; average or above average dead limbs or twigs may be present; some limb failures or bark inclusion observed; callus growth is average	Leaf size, color and density are typical or slightly below typical for the species; buds are normal or slightly sparse with potentially varied viability, abundance and distribution throughout the canopy; annual seasonal growth increments are average or slightly below average; minor insect or disease infestation/infection may be present	Minor structural problems such as weak crotches, minor wounds and/or cavities or moderate amount of excessive weight; non-critical structural defects which can be mitigated through pruning, cabling or bracing	Tree appears stressed or partially damaged; minimal vegetative growth since previous season; moderate amount of deadwood, abnormal foliage and minor lesions or cambium dieback
Poor	Moderate to severe injuries, decay, cavities or hollowing may be evident and are affecting the overall structure; presence of infestation or disease may be significant and affecting the tree's structure	Moderate to severe injuries, decay, cavities or hollowing may be evident and are affecting the tree's structure; presence of infestation or disease may be significant and affecting the tree's structure	Severe injuries, decay or cavities may be present; major deadwood, twig dieback, limb failures or bark inclusion observed; callus growth is below average	Leaf size, color and density are obviously abnormal; buds are obviously abnormal or absent; annual seasonal growth is well below average for the species; insect or disease problems may be severe	Obvious major structural problems which cannot be corrected with mitigation; potential for major limb, trunk or root system failure is high; significant decay or dieback may be present	Tree health is declining; no new vegetative growth; large amounts of deadwood; foliage is severely abnormal

The ratings "poor to fair" and "fair to good" are used to describe trees that fall between the described major categories and have elements of both

## ASSUMPTIONS AND LIMITING CONDITIONS

1. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
2. The consultant shall not be required to give a deposition and/or attend court by reason of this report unless subsequent contractual arrangements are made for in advance, including payment of an additional fee for such services according to our standard fee schedule, adjusted yearly, and terms of the subsequent contract of engagement.
3. Ownership of documents produced passes to the Client only when all fees have been paid. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior expressed written or verbal consent of the consultant.
4. Neither all nor any part of the contents of this report, nor copy thereof, shall be conveyed by anyone, including the client, to the public through advertising, public relations, news, sales, or other media, without the prior expressed written or verbal consent of the consultant, particularly as to value conclusions, identity of the consultant, or any reference to any professional society or institute or to any initialed designation conferred upon the consultant as stated in his qualifications.
5. This report and any values expressed herein represent the opinion of the consultant and the consultant's fee is in no way contingent upon the reporting of a specified value, a stipulated result, the occurrence of a subsequent event, nor upon any finding to be reported.
6. Sketches, diagrams, graphs, drawings and photographs within this report are intended as visual aids and are not necessarily to scale and should not be construed as engineering or architectural reports or surveys.
7. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without laboratory analysis, dissection, excavation, or probing unless otherwise stated.
8. This report is based on the observations and opinions of Wayne McKee, and does not provide guarantees regarding the future performance, health, vigor, structural stability or safety of the plants described herein. Neither this author nor Acorn Arboricultural Services, Inc. has assumed any responsibility for liability associated with the trees on or adjacent to this project site, their future demise and/or any damage which may result therefrom.

# Environmental Noise Assessment

## Mourier M31 Apartments

City of Roseville, California

BAC Job # 2020-038

Prepared For:

**JMC Homes**

Attn: Ryan Biziewski  
1430 Blue Oaks Boulevard, Suite 190  
Roseville, CA 95747

Prepared By:

**Bollard Acoustical Consultants, Inc.**



Dario Gotchet, Senior Consultant

March 9, 2020



## Introduction

The Mourier M31 Apartments (project) is located east of Woodcreek Oaks Boulevard and north of Horncastle Avenue in Roseville, California. The project proposes the construction of 80 multi-family residential units on undeveloped land. The project area and site plan are shown on Figures 1 and 2, respectively.

Due to the proximity of the project site to Woodcreek Oaks Boulevard, Bollard Acoustical Consultants, Inc. (BAC) was retained by the project applicant to prepare this noise assessment. Specifically, the purposes of this assessment are to quantify noise levels associated with traffic on Woodcreek Oaks Boulevard, and to compare those levels against the applicable City of Roseville standards for acceptable exterior and interior noise exposure for residential uses.

## Noise Fundamentals and Terminology



Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and are designated as sound. The number of pressure variations per second is called the frequency of sound and is expressed as cycles per second, or Hertz (Hz). Definitions of acoustical terminology are provided in Appendix A.

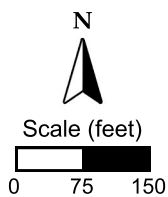
Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals of pressure) as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. Noise levels associated with common noise sources are provided in Figure 3.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable and can be approximated by filtering the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment.



**Legend**

-  Project Border (Approximate)
-  Long-Term Noise Measurement Locations

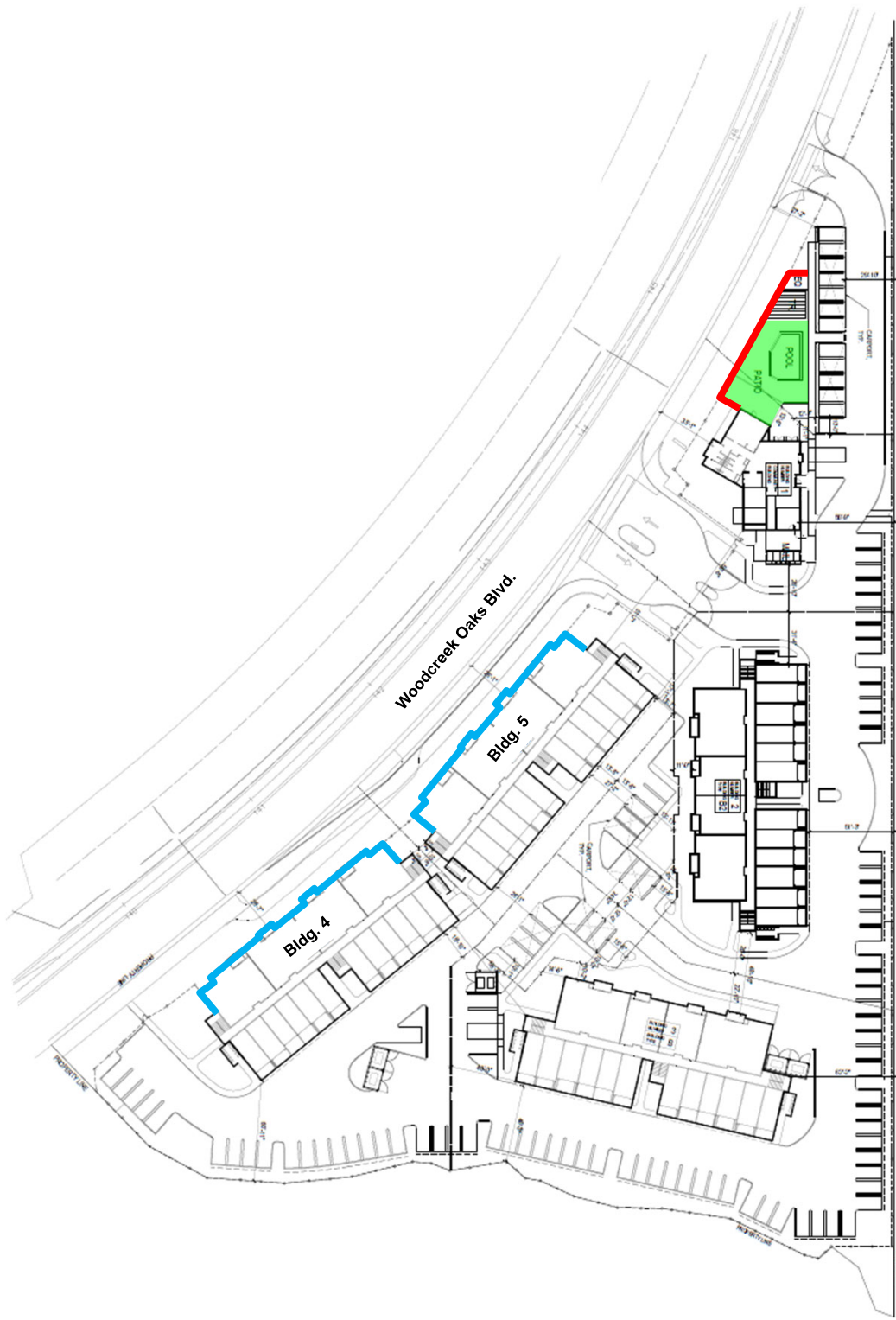


Mourier M31 Apartments  
Roseville, California

Project Area

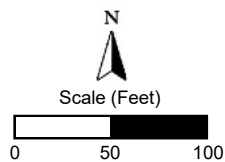
Figure 1





**Legend**

- Proposed Common Outdoor Area ( Pool/Patio)
- Recommended 6-Foot Tall Solid Noise Barrier
- Window & Door Construction Upgrades  
STC-32 (Upper-Floors Only)



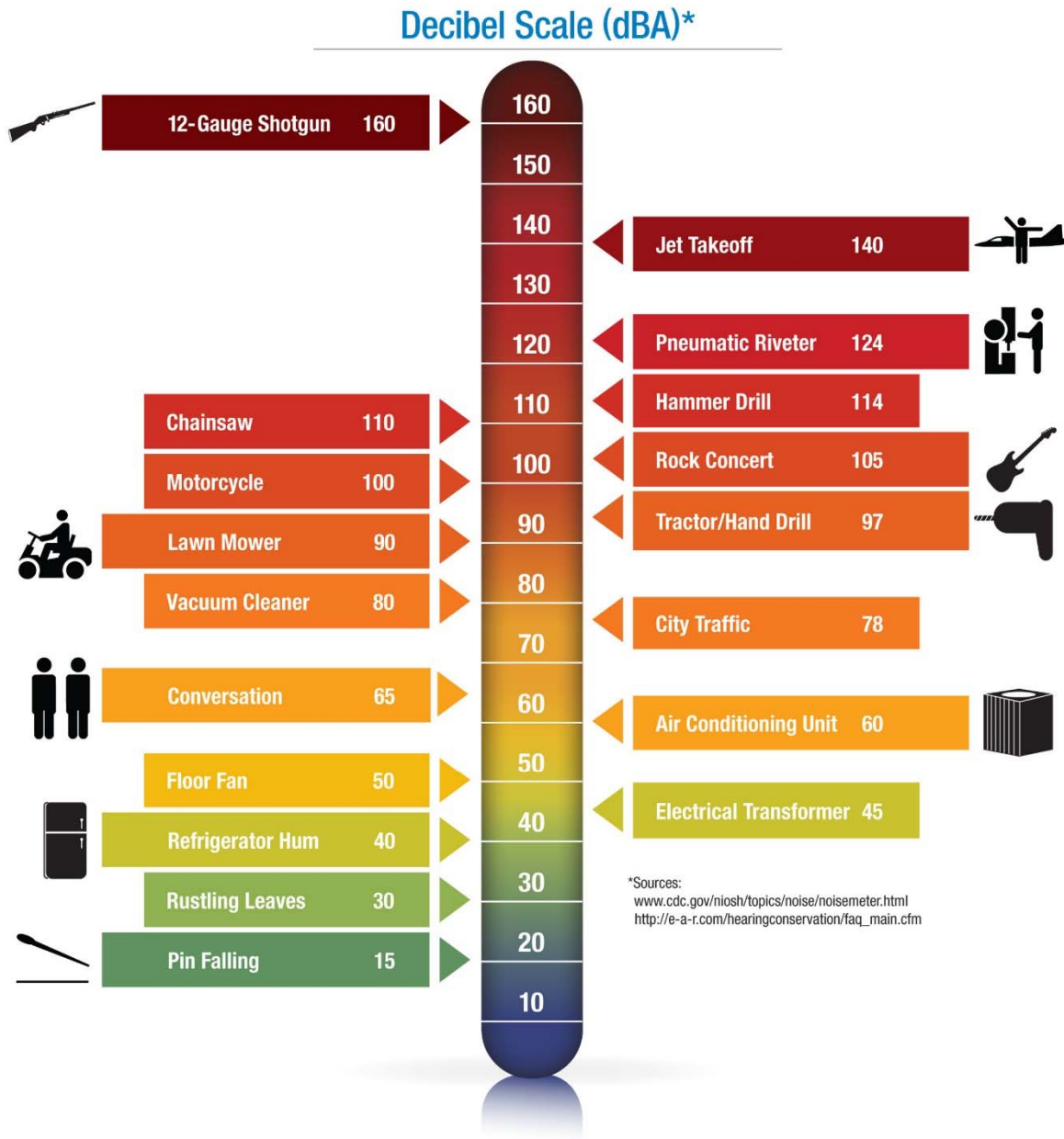
**Mourier M31 Apartments**  
Roseville, California

**Project Site Plan**

**Figure 2**



**Figure 3  
Noise Levels Associated with Common Noise Sources**



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

## Criteria for Acceptable Noise Exposure

### City of Roseville General Plan

The Noise Element of the City of Roseville General Plan 2035 sets forth maximum allowable noise exposure for various land uses. For noise generated by transportation noise sources (i.e., traffic), the Noise Element specifies that residential land uses are compatible with exterior noise levels of up to 60 dB  $L_{dn}$  without the need for noise mitigation. The exterior noise level standard is to be applied at common outdoor areas for multi-family residential developments. The City may allow an exterior transportation-related noise level of up to 75 dB  $L_{dn}$  provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with the City's standard. In addition, the Noise Element identifies a noise level standard of 45 dB  $L_{dn}$  for residential interior areas exposed to transportation noise sources.

## Existing Ambient Noise Environment at the Project Site

The existing ambient noise environment at the project site is defined primarily by traffic on Woodcreek Oaks Boulevard. To quantify the existing ambient noise environment at the project site, BAC conducted long-term (48-hour) noise level measurements on the project site from February 24-25, 2020. The long-term noise measurement locations are shown on Figure 1. Photographs of the noise level survey locations are provided in Appendix B.

Larson-Davis Laboratories (LDL) Model LxT precision integrating sound level meters were used to complete the long-term noise level measurement surveys. The meters were calibrated immediately before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

The long-term noise level measurement survey results are summarized in Table 1. The detailed results of the ambient noise survey are contained in Appendix C in tabular format and graphically in Appendix D.

**Table 1**  
**Summary of Long-Term Noise Survey Measurement Results – February 24-25, 2020<sup>1</sup>**

Site <sup>2</sup>	Date	L <sub>dn</sub>	Average Measured Hourly Noise Levels, dBA			
			Daytime <sup>3</sup>		Nighttime <sup>4</sup>	
			L <sub>eq</sub>	L <sub>max</sub>	L <sub>eq</sub>	L <sub>max</sub>
LT-1: Northwest end of the project site, approximately 90' from center of Woodcreek Oaks Blvd.	2/24/20	59	57	72	51	68
	2/25/20	58	56	73	51	68
LT-2: Southwest end of project site, approximately 100' from centerline of Woodcreek Oaks Blvd.	2/24/20	62	60	75	53	72
	2/25/20	62	60	75	54	74

<sup>1</sup> Detailed summaries of the noise monitoring results are provided in Appendices C and D.  
<sup>2</sup> Long-term noise survey locations are identified on Figure 1.  
<sup>3</sup> Daytime hours: 7:00 a.m. to 10:00 p.m.  
<sup>4</sup> Nighttime hours: 10:00 p.m. to 7:00 a.m.  
Source: Bollard Acoustical Consultants, Inc. (2020)

The Table 1 data indicates that measured day-night noise levels at site LT-2 exceeded the City of Roseville General Plan exterior noise level standard of 60 dB L<sub>dn</sub> applicable to residential uses. As a result, a detailed analysis of future traffic noise levels at the project site was conducted and that analysis is presented in the following section.

## Evaluation of Future Traffic Noise Levels at Project Site

### Traffic Noise Prediction Methodology

The Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to predict traffic noise levels at the project site. The model is based upon the CALVENO noise emission factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA Model was developed to predict hourly L<sub>eq</sub> values for free-flowing traffic conditions and is considered to be accurate within 1.5 dB in most situations.

### Predicted Future Exterior Traffic Noise Levels

To predict future Woodcreek Oaks Boulevard traffic noise exposure at the project site, BAC utilized the long-term ambient data collected from February 24-25, 2020. Specifically, future Woodcreek Oaks Boulevard traffic volumes were conservatively assumed to increase by a factor of 50% in the future, resulting in a 2 dB increase in traffic noise levels relative to measured existing conditions. The predicted future traffic noise levels were projected to the common outdoor area (pool/patio) and nearest proposed residential buildings to the roadway (Buildings 4 and 5) based on a 4.5 dB decrease per doubling of distance from the noise source. The results of those projections are provided in Table 2.

**Table 2**  
**Predicted Future Exterior Traffic Noise Levels at the Project Site<sup>1</sup>**

Roadway	Location	Distance from Centerline (feet) <sup>1</sup>	Predicted Noise Level, L <sub>dn</sub> (dB) <sup>2</sup>
Woodcreek Oaks Boulevard	Common outdoor area – pool/patio	90	65
	Buildings 4 & 5 – first-floor facades	65	67
	Buildings 4 & 5 – upper-floor facades	65	69
<sup>1</sup> Distances measured from the centerlines of the roadways to said locations. <sup>2</sup> Predicted future Woodcreek Oaks Boulevard traffic noise levels are based on a reference noise level of 64 dB L <sub>dn</sub> at 100 feet, which includes a +2 dB increase relative to measured ambient conditions to account for a 50% increase in future traffic volume. Source: Bollard Acoustical Consultants, Inc. (2020)			

### Analysis of Future Exterior Traffic Noise Exposure at Common Outdoor Area

As indicated in Table 2, future traffic noise level exposure at the common outdoor area of the development (pool/patio) is predicted to exceed the General Plan 60 dB L<sub>dn</sub> exterior noise level standard for residential uses. As a result, further consideration of exterior noise mitigation measures would be warranted for the common outdoor area of the development.

In order to achieve compliance with the City of Roseville General Plan 60 dB L<sub>dn</sub> exterior noise level standard, it is recommended that a 6-foot tall traffic noise barrier (relative to pool/patio elevation) be constructed at the location illustrated in Figure 2. The construction of a 6-foot tall traffic noise barrier at the location indicated on Figure 2 is calculated to reduce future Woodcreek Oaks Boulevard traffic noise exposure to approximately 58 dB L<sub>dn</sub> at the proposed common outdoor area of the development (pool/patio), which would satisfy the General Plan 60 dB L<sub>dn</sub> exterior noise level standard. Suitable materials for the traffic noise barrier include masonry and precast concrete panels. Glass can also be an effective barrier material in areas where preservation of views is desired. Other materials may be acceptable but should be reviewed by an acoustical consultant prior to use.

### Analysis of Future Interior Traffic Noise Exposure within Proposed Residences

As indicated in Table 2, future exterior traffic noise levels are predicted to be approximately 67 dB L<sub>dn</sub> at the first-floor facades of the residential buildings constructed nearest to Woodcreek Oaks Boulevard (Buildings 4 & 5). Due to reduced ground absorption at elevated positions, the noise levels at the upper-floor facades of those buildings are predicted to approach 69 dB L<sub>dn</sub>. In order to satisfy the City of Roseville General Plan 45 dB L<sub>dn</sub> interior noise level standard, minimum noise reductions of 22 dB and 24 dB would be required of the first- and upper-floor building facades (respectively) of the residential buildings constructed nearest to Woodcreek Oaks Boulevard.

Standard residential construction (stucco siding, STC-27 windows, door weather-stripping, exterior wall insulation, composition plywood roof), typically results in an exterior to interior noise

reduction of approximately 25 dB with windows closed and approximately 15 dB with windows open. This level of noise reduction would be adequate to reduce future Woodcreek Oaks Boulevard traffic noise levels within the first-floor rooms of all residences in this development to 45 dB  $L_{dn}$  or less. However, in order to ensure for satisfaction of the 45 dB  $L_{dn}$  interior noise level standard within upper-floor residential interior areas nearest to the roadway, a greater degree of noise attenuation is recommended. Specifically, it is recommended that all upper-floor windows and sliding glass doors of residences of Buildings 4 & 5 from which Woodcreek Oaks Boulevard would be visible (i.e., north, south and west-facing) be upgraded to a minimum STC rating of 32. The locations of the recommended window and door upgrades are illustrated on Figure 2. In addition, mechanical ventilation (air conditioning) should be provided for all residences of the development to allow the occupants to close doors and windows as desired for additional acoustical isolation.

## Conclusions and Recommendations

The Mourier M31 Apartments is predicted to be exposed to future traffic noise exposure in excess of the applicable City of Roseville General Plan exterior noise level standard for residential uses. In order to satisfy the General Plan exterior noise level standard, and in order to ensure for satisfaction of the General Plan interior noise level standard, the following specific noise mitigation measures are recommended for this project:

- 1) A solid noise barrier measuring a minimum of 6-feet in height relative to pool/patio area elevation should be constructed at the location illustrated on Figure 2. Suitable materials for the solid noise barrier include masonry and precast concrete panels. Glass can also be an effective barrier material in areas where preservation of views is desired. Other materials may be acceptable but should be reviewed by an acoustical consultant prior to use.
- 2) All upper-floor window and sliding glass door assemblies of residences of Buildings 4 & 5 from which Woodcreek Oaks Boulevard would be visible (i.e., north, south and west-facing) should be upgraded to a minimum STC rating of 32. The recommended window and sliding glass door construction upgrade locations are illustrated on Figure 2.
- 3) Mechanical ventilation (air conditioning) should be provided for all residences in this development to allow the occupants to close doors and windows as desired to achieve compliance with the applicable interior noise level criteria.

These conclusions are based on the measured traffic noise levels at the project site, the project site plan shown in Figure 2, and on noise reduction data for standard residential dwellings. Deviations from the above-mentioned resources could cause future traffic noise levels to differ from those predicted in this assessment. In addition, Bollard Acoustical Consultants, Inc. is not responsible for degradation in acoustic performance of the residential construction due to poor construction practices, failure to comply with applicable building code requirements, or for failure to adhere to the minimum building practices cited in this report.

This concludes BAC's environmental noise assessment for the proposed Mourier M31 Apartments project in Roseville, California. Please contact BAC at (916) 663-0500 or [dariog@bacnoise.com](mailto:dariog@bacnoise.com) with any questions regarding this assessment.

## Appendix A Acoustical Terminology

<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>Attenuation</b>	The reduction of an acoustic signal.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound. A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
<b>IIC</b>	Impact Insulation Class (IIC): A single-number representation of a floor/ceiling partition's impact generated noise insulation performance. The field-measured version of this number is the FIIC.
<b>L<sub>dn</sub></b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>Leq</b>	Equivalent or energy-averaged sound level.
<b>L<sub>max</sub></b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>Masking</b>	The amount (or the process) by which the threshold of audibility is for one sound is raised by the presence of another (masking) sound.
<b>Noise</b>	Unwanted sound.
<b>Peak Noise</b>	The level corresponding to the highest (not RMS) sound pressure measured over a given period of time. This term is often confused with the "Maximum" level, which is the highest RMS level.
<b>RT<sub>60</sub></b>	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
<b>STC</b>	Sound Transmission Class (STC): A single-number representation of a partition's noise insulation performance. This number is based on laboratory-measured, 16-band (1/3-octave) transmission loss (TL) data of the subject partition. The field-measured version of this number is the FSTC.



A



B



C

**Legend**

- [A] LT-1: 38°47'16.65"N, 121°19'43.44"W - Facing North
- [B] LT-1: 38°47'16.65"N, 121°19'43.44"W - Facing South
- [C] LT-2: 38°47'11.52"N, 121°19'48.13"W

*Note: Long-term monitoring completed February 24-25, 2020.*

**Mourier M31 Apartments  
Roseville, California**

Photographs of Noise Survey Locations

Appendix B



**Appendix C-1**  
**Ambient Noise Monitoring Results**  
**Mourier M31 Apartments - Roseville, California - Site LT-1**  
**Monday, February 24, 2020**

Hour	Leq	Lmax	L50	L90
12:00 PM	56	69	54	48
1:00 PM	58	73	55	50
2:00 PM	57	77	55	50
3:00 PM	57	74	55	50
4:00 PM	57	70	55	50
5:00 PM	57	73	55	50
6:00 PM	56	69	55	51
7:00 PM	55	67	53	49
8:00 PM	56	71	54	49
9:00 PM	52	66	50	46
10:00 PM	50	68	47	42
11:00 PM	47	68	43	40
12:00 AM	45	64	40	36
1:00 AM	42	60	37	35
2:00 AM	43	64	38	35
3:00 AM	56	76	43	38
4:00 AM	48	68	44	40
5:00 AM	53	71	48	45
6:00 AM	56	70	54	49
7:00 AM	59	73	58	54
8:00 AM	56	70	54	49
9:00 AM	54	73	50	47
10:00 AM	57	77	51	47
11:00 AM	57	75	51	44

**Statistical Summary**

	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average

Leq (Average)	59	50	57	56	42	51
Lmax (Maximum)	77	66	72	76	60	68
L50 (Median)	58	47	53	54	37	43
L90 (Background)	54	42	48	49	35	40

Computed Ldn, dB	59
% Daytime Energy	86%
% Nighttime Energy	14%

GPS Coordinates	38°47'16.65"N
	121°19'43.44"W

**Appendix C-2**  
**Ambient Noise Monitoring Results**  
**Mourier M31 Apartments - Roseville, California - Site LT-1**  
**Tuesday, February 25, 2020**

Hour	Leq	Lmax	L50	L90
12:00 PM	55	75	51	43
1:00 PM	53	68	50	44
2:00 PM	55	70	52	46
3:00 PM	57	74	54	47
4:00 PM	56	76	52	44
5:00 PM	58	78	56	48
6:00 PM	58	71	57	50
7:00 PM	56	73	54	47
8:00 PM	54	73	51	45
9:00 PM	54	68	51	42
10:00 PM	50	67	44	41
11:00 PM	47	68	42	39
12:00 AM	45	61	40	37
1:00 AM	46	65	38	36
2:00 AM	44	62	41	38
3:00 AM	47	69	41	39
4:00 AM	50	74	43	40
5:00 AM	54	72	51	45
6:00 AM	57	73	55	51
7:00 AM	59	78	58	55
8:00 AM	57	76	55	51
9:00 AM	55	70	52	47
10:00 AM	57	74	53	48
11:00 AM	56	76	53	48

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	59	50	56	57	44	51
Lmax (Maximum)	78	67	73	74	61	68
L50 (Median)	58	44	53	55	38	44
L90 (Background)	55	41	47	51	36	41

Leq (Average)	59	50	56
Lmax (Maximum)	78	67	73
L50 (Median)	58	44	53
L90 (Background)	55	41	47

Computed Ldn, dB	58
% Daytime Energy	86%
% Nighttime Energy	14%

GPS Coordinates	38°47'16.65"N
	121°19'43.44"W

**Appendix C-3**  
**Ambient Noise Monitoring Results**  
**Mourier M31 Apartments - Roseville, California - Site LT-2**  
**Monday, February 24, 2020**

Hour	Leq	Lmax	L50	L90
11:00 AM	59	76	56	49
12:00 PM	59	70	56	47
1:00 PM	61	73	58	50
2:00 PM	61	78	57	50
3:00 PM	61	86	57	49
4:00 PM	60	75	58	49
5:00 PM	61	74	58	49
6:00 PM	60	72	57	49
7:00 PM	58	71	55	46
8:00 PM	58	76	53	46
9:00 PM	57	72	50	43
10:00 PM	55	74	44	41
11:00 PM	50	69	42	40
12:00 AM	48	70	40	36
1:00 AM	45	69	37	35
2:00 AM	47	71	37	35
3:00 AM	57	76	42	37
4:00 AM	51	72	42	38
5:00 AM	55	76	46	43
6:00 AM	59	73	54	47
7:00 AM	62	77	59	54
8:00 AM	60	70	58	50
9:00 AM	58	74	54	45
10:00 AM	58	74	54	45

Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	62	55	60	59	45	53
Lmax (Maximum)	86	70	75	76	69	72
L50 (Median)	59	44	55	54	37	42
L90 (Background)	54	41	48	47	35	39

Leq (Average)	62
Lmax (Maximum)	86
L50 (Median)	59
L90 (Background)	54

Computed Ldn, dB	62
% Daytime Energy	88%
% Nighttime Energy	12%

GPS Coordinates	38°47'11.52"N
	121°19'48.13"W

**Appendix C-4**  
**Ambient Noise Monitoring Results**  
**Mourier M31 Apartments - Roseville, California - Site LT-2**  
**Tuesday, February 25, 2020**

Hour	Leq	Lmax	L50	L90
11:00 AM	60	75	55	42
12:00 PM	59	76	54	42
1:00 PM	57	69	54	43
2:00 PM	58	69	55	45
3:00 PM	60	76	57	47
4:00 PM	59	77	57	45
5:00 PM	62	77	59	48
6:00 PM	62	75	59	47
7:00 PM	60	78	54	43
8:00 PM	59	73	52	43
9:00 PM	58	72	49	39
10:00 PM	55	74	41	39
11:00 PM	53	75	40	37
12:00 AM	49	71	38	36
1:00 AM	49	73	37	35
2:00 AM	48	73	39	36
3:00 AM	51	76	40	38
4:00 AM	54	79	41	39
5:00 AM	56	73	49	43
6:00 AM	60	73	55	49
7:00 AM	62	77	60	54
8:00 AM	60	76	59	51
9:00 AM	58	72	54	44
10:00 AM	59	80	54	44

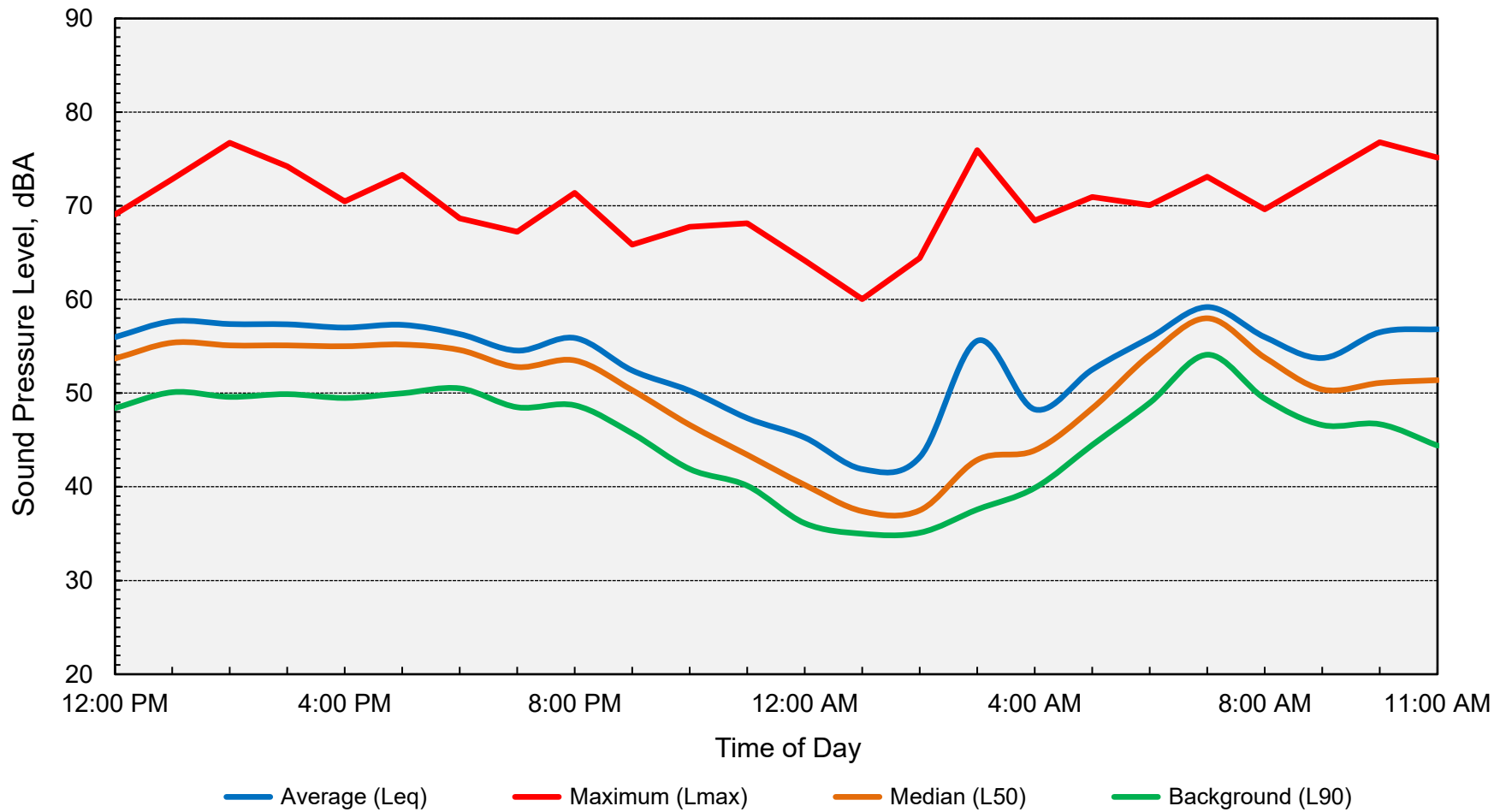
Statistical Summary						
	Daytime (7 a.m. - 10 p.m.)			Nighttime (10 p.m. - 7 a.m.)		
	High	Low	Average	High	Low	Average
Leq (Average)	62	55	60	60	48	54
Lmax (Maximum)	80	69	75	79	71	74
L50 (Median)	60	41	54	55	37	42
L90 (Background)	54	39	45	49	35	39

Leq (Average)	62
Lmax (Maximum)	80
L50 (Median)	60
L90 (Background)	54

Computed Ldn, dB	62
% Daytime Energy	87%
% Nighttime Energy	13%

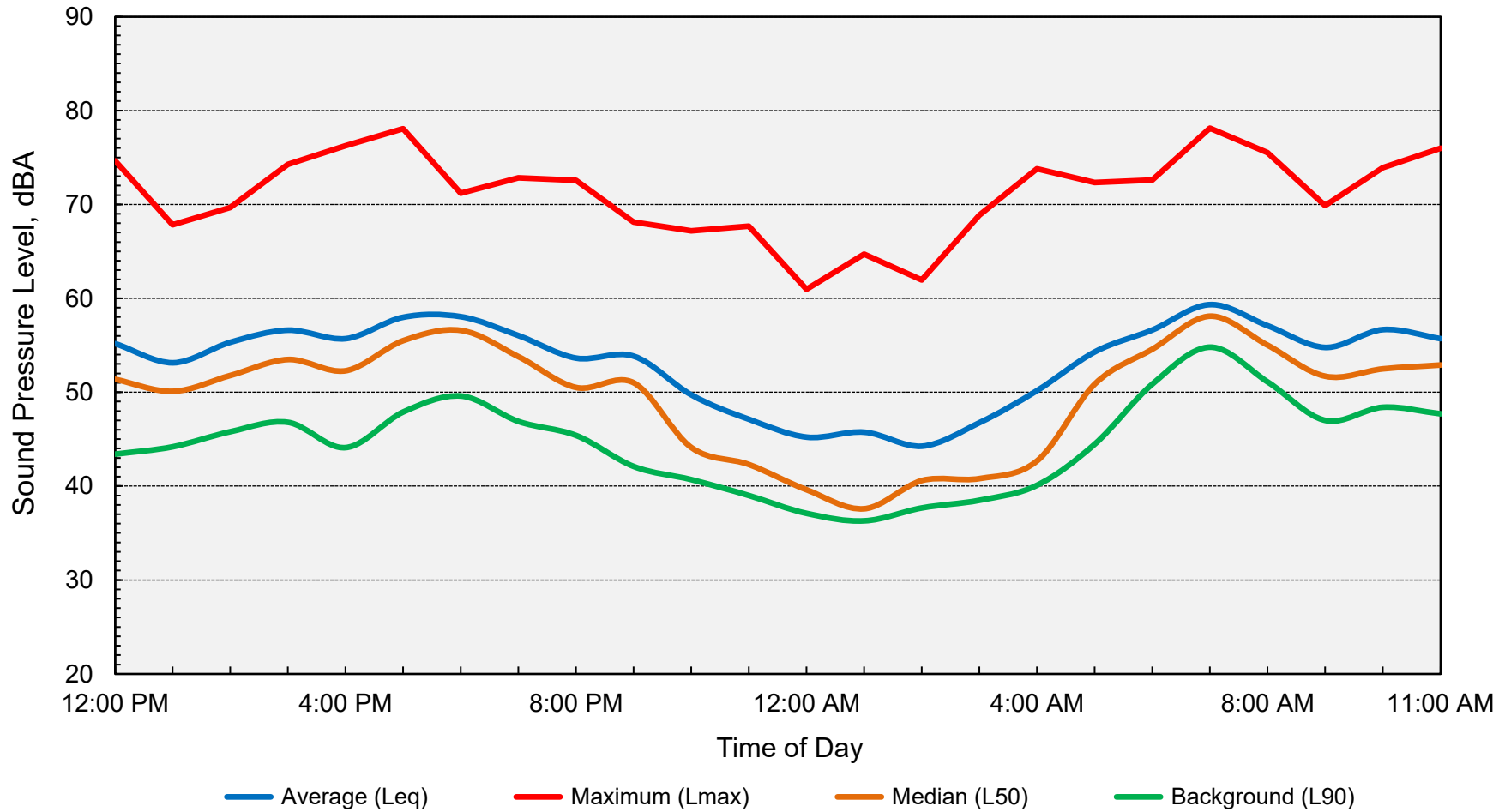
GPS Coordinates	38°47'11.52"N
	121°19'48.13"W

**Appendix D-1**  
**Ambient Noise Monitoring Results**  
**Mourier M31 Apartments - Roseville, California - Site LT-1**  
**Monday, February 24, 2020**



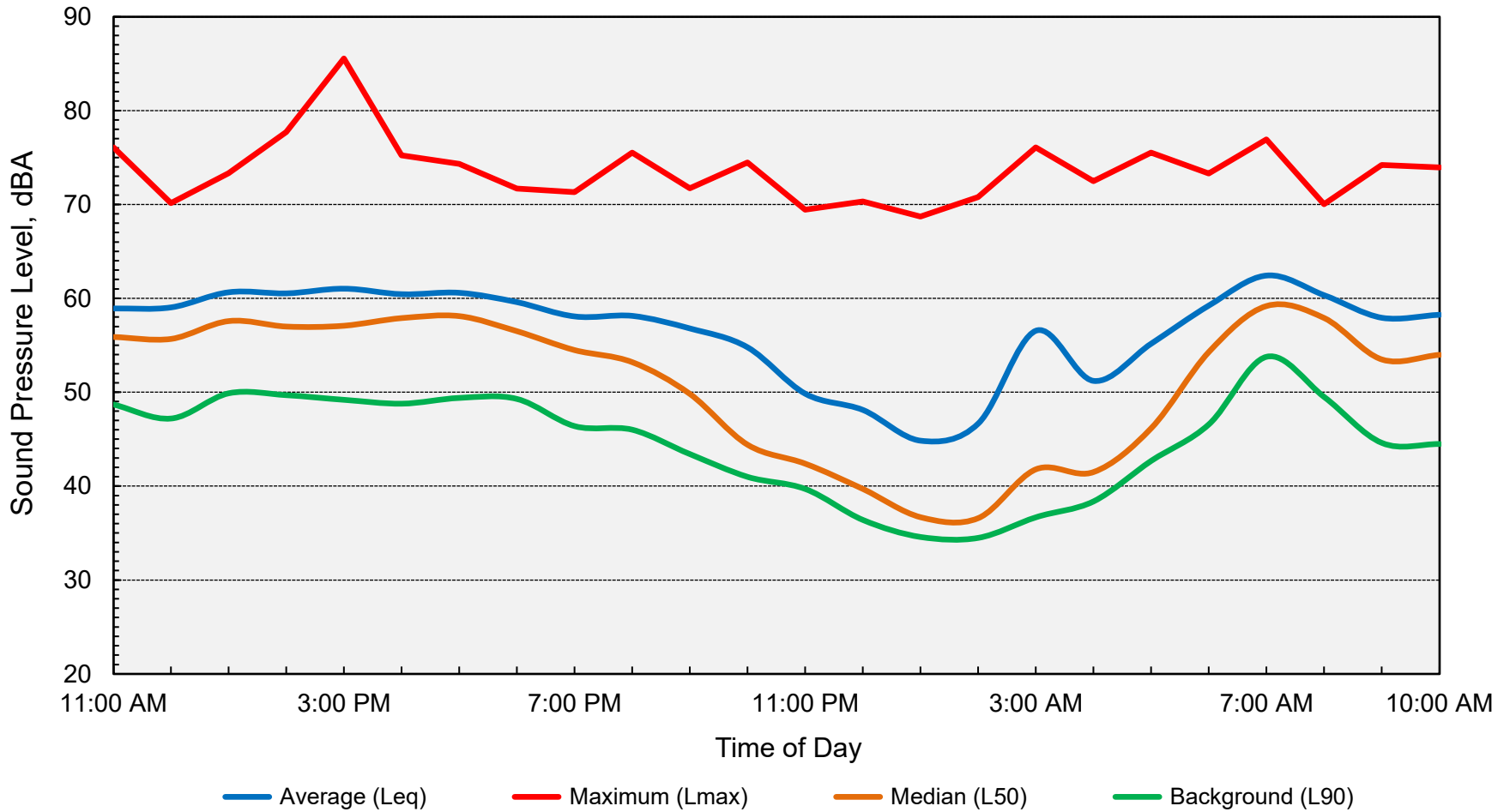
**Computed Ldn = 59 dB**

**Appendix D-2**  
**Ambient Noise Monitoring Results**  
**Mourier M31 Apartments - Roseville, California - Site LT-1**  
**Tuesday, February 25, 2020**



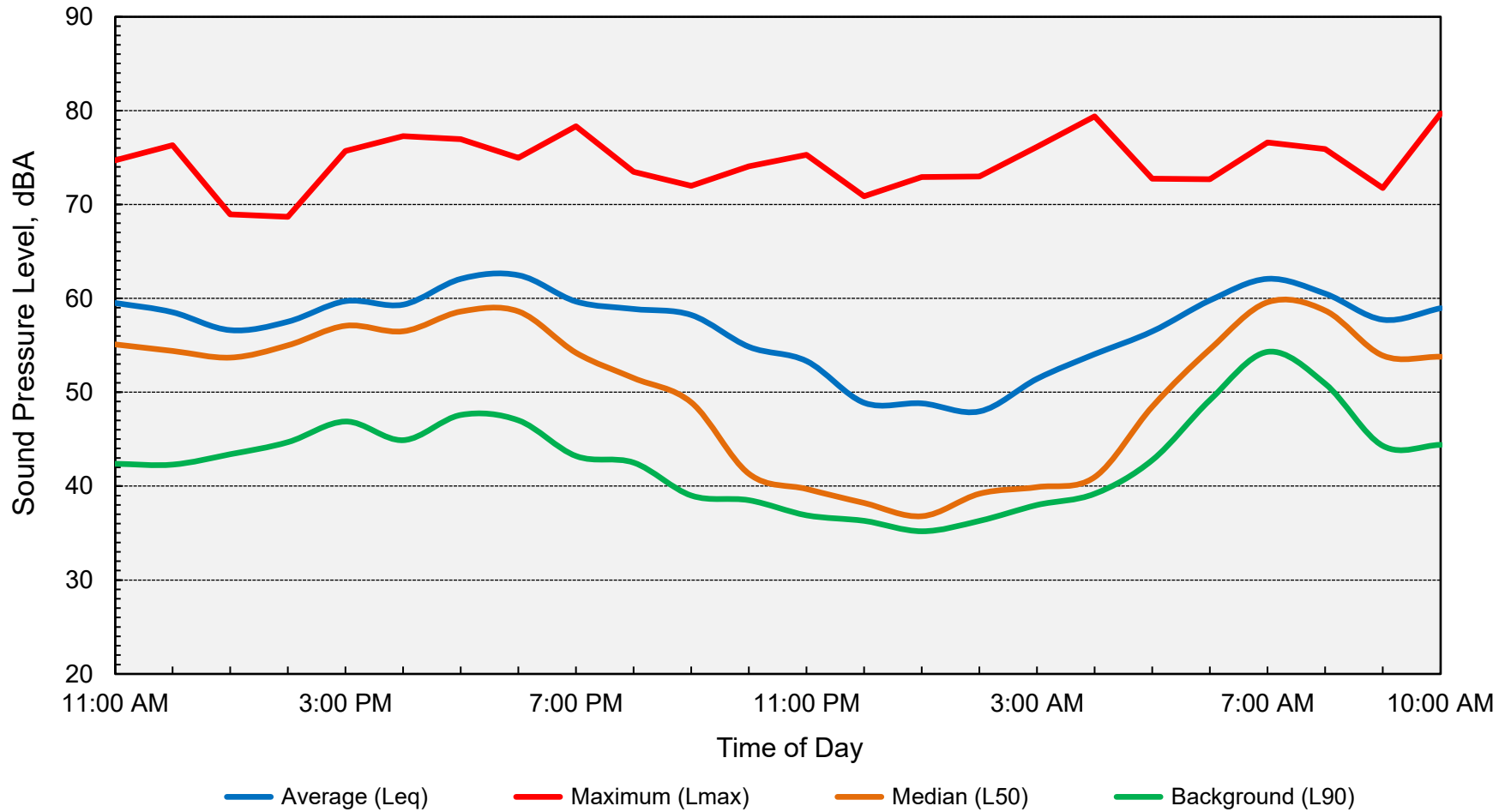
**Computed Ldn = 58 dB**

**Appendix D-3**  
**Ambient Noise Monitoring Results**  
**Mourier M31 Apartments - Roseville, California - Site LT-1**  
**Monday, February 24, 2020**



**Computed Ldn = 62 dB**

**Appendix D-4**  
**Ambient Noise Monitoring Results**  
**Mourier M31 Apartments - Roseville, California - Site LT-1**  
**Tuesday, February 25, 2020**



**Computed Ldn = 62 dB**

## Technical Memorandum

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**To:** Steve Schnable  
**From:** Lisa Mattos, P.E.  
**Subject:** M-31 Apartments, PL 19-031, Revised Water Demand  
**Date:** December 5, 2019

This technical memorandum is intended to address how to mitigate the increased water demand for the proposed 80 unit High Density Residential (HDR) project from the previous commercial use designation for the site and how to mitigate the increase with the use of recycled water for irrigation and water conservation measures for the recycled and potable water uses for the proposed project.

### Baseline Water Use

The baseline water use for the proposed project was established using the City's Average Day Unit Water Demand Factors found in Section 8- Domestic Water Supply System of the 2019 Design Standards. The factor for High Density Residential (HDR) is 177 gpd/unit, for 80 units, the yearly demand is 5,168,400 gallons or 15.86 AC-ft. This demand includes potable and recycled water. The current water allocation for this site is based on a commercial use which has a factor of 2598 gpd/acre, the 4.16 acre site would have a yearly demand of 3,944,803 gallons or 12.11 AC-ft. The HDR project needs to reduce the potable water demand by 3.75 AC-ft to maintain the allocation for this parcel.

### Methods for Reducing Potable Water Consumption

To reduce the potable water consumption for the project, the landscaping will be irrigated with a recycled water system. There is an existing 8" recycled water main on the east side of Woodcreek Oaks Blvd. and a stub was extended onto the proposed project. Based on information provided by the City of Roseville, 40% of the total water use for HDR units is landscaping. This equates to  $177\text{gpd/unit} \times 0.40 = 71\text{ gpd/unit}$ . By subtracting the irrigation demand, the potable water demand is reduced to 106gpd/unit or 9.50 AC-ft per year which is 2.61 AC-ft below the allocated 12.11 AC-ft.

### Methods for Reducing Recycled Water Consumption

The Water Efficient Landscape Ordinance (WELO) applies to this project. To reduce recycled water consumption, the following design measures will be employed:

1. Turf will be reduced
2. Low water plants will be specified
3. A low volume irrigation system with drip and micro sprayers will be installed
4. A smart controller will be installed

Information provided by the landscape architect indicates a Maximum Applied Water Allowance (MAWA) of 531,300 gal/year or 1.63 AC-ft is allowed for the site. The actual water use

projected is 452,000 gal/year or 1.39 AC-ft therefore the proposed irrigation demand is below the allowable use by 0.24 AC-ft.

## **Summary**

The water conservation measures outlined in this technical memorandum are similar to those employed in the WestPark-Federico and Sierra Vista Specific Plans as well as other local Water Conservation Plans.

The total demand for the proposed 80 unit HDR project is 10.89 AC-ft, 9.5 AC-ft of potable water and 1.39 AC-ft of recycled water. This is below the 12.11 AC-ft allocated for this parcel.

John Mourier Construction (JMC) will build and retain ownership of the project. Through the professional management of the apartment complex, JMC will have the ability to maintain the water savings realized with the recycled water irrigation system.

## **References**

1. HydroScience Engineers, Sierra Vista-WestPark Federico Land Use Modifications-Water Conservation Plan Update, August 30, 2017
2. City of Roseville Environmental Utilities Department, Water Supply Assessment for the Sierra Vista Specific Plan, October 2009
3. City of Roseville, 2019 Design Standards Section 8-Domestic Water Supply System

M31 Apartments - Placer-Sacramento County, Annual

**M31 Apartments**  
**Placer-Sacramento County, Annual**

**1.0 Project Characteristics**

**1.1 Land Usage**

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	80.00	Dwelling Unit	4.10	114,180.00	229

**1.2 Other Project Characteristics**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	74
<b>Climate Zone</b>	2			<b>Operational Year</b>	2022
<b>Utility Company</b>	Roseville Electric				
<b>CO2 Intensity (lb/MWhr)</b>	531.85	<b>CH4 Intensity (lb/MWhr)</b>	0.029	<b>N2O Intensity (lb/MWhr)</b>	0.006

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

Project Characteristics - Start of construction and operational year are estimated. CO2 intensity factor adjusted to reflect R.E.'s anticipated progress towards statewide RPS goals.

Land Use - Lot acreage and square footage based on proposed plans.

Energy Use -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	80,000.00	114,180.00
tblLandUse	LotAcreage	2.11	4.10
tblProjectCharacteristics	CO2IntensityFactor	793.8	531.85

M31 Apartments - Placer-Sacramento County, Annual

**2.0 Emissions Summary**

**2.1 Overall Construction**

**Unmitigated Construction**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1186	1.1051	0.8527	1.5500e-003	0.0875	0.0581	0.1456	0.0426	0.0543	0.0969	0.0000	135.8435	135.8435	0.0319	0.0000	136.6398
2021	0.9123	1.7342	1.7208	3.1700e-003	0.0473	0.0904	0.1377	0.0127	0.0850	0.0977	0.0000	276.3505	276.3505	0.0555	0.0000	277.7378
<b>Maximum</b>	<b>0.9123</b>	<b>1.7342</b>	<b>1.7208</b>	<b>3.1700e-003</b>	<b>0.0875</b>	<b>0.0904</b>	<b>0.1456</b>	<b>0.0426</b>	<b>0.0850</b>	<b>0.0977</b>	<b>0.0000</b>	<b>276.3505</b>	<b>276.3505</b>	<b>0.0555</b>	<b>0.0000</b>	<b>277.7378</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					
2020	0.1186	1.1051	0.8527	1.5500e-003	0.0875	0.0581	0.1456	0.0426	0.0543	0.0969	0.0000	135.8433	135.8433	0.0319	0.0000	136.6397
2021	0.9123	1.7342	1.7208	3.1700e-003	0.0473	0.0904	0.1377	0.0127	0.0850	0.0977	0.0000	276.3502	276.3502	0.0555	0.0000	277.7375
<b>Maximum</b>	<b>0.9123</b>	<b>1.7342</b>	<b>1.7208</b>	<b>3.1700e-003</b>	<b>0.0875</b>	<b>0.0904</b>	<b>0.1456</b>	<b>0.0426</b>	<b>0.0850</b>	<b>0.0977</b>	<b>0.0000</b>	<b>276.3502</b>	<b>276.3502</b>	<b>0.0555</b>	<b>0.0000</b>	<b>277.7375</b>

M31 Apartments - Placer-Sacramento County, Annual

	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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	9-1-2020	11-30-2020	0.9600	0.9600
2	12-1-2020	2-28-2021	0.6880	0.6880
3	3-1-2021	5-31-2021	0.6789	0.6789
4	6-1-2021	8-31-2021	0.6785	0.6785
5	9-1-2021	9-30-2021	0.1846	0.1846
		Highest	0.9600	0.9600

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	5.5550	0.1049	6.7909	0.0113		0.8721	0.8721		0.8721	0.8721	82.6366	35.6269	118.2635	0.0772	6.5000e-003	122.1304
Energy	4.2100e-003	0.0359	0.0153	2.3000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	123.7630	123.7630	5.2800e-003	1.6900e-003	124.3984
Mobile	0.1558	1.1273	1.8199	7.3000e-003	0.5538	6.1800e-003	0.5600	0.1490	5.8100e-003	0.1548	0.0000	672.3620	672.3620	0.0253	0.0000	672.9942
Waste						0.0000	0.0000		0.0000	0.0000	7.4701	0.0000	7.4701	0.4415	0.0000	18.5068
Water						0.0000	0.0000		0.0000	0.0000	1.6536	9.5786	11.2322	0.1704	4.1200e-003	16.7186
<b>Total</b>	<b>5.7151</b>	<b>1.2681</b>	<b>8.6261</b>	<b>0.0188</b>	<b>0.5538</b>	<b>0.8812</b>	<b>1.4350</b>	<b>0.1490</b>	<b>0.8808</b>	<b>1.0298</b>	<b>91.7603</b>	<b>841.3304</b>	<b>933.0907</b>	<b>0.7196</b>	<b>0.0123</b>	<b>954.7484</b>

M31 Apartments - Placer-Sacramento County, Annual

**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	5.5550	0.1049	6.7909	0.0113		0.8721	0.8721		0.8721	0.8721	82.6366	35.6269	118.2635	0.0772	6.5000e-003	122.1304
Energy	4.2100e-003	0.0359	0.0153	2.3000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	123.7630	123.7630	5.2800e-003	1.6900e-003	124.3984
Mobile	0.1558	1.1273	1.8199	7.3000e-003	0.5538	6.1800e-003	0.5600	0.1490	5.8100e-003	0.1548	0.0000	672.3620	672.3620	0.0253	0.0000	672.9942
Waste						0.0000	0.0000		0.0000	0.0000	7.4701	0.0000	7.4701	0.4415	0.0000	18.5068
Water						0.0000	0.0000		0.0000	0.0000	1.6536	8.3978	10.0515	0.1703	4.1100e-003	15.5323
<b>Total</b>	<b>5.7151</b>	<b>1.2681</b>	<b>8.6261</b>	<b>0.0188</b>	<b>0.5538</b>	<b>0.8812</b>	<b>1.4350</b>	<b>0.1490</b>	<b>0.8808</b>	<b>1.0298</b>	<b>91.7603</b>	<b>840.1497</b>	<b>931.9100</b>	<b>0.7195</b>	<b>0.0123</b>	<b>953.5621</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>0.00</b>	<b>0.14</b>	<b>0.13</b>	<b>0.01</b>	<b>0.08</b>	<b>0.12</b>

**3.0 Construction Detail**

**Construction Phase**

M31 Apartments - Placer-Sacramento County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2020	9/28/2020	5	20	
2	Site Preparation	Site Preparation	9/29/2020	10/5/2020	5	5	
3	Grading	Grading	10/6/2020	10/15/2020	5	8	
4	Building Construction	Building Construction	10/16/2020	9/2/2021	5	230	
5	Paving	Paving	9/3/2021	9/28/2021	5	18	
6	Architectural Coating	Architectural Coating	9/29/2021	10/22/2021	5	18	

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 4**

**Acres of Paving: 0**

**Residential Indoor: 231,215; Residential Outdoor: 77,072; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)**

**OffRoad Equipment**

## M31 Apartments - Placer-Sacramento County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Grading	Excavators	1	8.00	158	0.38
Paving	Pavers	1	8.00	130	0.42
Paving	Rollers	2	6.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Paving	Paving Equipment	2	6.00	132	0.36
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

**Trips and VMT**

M31 Apartments - Placer-Sacramento County, Annual

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	58.00	9.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	12.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2386
<b>Total</b>	<b>0.0331</b>	<b>0.3320</b>	<b>0.2175</b>	<b>3.9000e-004</b>		<b>0.0166</b>	<b>0.0166</b>		<b>0.0154</b>	<b>0.0154</b>	<b>0.0000</b>	<b>33.9986</b>	<b>33.9986</b>	<b>9.6000e-003</b>	<b>0.0000</b>	<b>34.2386</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.2 Demolition - 2020**

**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	5.2000e-004	3.6000e-004	3.8900e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0167	1.0167	3.0000e-005	0.0000	1.0173
<b>Total</b>	<b>5.2000e-004</b>	<b>3.6000e-004</b>	<b>3.8900e-003</b>	<b>1.0000e-005</b>	<b>1.1800e-003</b>	<b>1.0000e-005</b>	<b>1.1900e-003</b>	<b>3.1000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>1.0167</b>	<b>1.0167</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.0173</b>

**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	0.0331	0.3320	0.2175	3.9000e-004		0.0166	0.0166		0.0154	0.0154	0.0000	33.9986	33.9986	9.6000e-003	0.0000	34.2385
<b>Total</b>	<b>0.0331</b>	<b>0.3320</b>	<b>0.2175</b>	<b>3.9000e-004</b>		<b>0.0166</b>	<b>0.0166</b>		<b>0.0154</b>	<b>0.0154</b>	<b>0.0000</b>	<b>33.9986</b>	<b>33.9986</b>	<b>9.6000e-003</b>	<b>0.0000</b>	<b>34.2385</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.2 Demolition - 2020**

**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	5.2000e-004	3.6000e-004	3.8900e-003	1.0000e-005	1.1800e-003	1.0000e-005	1.1900e-003	3.1000e-004	1.0000e-005	3.2000e-004	0.0000	1.0167	1.0167	3.0000e-005	0.0000	1.0173
<b>Total</b>	<b>5.2000e-004</b>	<b>3.6000e-004</b>	<b>3.8900e-003</b>	<b>1.0000e-005</b>	<b>1.1800e-003</b>	<b>1.0000e-005</b>	<b>1.1900e-003</b>	<b>3.1000e-004</b>	<b>1.0000e-005</b>	<b>3.2000e-004</b>	<b>0.0000</b>	<b>1.0167</b>	<b>1.0167</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.0173</b>

**3.3 Site Preparation - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1060	0.0538	1.0000e-004		5.4900e-003	5.4900e-003		5.0500e-003	5.0500e-003	0.0000	8.3577	8.3577	2.7000e-003	0.0000	8.4253
<b>Total</b>	<b>0.0102</b>	<b>0.1060</b>	<b>0.0538</b>	<b>1.0000e-004</b>	<b>0.0452</b>	<b>5.4900e-003</b>	<b>0.0507</b>	<b>0.0248</b>	<b>5.0500e-003</b>	<b>0.0299</b>	<b>0.0000</b>	<b>8.3577</b>	<b>8.3577</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>8.4253</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.3 Site Preparation - 2020**

**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	1.6000e-004	1.1000e-004	1.1700e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3050	0.3050	1.0000e-005	0.0000	0.3052
<b>Total</b>	<b>1.6000e-004</b>	<b>1.1000e-004</b>	<b>1.1700e-003</b>	<b>0.0000</b>	<b>3.5000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3050</b>	<b>0.3050</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3052</b>

**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					0.0452	0.0000	0.0452	0.0248	0.0000	0.0248	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1060	0.0538	1.0000e-004		5.4900e-003	5.4900e-003		5.0500e-003	5.0500e-003	0.0000	8.3577	8.3577	2.7000e-003	0.0000	8.4252
<b>Total</b>	<b>0.0102</b>	<b>0.1060</b>	<b>0.0538</b>	<b>1.0000e-004</b>	<b>0.0452</b>	<b>5.4900e-003</b>	<b>0.0507</b>	<b>0.0248</b>	<b>5.0500e-003</b>	<b>0.0299</b>	<b>0.0000</b>	<b>8.3577</b>	<b>8.3577</b>	<b>2.7000e-003</b>	<b>0.0000</b>	<b>8.4252</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.3 Site Preparation - 2020**

**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	1.6000e-004	1.1000e-004	1.1700e-003	0.0000	3.5000e-004	0.0000	3.6000e-004	9.0000e-005	0.0000	1.0000e-004	0.0000	0.3050	0.3050	1.0000e-005	0.0000	0.3052
<b>Total</b>	<b>1.6000e-004</b>	<b>1.1000e-004</b>	<b>1.1700e-003</b>	<b>0.0000</b>	<b>3.5000e-004</b>	<b>0.0000</b>	<b>3.6000e-004</b>	<b>9.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-004</b>	<b>0.0000</b>	<b>0.3050</b>	<b>0.3050</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.3052</b>

**3.4 Grading - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1055	0.0642	1.2000e-004		5.0900e-003	5.0900e-003		4.6900e-003	4.6900e-003	0.0000	10.4235	10.4235	3.3700e-003	0.0000	10.5078
<b>Total</b>	<b>9.7200e-003</b>	<b>0.1055</b>	<b>0.0642</b>	<b>1.2000e-004</b>	<b>0.0262</b>	<b>5.0900e-003</b>	<b>0.0313</b>	<b>0.0135</b>	<b>4.6900e-003</b>	<b>0.0182</b>	<b>0.0000</b>	<b>10.4235</b>	<b>10.4235</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5078</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.4 Grading - 2020**

**Unmitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.5600e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4067	0.4067	1.0000e-005	0.0000	0.4069
<b>Total</b>	<b>2.1000e-004</b>	<b>1.5000e-004</b>	<b>1.5600e-003</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.4067</b>	<b>0.4067</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.4069</b>

**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					0.0262	0.0000	0.0262	0.0135	0.0000	0.0135	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.7200e-003	0.1055	0.0642	1.2000e-004		5.0900e-003	5.0900e-003		4.6900e-003	4.6900e-003	0.0000	10.4235	10.4235	3.3700e-003	0.0000	10.5078
<b>Total</b>	<b>9.7200e-003</b>	<b>0.1055</b>	<b>0.0642</b>	<b>1.2000e-004</b>	<b>0.0262</b>	<b>5.0900e-003</b>	<b>0.0313</b>	<b>0.0135</b>	<b>4.6900e-003</b>	<b>0.0182</b>	<b>0.0000</b>	<b>10.4235</b>	<b>10.4235</b>	<b>3.3700e-003</b>	<b>0.0000</b>	<b>10.5078</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.4 Grading - 2020**

**Mitigated Construction Off-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	1.5600e-003	0.0000	4.7000e-004	0.0000	4.7000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4067	0.4067	1.0000e-005	0.0000	0.4069
<b>Total</b>	<b>2.1000e-004</b>	<b>1.5000e-004</b>	<b>1.5600e-003</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.7000e-004</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>0.4067</b>	<b>0.4067</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>0.4069</b>

**3.5 Building Construction - 2020**

**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0583	0.5276	0.4633	7.4000e-004		0.0307	0.0307		0.0289	0.0289	0.0000	63.6928	63.6928	0.0155	0.0000	64.0812
<b>Total</b>	<b>0.0583</b>	<b>0.5276</b>	<b>0.4633</b>	<b>7.4000e-004</b>		<b>0.0307</b>	<b>0.0307</b>		<b>0.0289</b>	<b>0.0289</b>	<b>0.0000</b>	<b>63.6928</b>	<b>63.6928</b>	<b>0.0155</b>	<b>0.0000</b>	<b>64.0812</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.5 Building Construction - 2020**

**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	9.1000e-004	0.0294	5.8100e-003	7.0000e-005	1.6200e-003	1.3000e-004	1.7400e-003	4.7000e-004	1.2000e-004	5.9000e-004	0.0000	6.8319	6.8319	3.3000e-004	0.0000	6.8402
Worker	5.5300e-003	3.8600e-003	0.0414	1.2000e-004	0.0125	8.0000e-005	0.0126	3.3300e-003	8.0000e-005	3.4100e-003	0.0000	10.8107	10.8107	2.7000e-004	0.0000	10.8174
<b>Total</b>	<b>6.4400e-003</b>	<b>0.0333</b>	<b>0.0472</b>	<b>1.9000e-004</b>	<b>0.0142</b>	<b>2.1000e-004</b>	<b>0.0144</b>	<b>3.8000e-003</b>	<b>2.0000e-004</b>	<b>4.0000e-003</b>	<b>0.0000</b>	<b>17.6426</b>	<b>17.6426</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>17.6576</b>

**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	0.0583	0.5276	0.4633	7.4000e-004		0.0307	0.0307		0.0289	0.0289	0.0000	63.6927	63.6927	0.0155	0.0000	64.0811
<b>Total</b>	<b>0.0583</b>	<b>0.5276</b>	<b>0.4633</b>	<b>7.4000e-004</b>		<b>0.0307</b>	<b>0.0307</b>		<b>0.0289</b>	<b>0.0289</b>	<b>0.0000</b>	<b>63.6927</b>	<b>63.6927</b>	<b>0.0155</b>	<b>0.0000</b>	<b>64.0811</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.5 Building Construction - 2020**

**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	9.1000e-004	0.0294	5.8100e-003	7.0000e-005	1.6200e-003	1.3000e-004	1.7400e-003	4.7000e-004	1.2000e-004	5.9000e-004	0.0000	6.8319	6.8319	3.3000e-004	0.0000	6.8402
Worker	5.5300e-003	3.8600e-003	0.0414	1.2000e-004	0.0125	8.0000e-005	0.0126	3.3300e-003	8.0000e-005	3.4100e-003	0.0000	10.8107	10.8107	2.7000e-004	0.0000	10.8174
<b>Total</b>	<b>6.4400e-003</b>	<b>0.0333</b>	<b>0.0472</b>	<b>1.9000e-004</b>	<b>0.0142</b>	<b>2.1000e-004</b>	<b>0.0144</b>	<b>3.8000e-003</b>	<b>2.0000e-004</b>	<b>4.0000e-003</b>	<b>0.0000</b>	<b>17.6426</b>	<b>17.6426</b>	<b>6.0000e-004</b>	<b>0.0000</b>	<b>17.6576</b>

**3.5 Building Construction - 2021**

**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	0.1663	1.5253	1.4503	2.3600e-003		0.0839	0.0839		0.0789	0.0789	0.0000	202.6826	202.6826	0.0489	0.0000	203.9051
<b>Total</b>	<b>0.1663</b>	<b>1.5253</b>	<b>1.4503</b>	<b>2.3600e-003</b>		<b>0.0839</b>	<b>0.0839</b>		<b>0.0789</b>	<b>0.0789</b>	<b>0.0000</b>	<b>202.6826</b>	<b>202.6826</b>	<b>0.0489</b>	<b>0.0000</b>	<b>203.9051</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.5 Building Construction - 2021**

**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	2.4300e-003	0.0860	0.0164	2.3000e-004	5.1400e-003	2.0000e-004	5.3400e-003	1.4900e-003	1.9000e-004	1.6800e-003	0.0000	21.5654	21.5654	1.0100e-003	0.0000	21.5905
Worker	0.0164	0.0110	0.1205	3.7000e-004	0.0399	2.6000e-004	0.0401	0.0106	2.4000e-004	0.0108	0.0000	33.1877	33.1877	7.6000e-004	0.0000	33.2066
<b>Total</b>	<b>0.0188</b>	<b>0.0970</b>	<b>0.1369</b>	<b>6.0000e-004</b>	<b>0.0450</b>	<b>4.6000e-004</b>	<b>0.0455</b>	<b>0.0121</b>	<b>4.3000e-004</b>	<b>0.0125</b>	<b>0.0000</b>	<b>54.7530</b>	<b>54.7530</b>	<b>1.7700e-003</b>	<b>0.0000</b>	<b>54.7971</b>

**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	0.1663	1.5253	1.4503	2.3600e-003		0.0839	0.0839		0.0789	0.0789	0.0000	202.6824	202.6824	0.0489	0.0000	203.9048
<b>Total</b>	<b>0.1663</b>	<b>1.5253</b>	<b>1.4503</b>	<b>2.3600e-003</b>		<b>0.0839</b>	<b>0.0839</b>		<b>0.0789</b>	<b>0.0789</b>	<b>0.0000</b>	<b>202.6824</b>	<b>202.6824</b>	<b>0.0489</b>	<b>0.0000</b>	<b>203.9048</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.5 Building Construction - 2021**

**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	2.4300e-003	0.0860	0.0164	2.3000e-004	5.1400e-003	2.0000e-004	5.3400e-003	1.4900e-003	1.9000e-004	1.6800e-003	0.0000	21.5654	21.5654	1.0100e-003	0.0000	21.5905
Worker	0.0164	0.0110	0.1205	3.7000e-004	0.0399	2.6000e-004	0.0401	0.0106	2.4000e-004	0.0108	0.0000	33.1877	33.1877	7.6000e-004	0.0000	33.2066
<b>Total</b>	<b>0.0188</b>	<b>0.0970</b>	<b>0.1369</b>	<b>6.0000e-004</b>	<b>0.0450</b>	<b>4.6000e-004</b>	<b>0.0455</b>	<b>0.0121</b>	<b>4.3000e-004</b>	<b>0.0125</b>	<b>0.0000</b>	<b>54.7530</b>	<b>54.7530</b>	<b>1.7700e-003</b>	<b>0.0000</b>	<b>54.7971</b>

**3.6 Paving - 2021**

**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	9.8500e-003	0.0976	0.1103	1.7000e-004		5.2100e-003	5.2100e-003		4.8100e-003	4.8100e-003	0.0000	14.7336	14.7336	4.6300e-003	0.0000	14.8493
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>9.8500e-003</b>	<b>0.0976</b>	<b>0.1103</b>	<b>1.7000e-004</b>		<b>5.2100e-003</b>	<b>5.2100e-003</b>		<b>4.8100e-003</b>	<b>4.8100e-003</b>	<b>0.0000</b>	<b>14.7336</b>	<b>14.7336</b>	<b>4.6300e-003</b>	<b>0.0000</b>	<b>14.8493</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.6 Paving - 2021**

**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	5.8000e-004	3.9000e-004	4.2700e-003	1.0000e-005	1.4100e-003	1.0000e-005	1.4200e-003	3.8000e-004	1.0000e-005	3.8000e-004	0.0000	1.1771	1.1771	3.0000e-005	0.0000	1.1778
<b>Total</b>	<b>5.8000e-004</b>	<b>3.9000e-004</b>	<b>4.2700e-003</b>	<b>1.0000e-005</b>	<b>1.4100e-003</b>	<b>1.0000e-005</b>	<b>1.4200e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>1.1771</b>	<b>1.1771</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.1778</b>

**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	9.8500e-003	0.0976	0.1103	1.7000e-004		5.2100e-003	5.2100e-003		4.8100e-003	4.8100e-003	0.0000	14.7335	14.7335	4.6300e-003	0.0000	14.8493
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>9.8500e-003</b>	<b>0.0976</b>	<b>0.1103</b>	<b>1.7000e-004</b>		<b>5.2100e-003</b>	<b>5.2100e-003</b>		<b>4.8100e-003</b>	<b>4.8100e-003</b>	<b>0.0000</b>	<b>14.7335</b>	<b>14.7335</b>	<b>4.6300e-003</b>	<b>0.0000</b>	<b>14.8493</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.6 Paving - 2021**

**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	5.8000e-004	3.9000e-004	4.2700e-003	1.0000e-005	1.4100e-003	1.0000e-005	1.4200e-003	3.8000e-004	1.0000e-005	3.8000e-004	0.0000	1.1771	1.1771	3.0000e-005	0.0000	1.1778
<b>Total</b>	<b>5.8000e-004</b>	<b>3.9000e-004</b>	<b>4.2700e-003</b>	<b>1.0000e-005</b>	<b>1.4100e-003</b>	<b>1.0000e-005</b>	<b>1.4200e-003</b>	<b>3.8000e-004</b>	<b>1.0000e-005</b>	<b>3.8000e-004</b>	<b>0.0000</b>	<b>1.1771</b>	<b>1.1771</b>	<b>3.0000e-005</b>	<b>0.0000</b>	<b>1.1778</b>

**3.7 Architectural Coating - 2021**

**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	0.7145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9700e-003	0.0137	0.0164	3.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	2.2979	2.2979	1.6000e-004	0.0000	2.3019
<b>Total</b>	<b>0.7164</b>	<b>0.0137</b>	<b>0.0164</b>	<b>3.0000e-005</b>		<b>8.5000e-004</b>	<b>8.5000e-004</b>		<b>8.5000e-004</b>	<b>8.5000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>2.3019</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.7 Architectural Coating - 2021**

**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	2.3000e-004	2.5600e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.5000e-004	2.3000e-004	1.0000e-005	2.3000e-004	0.0000	0.7063	0.7063	2.0000e-005	0.0000	0.7067
<b>Total</b>	<b>3.5000e-004</b>	<b>2.3000e-004</b>	<b>2.5600e-003</b>	<b>1.0000e-005</b>	<b>8.5000e-004</b>	<b>1.0000e-005</b>	<b>8.5000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.3000e-004</b>	<b>0.0000</b>	<b>0.7063</b>	<b>0.7063</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.7067</b>

**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	0.7145					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9700e-003	0.0137	0.0164	3.0000e-005		8.5000e-004	8.5000e-004		8.5000e-004	8.5000e-004	0.0000	2.2979	2.2979	1.6000e-004	0.0000	2.3019
<b>Total</b>	<b>0.7164</b>	<b>0.0137</b>	<b>0.0164</b>	<b>3.0000e-005</b>		<b>8.5000e-004</b>	<b>8.5000e-004</b>		<b>8.5000e-004</b>	<b>8.5000e-004</b>	<b>0.0000</b>	<b>2.2979</b>	<b>2.2979</b>	<b>1.6000e-004</b>	<b>0.0000</b>	<b>2.3019</b>

M31 Apartments - Placer-Sacramento County, Annual

**3.7 Architectural Coating - 2021**

**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	2.3000e-004	2.5600e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.5000e-004	2.3000e-004	1.0000e-005	2.3000e-004	0.0000	0.7063	0.7063	2.0000e-005	0.0000	0.7067
<b>Total</b>	<b>3.5000e-004</b>	<b>2.3000e-004</b>	<b>2.5600e-003</b>	<b>1.0000e-005</b>	<b>8.5000e-004</b>	<b>1.0000e-005</b>	<b>8.5000e-004</b>	<b>2.3000e-004</b>	<b>1.0000e-005</b>	<b>2.3000e-004</b>	<b>0.0000</b>	<b>0.7063</b>	<b>0.7063</b>	<b>2.0000e-005</b>	<b>0.0000</b>	<b>0.7067</b>

**4.0 Operational Detail - Mobile**

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**4.1 Mitigation Measures Mobile**

M31 Apartments - Placer-Sacramento County, Annual

	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	0.1558	1.1273	1.8199	7.3000e-003	0.5538	6.1800e-003	0.5600	0.1490	5.8100e-003	0.1548	0.0000	672.3620	672.3620	0.0253	0.0000	672.9942
Unmitigated	0.1558	1.1273	1.8199	7.3000e-003	0.5538	6.1800e-003	0.5600	0.1490	5.8100e-003	0.1548	0.0000	672.3620	672.3620	0.0253	0.0000	672.9942

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	532.00	511.20	468.80	1,489,562	1,489,562
Total	532.00	511.20	468.80	1,489,562	1,489,562

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
Apartments Mid Rise	10.80	7.30	7.50	42.60	21.00	36.40	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.499712	0.039404	0.220288	0.124864	0.021993	0.006021	0.030614	0.046741	0.001428	0.001188	0.005840	0.000765	0.001142

5.0 Energy Detail

Historical Energy Use: N

M31 Apartments - Placer-Sacramento County, Annual

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	82.1473	82.1473	4.4800e-003	9.3000e-004	82.5355
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	82.1473	82.1473	4.4800e-003	9.3000e-004	82.5355
NaturalGas Mitigated	4.2100e-003	0.0359	0.0153	2.3000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	41.6157	41.6157	8.0000e-004	7.6000e-004	41.8630
NaturalGas Unmitigated	4.2100e-003	0.0359	0.0153	2.3000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	41.6157	41.6157	8.0000e-004	7.6000e-004	41.8630

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					
Apartments Mid Rise	779848	4.2100e-003	0.0359	0.0153	2.3000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	41.6157	41.6157	8.0000e-004	7.6000e-004	41.8630
<b>Total</b>		<b>4.2100e-003</b>	<b>0.0359</b>	<b>0.0153</b>	<b>2.3000e-004</b>		<b>2.9100e-003</b>	<b>2.9100e-003</b>		<b>2.9100e-003</b>	<b>2.9100e-003</b>	<b>0.0000</b>	<b>41.6157</b>	<b>41.6157</b>	<b>8.0000e-004</b>	<b>7.6000e-004</b>	<b>41.8630</b>

M31 Apartments - Placer-Sacramento County, Annual

**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	tons/yr										MT/yr					
Apartments Mid Rise	779848	4.2100e-003	0.0359	0.0153	2.3000e-004		2.9100e-003	2.9100e-003		2.9100e-003	2.9100e-003	0.0000	41.6157	41.6157	8.0000e-004	7.6000e-004	41.8630
<b>Total</b>		<b>4.2100e-003</b>	<b>0.0359</b>	<b>0.0153</b>	<b>2.3000e-004</b>		<b>2.9100e-003</b>	<b>2.9100e-003</b>		<b>2.9100e-003</b>	<b>2.9100e-003</b>	<b>0.0000</b>	<b>41.6157</b>	<b>41.6157</b>	<b>8.0000e-004</b>	<b>7.6000e-004</b>	<b>41.8630</b>

**5.3 Energy by Land Use - Electricity**

**Unmitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	340517	82.1473	4.4800e-003	9.3000e-004	82.5355
<b>Total</b>		<b>82.1473</b>	<b>4.4800e-003</b>	<b>9.3000e-004</b>	<b>82.5355</b>

M31 Apartments - Placer-Sacramento County, Annual

**5.3 Energy by Land Use - Electricity**

**Mitigated**

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	340517	82.1473	4.4800e-003	9.3000e-004	82.5355
<b>Total</b>		<b>82.1473</b>	<b>4.4800e-003</b>	<b>9.3000e-004</b>	<b>82.5355</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	tons/yr										MT/yr					
Mitigated	5.5550	0.1049	6.7909	0.0113		0.8721	0.8721		0.8721	0.8721	82.6366	35.6269	118.2635	0.0772	6.5000e-003	122.1304
Unmitigated	5.5550	0.1049	6.7909	0.0113		0.8721	0.8721		0.8721	0.8721	82.6366	35.6269	118.2635	0.0772	6.5000e-003	122.1304

M31 Apartments - Placer-Sacramento County, Annual

**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	0.0715					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4459					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.0197	0.0980	6.1963	0.0112		0.8688	0.8688		0.8688	0.8688	82.6366	34.6566	117.2932	0.0763	6.5000e-003	121.1367
Landscaping	0.0180	6.8600e-003	0.5947	3.0000e-005		3.2900e-003	3.2900e-003		3.2900e-003	3.2900e-003	0.0000	0.9703	0.9703	9.4000e-004	0.0000	0.9937
<b>Total</b>	<b>5.5550</b>	<b>0.1049</b>	<b>6.7909</b>	<b>0.0113</b>		<b>0.8721</b>	<b>0.8721</b>		<b>0.8721</b>	<b>0.8721</b>	<b>82.6366</b>	<b>35.6269</b>	<b>118.2635</b>	<b>0.0772</b>	<b>6.5000e-003</b>	<b>122.1304</b>

M31 Apartments - Placer-Sacramento County, Annual

**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	0.0715					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4459					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.0197	0.0980	6.1963	0.0112		0.8688	0.8688		0.8688	0.8688	82.6366	34.6566	117.2932	0.0763	6.5000e-003	121.1367
Landscaping	0.0180	6.8600e-003	0.5947	3.0000e-005		3.2900e-003	3.2900e-003		3.2900e-003	3.2900e-003	0.0000	0.9703	0.9703	9.4000e-004	0.0000	0.9937
<b>Total</b>	<b>5.5550</b>	<b>0.1049</b>	<b>6.7909</b>	<b>0.0113</b>		<b>0.8721</b>	<b>0.8721</b>		<b>0.8721</b>	<b>0.8721</b>	<b>82.6366</b>	<b>35.6269</b>	<b>118.2635</b>	<b>0.0772</b>	<b>6.5000e-003</b>	<b>122.1304</b>

**7.0 Water Detail**

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**7.1 Mitigation Measures Water**

Use Water Efficient Landscaping

M31 Apartments - Placer-Sacramento County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	10.0515	0.1703	4.1100e-003	15.5323
Unmitigated	11.2322	0.1704	4.1200e-003	16.7186

**7.2 Water by Land Use**

**Unmitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	5.21232 / 3.28603	11.2322	0.1704	4.1200e-003	16.7186
<b>Total</b>		<b>11.2322</b>	<b>0.1704</b>	<b>4.1200e-003</b>	<b>16.7186</b>

M31 Apartments - Placer-Sacramento County, Annual

**7.2 Water by Land Use**

**Mitigated**

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	5.21232 / 1.88764	10.0515	0.1703	4.1100e-003	15.5323
<b>Total</b>		<b>10.0515</b>	<b>0.1703</b>	<b>4.1100e-003</b>	<b>15.5323</b>

**8.0 Waste Detail**

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**8.1 Mitigation Measures Waste**

**Category/Year**

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	7.4701	0.4415	0.0000	18.5068
Unmitigated	7.4701	0.4415	0.0000	18.5068

M31 Apartments - Placer-Sacramento County, Annual

**8.2 Waste by Land Use**

**Unmitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	36.8	7.4701	0.4415	0.0000	18.5068
<b>Total</b>		<b>7.4701</b>	<b>0.4415</b>	<b>0.0000</b>	<b>18.5068</b>

**Mitigated**

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	36.8	7.4701	0.4415	0.0000	18.5068
<b>Total</b>		<b>7.4701</b>	<b>0.4415</b>	<b>0.0000</b>	<b>18.5068</b>

**9.0 Operational Offroad**

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Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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M31 Apartments - Placer-Sacramento County, Annual

**10.0 Stationary Equipment**

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**Fire Pumps and Emergency Generators**

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

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