ADAMS AVENUE AFFORDABLE HOUSING MULTI-FAMILY DEVELOPMENT

Initial Study and Mitigated Negative Declaration (IS/MND)

CEQA Analysis Prepared for:

City of Murrieta
1 Town Square
Murrieta, CA 92562

Prepared by:

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December 2021

Project No. 7080

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PROJECT INFORMATION SHEET

1. Project Title	Adams Avenue Affordable Housing Multi-Family Development
2. CEQA Lead Agency	**City of Murrieta** 1 Town Square Murrieta, CA 92562 Aaron Rintamaki 951-461-6079 ARintamaki@MurrietaCA.gov
3. Project Applicant	Alexa Washburn **National Community Renaissance of California** 9421 Haven Avenue Rancho Cucamonga, CA 91730
4. Project Location	24960 Adams Avenue Murrieta CA 92562
5. Assessor's Parcel Numbers	APN 906-080-018
6. Project Site General Plan Designation(s)	Current: Multiple Family Residential
7. Project Site Zoning Designation(s)	Current: Downtown Murrieta Specific Plan Zoning: Multi-Family
8. Surrounding Land Uses and Setting	Multifamily residences are located to the west of the project site. To the north of the project site is vacant graded land, which is in the process of being developed with multifamily apartments, to the east of the project site is a mix of commercial and office land uses. The project site is bounded by Adams Avenue to the south/southwest.
9. Description of Project	The project proposes four buildings (A, B-1, B-2 and C) on a 6.22-acre site. Proposed are three Multi-Family Housing buildings (A, B-1 and B-2) and one Senior Housing building (C). The project includes the development of 200 units (including Manager's units). The Multi-Family Housing component is made up of a mix of one-bedroom, two-bedroom, and three-bedroom units totaling 119 units, including 1 Manager's unit. The Senior Housing component includes a total of 81 units, including 1 Manager's unit, mixed between one-bedroom and two-bedroom units.

The project proposes amenities within the site including an outdoor pool, children's playground, community center, community garden, half basketball court, outdoor fitness stations & conversation areas, pet-friendly green space, BBQ area with tables, and a senior community room. In addition, the project includes the preservation of the existing 100-year-old oak tree on site, and the integration of the proposed paseos with the Murrieta Paseo network.

Refer to **Section 3.0** of this document for additional information.

The project applicant is requesting the following discretionary actions, which are discussed in detail in **Section 3.0** of this document:

- Site Plan approval and building permits
- Tentative Parcel Map
- Development Agreement

11. Selected Agencies whose Approval is Required

City of Murrieta

12. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code § 21080.3.1? If so, has consultation begun?

Letters were sent by the City of Murrieta (the Lead Agency), to local Native American tribes asking if they wished to participate in AB 52 consultation concerning the proposed project in the City of Murrieta. Tribes had up to 30 days in which to respond to notification of the project. For the proposed project, those five tribe(s) that requested consultation were contacted by the City of Murrieta. Of the five tribes that were contacted, the Rincon Band of Luiseño Indians declined and only the Temecula Band of Luiseño Mission Indians (Pechanga Reservation) requested consultation, which was initiated on October 28, 2021. Refer to **Section 4.18** for details.

13. Other Public Agencies

Agencies that will review the proposed project include the following:

- California Regional Water Quality Control Board – San Diego
- South Coast Air Quality Management District
- Murrieta Fire Department

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Term
AAQS	ambient air quality standards
AB 32	California Global Warming Solutions Act of 2006 (Assembly Bill 32)
AB 52	Assembly Bill 52
ACM(s)	Asbestos-Containing Material(s)
ADA	Americans with Disabilities Act
AFY	Acre-feet per year
amsl	above mean sea level
APN	Assessor's Parcel Number
AQMP	Air Quality Management Plan
AR4	Fourth Assessment Report
ARB	California Air Resources Board
BAU	business as usual
BIOS	Biogeographic Information and Observation System
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAL FIRE	California Department of Forestry and Fire Protection
CAL Green	California Green Building Standards
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CASGEM	California Statewide Groundwater Elevation Monitoring
CAT	Climate Action Team
CBC	California Building Code
CCAA	California Clean Air Act
CDO(s)	Cease and Desist Order(s)
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
cfs	cubic feet per second
CGS	California Geological Survey
CH_4	methane
CHRIS	California Historic Resources Inventory System
City	City of Murrieta
CMP	Congestion Management Program
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel scale
DOC	California Department of Conservation

Acronym/Abbreviation	Term
DOSH	California Division of Safety and Health
DTSC	Department of Toxic Substances Control
du/ac	Dwellling units per acre
DWR	Department of Water Resources
EIR	Environmental Impact Report
EMS	Emergency Medical Services
EO	Executive Order
ESA	Endangered Species Act
ESRL	Earth System Research Laboratory
°F	degrees Fahrenheit
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zones
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
GHG	greenhouse gases
GIS	Geographic Information System
GPCD	gallons per capita per day
gpd	gallons per day
HVAC	heating, ventiliation and air conditioning
IPCC	Intergovernmental Panel on Climate Change
IS/MND	Initial Study/Mitigated Negative Declaration
L_{90}	noise level that is exceeded 90% of the time
L_{eq}	equivalent noise level
LBP	Lead-Based Paint
L_{max}	root mean square maximum noise level
LRA	Local Responsibility Area
LSTs	Localized Significance Thresholds
mgd	million gallons per day
MM(s)	mitigation measure(s)
MMRP	Mitigation Monitoring and Reporting Program
$MMTCO_2e$	million metric tons of CO2e
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
MS4	Municiple Separate Storm Sewer permit
MT	Metric tons
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
National Core	National Community Renaissance
NASA	National Aeronautics and Space Administration
NCCP	Natural Communities Conservation Plan
ND	Negative Declaration
NO	nitric oxide
NO_x	nitrogen oxides
NO_2	nitrogen dioxide
O_3	Ozone

Acronym/Abbreviation	Term
OPR	Governor's Office of Planning and Research
OSHA	Occupational Safety and Health Administration
Pb	lead
PCB	polychlorinated biphenyl
PFCs	perfluorocarbons
PM	particulate matter
PM_{10}	respirable particulate matter
$PM_{2.5}$	fine particulate matter
ppm	parts per million
PPV	peak particle velocity
R-1	Single-family Residential zoning designation
R-3	High Density Residential zoning designation
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Condition(s)
R-G	Medium Density Residential zoning designation
RHNA	Regional Housing Needs Allocation
RMS	root mean square
ROG	Reactive organic gases
ROW	Right-of-way
RPS	Renewables Portfolio Standard
RWQCB	Regional Water Quality Control Board
§	section
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCCIC	South Central Coastal Information Center
SCE	Southern California Edison Company
SF_6	sulfur hexafluoride
SIP	State Implementation Plan
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act
SO_2	sulfur dioxide
SR-91	State Route 91
SR-74	State Route 74
SRA	State Responsibility Area
SRAs	source receptor areas
SRRE	Source Reduction and Recycling Element
STIP	Statewide Transportation Improvement Program
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAPs	Transportation Assembly Points
T-C	Town Center zoning designation
TCRs	Tribal Cultural Resources
UEI	Ultrasystems Environmental, Inc.

Acronym/Abbreviation	Term
U.S.	United States
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
VdB	vibration decibels
VCP	vitrified clay pipe
VHFHSZ(s)	very high fire hazard severity zone(s)
VMT	vehicle miles traveled
VOC	volatile organic compound
WEG	wind erodibility group
WQMP	Water Quality Management Plan
WRI	World Resources Institute
ybp	years before present
ZEV	Zero emmision vehicle

1.0 INTRODUCTION

1.1 Proposed Project

The City of Murrieta (City) is processing a request to implement a series of discretionary actions that would ultimately allow for the development of an affordable multi-family residential project (project) northeast of the intersection of Adams Avenue and Ivy Street at 24960 Adams Avenue in the City of Murrieta in Riverside County California. The proposed project would provide a 200-unit 100% affordable multi-family apartment complex on an approximately 6.22-acre site.

1.1.1 Project Components

The proposed project would consist of:

Proposed Buildings

- Construction of four four-story residential buildings with 200 total units ranging from one to three bedrooms and from 570 to 1,100 square feet each; the buildings would total 230,027 square feet.
- Construction of a 266-square-foot maintenance building.

Open Space and Recreational Amenities

- Community Room on the first floor of Building B-2
- Boys and Girls Club on the first floor of Building B-2
- Senior Community Room on first floor of Building C
- Outdoor pool
- Children's playground/tot lot
- Community garden
- Half basketball court
- Outdoor kitchen/BBQ
- Outdoor fitness stations and conversation area
- Pet-friendly green space
- Composite Wood Board Walk and Plantings
- Fire Lanes/Paseos

Parking

- 241 parking spaces including 23 accessible and 26 electric vehicle spaces
- 14 bicycle parking spaces

Utilities

- Trash enclosures
- 3 new transformers

1.1.2 Estimated Construction Schedule

Project construction could start as early as the first quarter (Q1) of 2023 and project completion is anticipated for the third quarter (Q3) of 2025. Phase I would be construction of the family units, which is estimated to take approximately 20 months. Phase II would be construction of the senior units, which is estimated to take approximately 14 months. Refer to **Section 3.0** for details.

1.2 Lead Agencies – Environmental Review Implementation

The City of Murrieta is the Lead Agency for the proposed project. Pursuant to the California Environmental Quality Act (CEQA) and its implementing regulations,[1] the Lead Agency has the principal responsibility for implementing and approving a project that may have a significant effect on the environment.

1.3 CEQA Overview

1.3.1 Purpose of CEQA

All discretionary projects within California are required to undergo environmental review under CEQA. A Project is defined in CEQA Guidelines § 15378 as the whole of the action having the potential to result in a direct physical change or a reasonably foreseeable indirect change to the environment and is any of the following:

- An activity directly undertaken by any public agency including but not limited to public works construction and related activities, clearing or grading of land, improvements to existing public structures, enactment and amendment of zoning ordinances, and the adoption and amendment of local General Plans or elements.
- An activity undertaken by a person which is supported in whole or in part through public agency contracts, grants, subsidies, loans, or other forms of assistance from one or more public agencies.
- An activity involving the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies.

CEQA Guidelines § 15002 lists the basic purposes of CEQA as follows:

- Inform governmental decision makers and the public about the potential, significant environmental effects of proposed activities.
- Identify the ways that environmental damage can be avoided or significantly reduced.
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures (MMs) when the governmental agency finds the changes to be feasible.
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

1.3.2 Authority to Mitigate under CEQA

CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible. Under CEQA Guidelines § 15041 a Lead Agency for a project has authority to require feasible

1 Public Resources Code §§ 21000 - 21177 and California Code of Regulations Title 14, Division 6, Chapter 3.

changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as the "nexus"[2] and "rough proportionality"[3] standards.

CEQA allows a Lead Agency to approve a project even though the project would cause a significant effect on the environment if the agency makes a fully informed and publicly disclosed decision that there is no feasible way to lessen or avoid the significant effect. In such cases, the Lead Agency must specifically identify expected benefits and other overriding considerations from the project that outweigh the policy of reducing or avoiding significant environmental impacts of the project.

1.4 Purpose of Initial Study

The CEQA process begins with a public agency making a determination as to whether the project is subject to CEQA at all. If the project is exempt, the process does not need to proceed any farther. If the project is not exempt, the Lead Agency takes the second step and conducts an Initial Study to determine whether the project may have a significant effect on the environment.

The purposes of an Initial Study as listed in § 15063(c) of the CEQA Guidelines are to:

- Provide the Lead Agency with information necessary to decide if an Environmental Impact Report (EIR), Negative Declaration (ND), or Mitigated Negative Declaration (MND) should be prepared.
- Enable a Lead Agency to modify a project to mitigate adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a ND or MND.
- Assist in the preparation of an EIR, if required, by focusing the EIR on adverse effects determined to be significant, identifying the adverse effects determined not to be significant, explaining the reasons for determining that potentially significant adverse effects would not be significant, and identifying whether a program EIR, or other process, can be used to analyze adverse environmental effects of the project.
- Facilitate an environmental assessment early during project design.
- Provide documentation in the ND or MND that a project would not have a significant effect on the environment.
- Eliminate unnecessary EIRs.
- Determine if a previously prepared EIR could be used for the Project.

In cases where no potentially significant impacts are identified, the Lead Agency may issue a ND, and no MMs would be needed. Where potentially significant impacts are identified, the Lead Agency may determine that MMs would adequately reduce these impacts to less than significant levels. The Lead Agency would then prepare a MND for the proposed project. If the Lead Agency determines that individual or cumulative effects of the proposed project would cause a significant adverse environmental effect that cannot be mitigated to less than significant levels, then the Lead Agency would require an EIR to further analyze these impacts.

2 A nexus (i.e., connection) must be established between the mitigation measure and a legitimate governmental interest.

3 The mitigation measure must be "roughly proportional" to the impacts of the Project.

1.5 Review and Comment by Other Agencies

Other public agencies are provided the opportunity to review and comment on the IS/MND. Each of these agencies is described briefly below.

- A Responsible Agency (14 CCR § 15381) is a public agency, other than the Lead Agency, that has discretionary approval power over the Project, such as permit issuance or plan approval authority.
- A Trustee Agency[4] (14 CCR § 15386) is a state agency having jurisdiction by law over natural resources affected by a project that are held in trust for the people of the State of California.
- Agencies with Jurisdiction by Law (14 CCR § 15366) are any public agencies who have authority (1) to grant a permit or other entitlement for use; (2) to provide funding for the project in question; or (3) to exercise authority over resources which may be affected by the project. Furthermore, a city or county will have jurisdiction by law with respect to a project when the city or county having primary jurisdiction over the area involved is: (1) the site of the project; (2) the area in which the major environmental effects will occur; and/or (3) the area in which reside those citizens most directly concerned by any such environmental effects.

1.6 Impact Terminology

The following terminology is used to describe the level of significance of potential impacts:

- A finding of ***no impact*** is appropriate if the analysis concludes that the project would not affect the particular environmental threshold in any way.
- An impact is considered ***less than significant*** if the analysis concludes that the project would cause no substantial adverse change to the environment and requires no mitigation.
- An impact is considered ***less than significant with mitigation incorporated*** if the analysis concludes that the project would cause no substantial adverse change to the environment with the inclusion of environmental commitments, or other enforceable measures, that would be adopted by the lead agency.
- An impact is considered potentially significant if the analysis concludes that the project could have a substantial adverse effect on the environment.
- An EIR is required if an impact is identified as ***potentially significant***.

1.7 Organization of Initial Study

This document is organized to satisfy CEQA Guidelines § 15063(d), and includes the following sections:

- **Section 1.0 - Introduction**, which identifies the purpose and scope of the IS/MND.
- **Section 2.0 - Environmental Setting**, which describes location, existing site conditions, land uses, zoning designations, topography, and vegetation associated with the project site and surroundings.

4 The four Trustee Agencies in California listed in CEQA Guidelines § 15386 are California Department of Fish and Wildlife, State Lands Commission, State Department of Parks and Recreation, and University of California.

- **Section 3.0 - Project Description**, which provides an overview of the project, a description of the proposed development, project phasing during construction, and discretionary actions for project approval.
- **Section 4.0 - Environmental Checklist**, which presents checklist responses for each resource topic to identify and assess impacts associated with the proposed project, and proposes MMs, as needed, to reduce potential environmental impacts to less than significant.
- **Section 5.0 - References**, which includes a list of documents cited in the IS/MND.
- **Section 6.0 - List of Preparers**, which identifies the primary authors and technical experts that prepared the IS/MND.

Technical studies and other documents, which include supporting information or analyses used to prepare the IS/MND, are included in the following appendices:

- Appendix A Project Plans
- Appendix B1 CalEEMod Input and Results For Air Quality Analysis
- Appendix B2 CalEEMod Input and Results For Greenhouse Gas Emissions Analysis
- Appendix C1 Biological Resources Evaluation
- Appendix C2 Arborist Report
- Appendix D1 Cultural Resources Report
- Appendix D2 Paleontological Records Search
- Appendix E1 Geotechnical Report
- Appendix E2 Fault Study Email
- Appendix F1 Phase I Environmental Site Assessment
- Appendix F2 Pesticide Sampling Report
- Appendix G Percolation Testing Report
- Appendix H1 Water Quality Management Plan
- Appendix H2 Preliminary Hydrology Report
- Appendix I Noise Data
- Appendix J Limited VMT Analysis
- Appendix K Public Service and Utilities Letters and Responses

1.8 Findings from the Initial Study

1.8.1 No Impact or Impacts Considered Less than Significant

Based on IS findings, the project would have no impact or a less than significant impact on the following environmental categories listed from Appendix G of the CEQA Guidelines.

- Agriculture and Forestry Resources
- Air Quality
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic

- Utilities and Service Systems
- Wildfire

1.8.2 Impacts Considered Less than Significant with Mitigation Measures

Based on IS findings, the project would have a less than significant impact on the following environmental categories listed in Appendix G of the CEQA Guidelines when proposed MMs are implemented.

- Aesthetics
- Biological Resources
- Cultural Resources
- Geology and Soils
- Noise
- Tribal Cultural Resources
- Mandatory Findings of Significance

2.0 ENVIRONMENTAL SETTING

2.1 Project Location

The proposed Adams Avenue Affordable Housing Multi-Family Development Project is located at 24960 Adams Avenue in the City of Murrieta, California, on an approximately 6.2-acre site. Refer to **Figure 2.1-1**, which shows the project's location in a regional context. Local surface streets adjacent to the site include Adams Avenue to the west. **Figure 2.1-2** depicts an aerial photo of the project site and the surrounding land.

2.2 Project Setting

The project site is comprised of one parcel, APN 960-080-018. The project site was a previous agricultural operation and contains an old barn in the central portion of the site, an old well in the western portion of the site, and a short concrete driveway along the southwestern portion of the site. The balance of the site is covered with grasses, shrubs and trees. The barn on site will be removed by the City of Murrieta, the removal of which is not a part of the proposed project. The project site is surrounded by multi-family homes to the north, commercial buildings to the south, undeveloped land to the east, and a mix of single-family homes and an outdoor RV storage lot across Adams Avenue to the west. The project site is located on the United States Geological Survey, 7.5-Minute Series, Topographic Map, Murrieta Quadrangle, California. See **Figure 2.2-1**, which depicts the topography of the site, and surrounding area. Topography within the project site is relatively flat (Google Earth, 2021). Site photographs are provided in **Figure 2.2-2**.

2.2.1 Land Use and Zoning

The land use, zoning, and specific plan designations of the project site and its immediate vicinity are listed in **Table 2.2-1**. The project site has a General Plan land use designation of Multiple-Family Residential (MFR) and a zoning designation of Downtown Murrieta Specific Plan (SPM 8) (City of Murrieta, 2020a; City of Murrieta, 2020b). Under the existing General Plan and zoning designations, onsite residential development is permitted up to a minimum base density of 30.0 dwelling units per acre (du/ac) (City of Murrieta, 2020a; RBF Consulting, 2011, p. 3-8, Table 7-4 on p. 97).

Table 2.2-1
SUMMARY OF EXISTING LAND USE, ZONING AND SPECIFIC PLAN DESIGNATIONS

Location	General Plan Designation	Zoning Designation	Specific Plan Designation	Existing Development
Project Site	Multiple-Family Residential (MFR)	Downtown Murrieta Specific Plan (SPM 8)	Downtown Murrieta Specific Plan (SPM 8)	Undeveloped lot with an old barn
Surrounding Areas				
North	Multiple-Family Residential (MFR)	Downtown Murrieta Specific Plan (SPM 8)	Downtown Murrieta Specific Plan (SPM 8)	Multi-family homes
South	Multiple-Family Residential (MFR)	Downtown Murrieta Specific Plan (SPM 8)	Downtown Murrieta Specific Plan (SPM 8)	Commercial buildings
East	Multiple-Family Residential (MFR)	Downtown Murrieta Specific Plan (SPM 8)	Downtown Murrieta Specific Plan (SPM 8)	Undeveloped land
West	Multiple-Family Residential (MFR)	Downtown Murrieta Specific Plan (SPM 8)	Downtown Murrieta Specific Plan (SPM 8)	Outdoor RV storage lot

Source: City of Murrieta, 2020a; City of Murrieta 2020b; Google Earth Pro, 2021

Figure 2.2-1
REGIONAL LOCATION

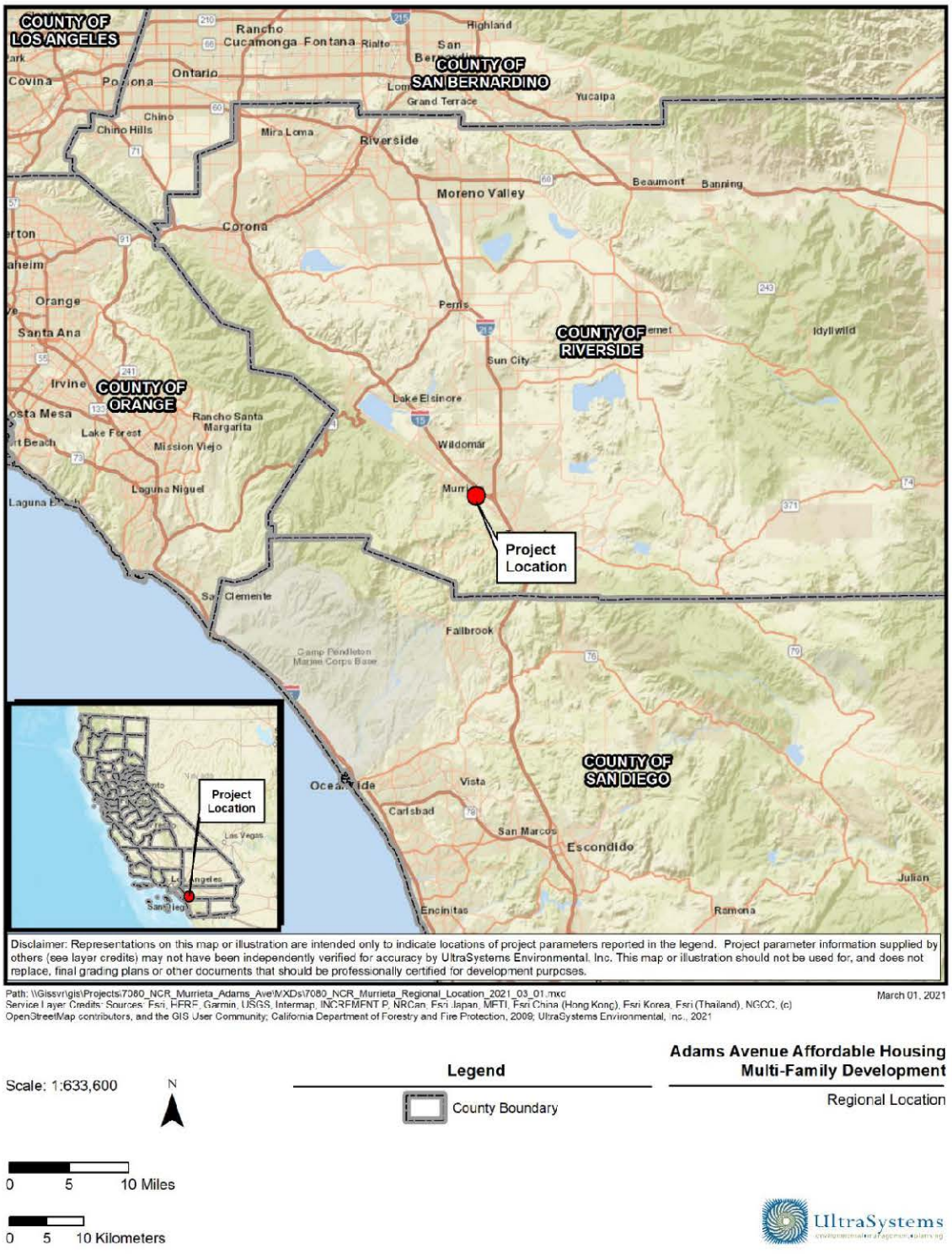


Figure 2.2-2
PROJECT LOCATION

Figure 2.2-3
TOPOGRAPHIC MAP

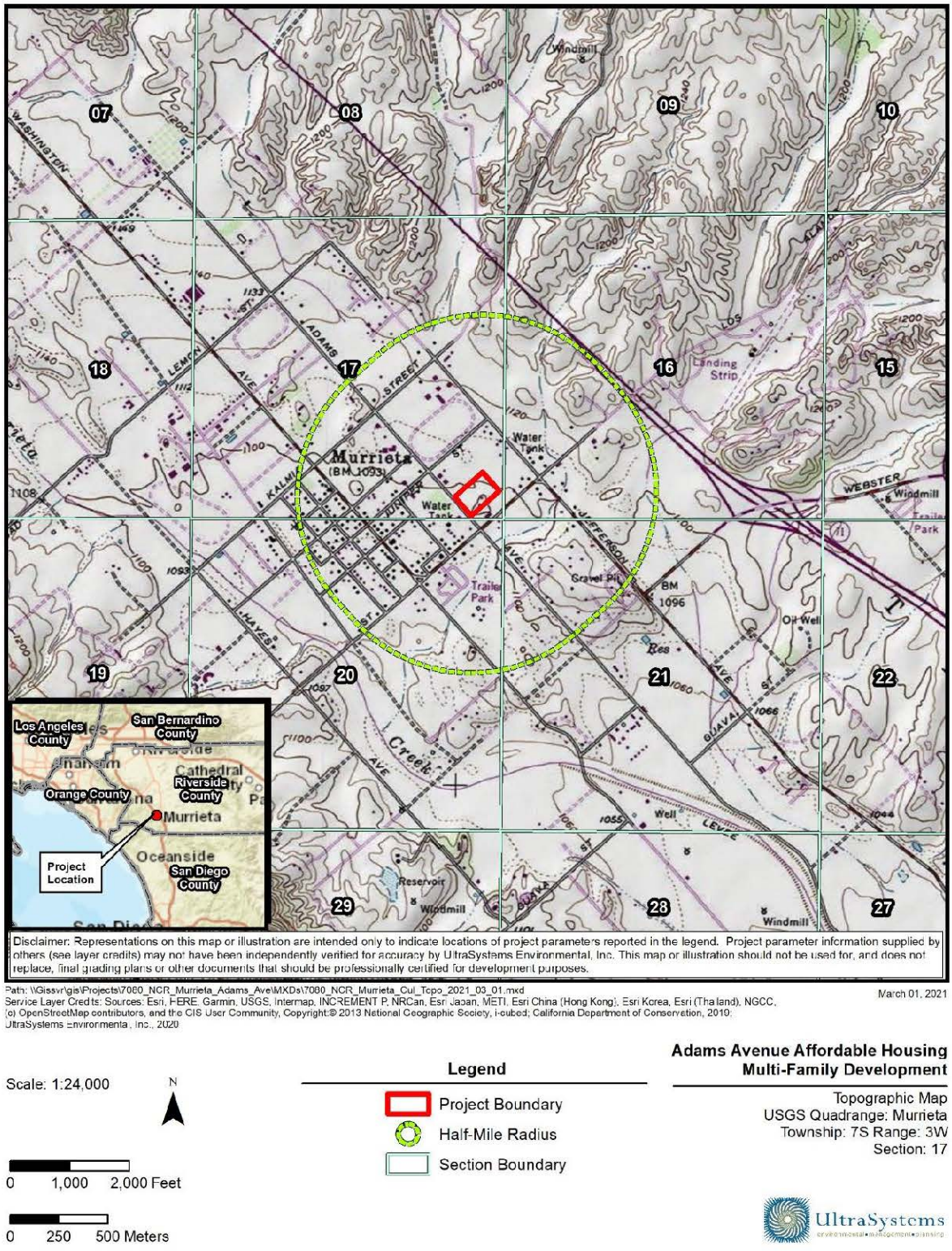


Figure 2.2-4
PROJECT SITE PHOTOGRAPHS

PHOTO 1: View of the northern portion of the project site, undeveloped land and adjacent multi-family development.

PHOTO 2: View of the southern portion of the project site, undeveloped land and adjacent commercial buildings.

PHOTO 3: View of the eastern portion of the project site, undeveloped land and adjacent undeveloped land.

PHOTO 4: View of the western portion of the project site, undeveloped land and adjacent across Adams Avenue, single-family homes and a mobile home park.

2.3 Existing Characteristics of the Site

2.3.1 Climate and Air Quality

The project site is located within the South Coast Air Basin (SCAB), a 6,600-square-mile area encompassing all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. A persistent high-pressure area that commonly resides over the eastern Pacific Ocean largely dominates regional meteorology. The distinctive climate of this area is determined primarily by its terrain and geographic location. Local climate is characterized by warm summers, mild winters, infrequent rainfall, moderate daytime onshore breezes, and moderate humidity. Ozone (O_3) and pollutant concentrations tend to be lower along the coast, where the onshore breeze disperses pollutants toward the inland valley of the SCAB and adjacent deserts. However, as a whole, the SCAB fails to meet National Ambient Air Quality Standards (NAAQS) for O_3 and fine particulate matter ($PM_{2.5}$), and is classified as a "nonattainment area" for those pollutants.

2.3.2 Geology and Soils

The proposed project site straddles two geologic units:

- Young Alluvial Fan Deposits are fluvial deposits along valley floors, and consist of unconsolidated sand, silt, and clay-nearing alluvium. These are surficial deposits, Holocene to Late Pleistocene in nature; and

- Bedrock: Pauba Formation is composed of siltstone, sandstone, and conglomerate. The formation designated Qpfs is comprised of brown, moderately well-indurated, cross-bedded sandstone containing sparse cobble- to boulder-conglomerate beds. This bedrock is Pleistocene in age (USGS, 2003).

The existing surface elevation at the proposed project site ranges from approximately 1,099 feet to 1,110 feet above mean sea level. Surface topography is generally flat to slightly sloping with the highest surface elevations in the northern portion of the site and the lowest surface elevations across the southern portions of the site (EEI 2021, p. 2). The project site is located entirely within the Alquist-Priolo Earthquake Fault Zone for the Elsinore Fault Zone. The project site is located within a liquefaction zone (EEI 2021, p. 5).

2.3.3 Hydrology

The project site consists of a rectangular-shaped property on approximately 6.2-acres of land. Surface topography is generally flat to slightly sloping with the highest surface elevations in the northern portion of the site and the lowest surface elevations across the southern portions of the site. Surface drainage by sheet flow is generally to the south (EEI 2021, p. 2). The project is within FEMA Map 06065C2715G (08/28/2008). The site is entirely within Zone X, which is an area of minimal flood hazard (FEMA, 2008). Groundwater was encountered at a depth of 17 to 41.5 feet below ground surface (bgs) during the geotechnical study field visit on February 8, 2021 (EEI 2021, p. 5).

2.3.4 Biology

The project site is located in an urbanized area, which provides low habitat value for special-status plant and wildlife species; however, there are some areas of undeveloped habitat within the biological survey area (BSA) that contain vegetation and soil conditions that could support special-

status species. The project site itself has a relatively flat topography and is primarily composed of a former hayfield, a dilapidated barn, an old paved driveway, a few groupings of native and ornamental trees, a well, and piles of demolished building material. The vegetation within the former hayfield consists of non-native annual grasses and ruderal herbaceous plants such as mustard, filaree, and horseweed. There are several complexes of burrow openings likely created by fossorial mammals such as gophers and ground squirrels scattered throughout the field. There is also a small stand of giant reed (*Arundo donax*) to the east of the barn. Most of the onsite trees are clustered around the barn and on the few pads where former dwellings were located near the center of the project site. There are several native coast live oak (*Quercus agrifolia*) trees and saplings located around the southern and eastern perimeter of the barn. Other mature ornamental trees located near the barn and former residences include an olive (*Olea europea*), black elderberry (Sambucus nigra), Peruvian pepper tree (*Schinus molle*) and Italian cypress (*Cupressus sempervirens*). There are two Podocarpus (*Podocarpus* sp.) trees located on the western fence line and the canopy of a large eucalyptus tree that overhangs the fence line at the northern boundary of the project site.

On March 4, 2021, UEI biologists Ms. Tollett and Mr. Sutton conducted a habitat assessment survey, a burrowing owl survey and a tree survey at the project site. Based on the habitat assessment survey, three land cover types were identified onsite: non-native annual grassland, coast live oak woodland/oak woodland and residential/urban/exotic. During the survey, 18 wildlife species were observed, of which there was a lizard, cottontail rabbits, a gopher and several bird species. There was one special-status bird species observed during the survey, a Cooper's hawk (*Accipiter cooperii* WL, WRCMSHCP: Covered Season of Concern: nesting), which was observed in a large oak tree near the eastern fence line. During the BUOW survey, no BUOW nor potential burrows with active signs of BUOW were observed. There were several complexes of suitable burrows observed that were likely created by fossorial mammals such as ground squirrels and gophers, both of which were observed within the BSA. During the tree survey, several coast live oak trees and ornamental trees were documented onsite. Nine of the trees on site are mature coast live oak trees, and one of these oak trees was particularly large with a diameter at standard height of 30.1 inches, and a vertical height of 32.1 feet.

2.3.5 Public Services

The City is served by a full range of public services. Fire services for the City of Murrieta are provided by Murrieta Fire and Rescue (MFR). Six fire stations are strategically located throughout the City, providing primary response for fire suppression and emergency medical services. The closest fire station to the project site is Fire Station No. 1, located at 41825 Juniper Street, approximately 0.15-mile northwest of the project site (RBF Consulting, 2011, p. 12-9; Google Earth Pro, 2021).

The Murrieta Police Department (MPD) provides police services in the City of Murrieta and would provide law enforcement services to the project site. Besides responding to incidents involving safety and law enforcement, the MPD actively promotes safety through education programs, community partnerships, and providing advice on incorporating crime prevention through environmental design principles into development projects (RBF Consulting, 2011, p. 12-14). The project is located within the boundaries of the Murrieta Valley Unified School District (MVLUSD), which has a total of 20 schools, including 11 elementary schools, four intermediate schools, three high schools, and two alternative schools (Murrieta Valley Unified School District, 2019).

2.3.6 Utilities

The Western Municipal Water District (WMWD) supplies water to a portion of the City of Murrieta, including the project site. Water supplies consist of imported water from northern California and the Colorado River purchased from the Metropolitan Water District of Southern California; local groundwater from the Temecula Valley Groundwater Basin; and recycled water (RMC, 2016, p. 6-1).

The Eastern Municipal Water District (EMWD) provides wastewater treatment to parts of the City of Murrieta, including the project site, at its Temecula Valley Regional Water Reclamation Facility (TVRWRF). The capacity of the TVRWRF is currently 18 million gallons per day (mgd); expansion of the facility to 23 mgd capacity is under construction. Average wastewater flows through the facility in 2015 were approximately 13.5 mgd (EMWD 2016; EMWD 2019).

Solid waste disposal services in the City of Murrieta are provided by Waste Management, Inc., a private company under contract with the City (City of Murrieta Residential Services, 2021). Electrical service to the site is provided by Southern California Edison through a grid of transmission lines and related facilities (City of Murrieta, 2021).

3.0 PROJECT DESCRIPTION

3.1 Project Background

The City of Murrieta (City) is processing a request to implement a series of discretionary actions that would ultimately allow for the development of an affordable multi-family residential project (project) northeast of the intersection of Adams Avenue and Ivy Street at 24960 Adams Avenue in the City of Murrieta in Riverside County, California. The proposed project would provide a 200-unit 100% affordable multi-family apartment complex on an approximately 6.22-acre site. The project is technically considered 100% affordable as the managers units onsite are exempt from the affordability calculation. The proposed project is in compliance with the City's General Plan and Zoning designations and therefore no General Plan amendment or Zone Change is required. The City is the Lead Agency for the purposes of the CEQA.

The project site is developed with a barn that will be moved from the project site. The barn is planned to be catalogued and selectively preserved by the City of Murrieta. It is too fragile to attempt to move in one piece and not all of the structure is to be preserved. The City plans to issue a request for proposal for the barn in 2021 and would selectively preserve it as a separate City of Murrieta project that the City has budgeted for in 2021; it would be removed before site preparation and grading for the proposed project would begin. The elements of the barn to be preserved will be disassembled and selectively preserved in a storage container and eventually restored in the City's planned Heritage Park in the future where other historic structures are also planned to be preserved.

The City's General Plan Land Use Map designates the project site as Multiple Family Residential (City of Murrieta General Plan, 2017). The project site is zoned Specific Plan. The project site is within the Downtown Murrieta Specific Plan (DMSP) approved by the City of Murrieta in 2017. It is designated for Multi-Family Residential under the DMSP (City of Murrieta, 2017). The project proposes a density of approximately 32 dwelling units per acre. The current land use allows for a base density of a minimum of 30 dwelling units per acre.

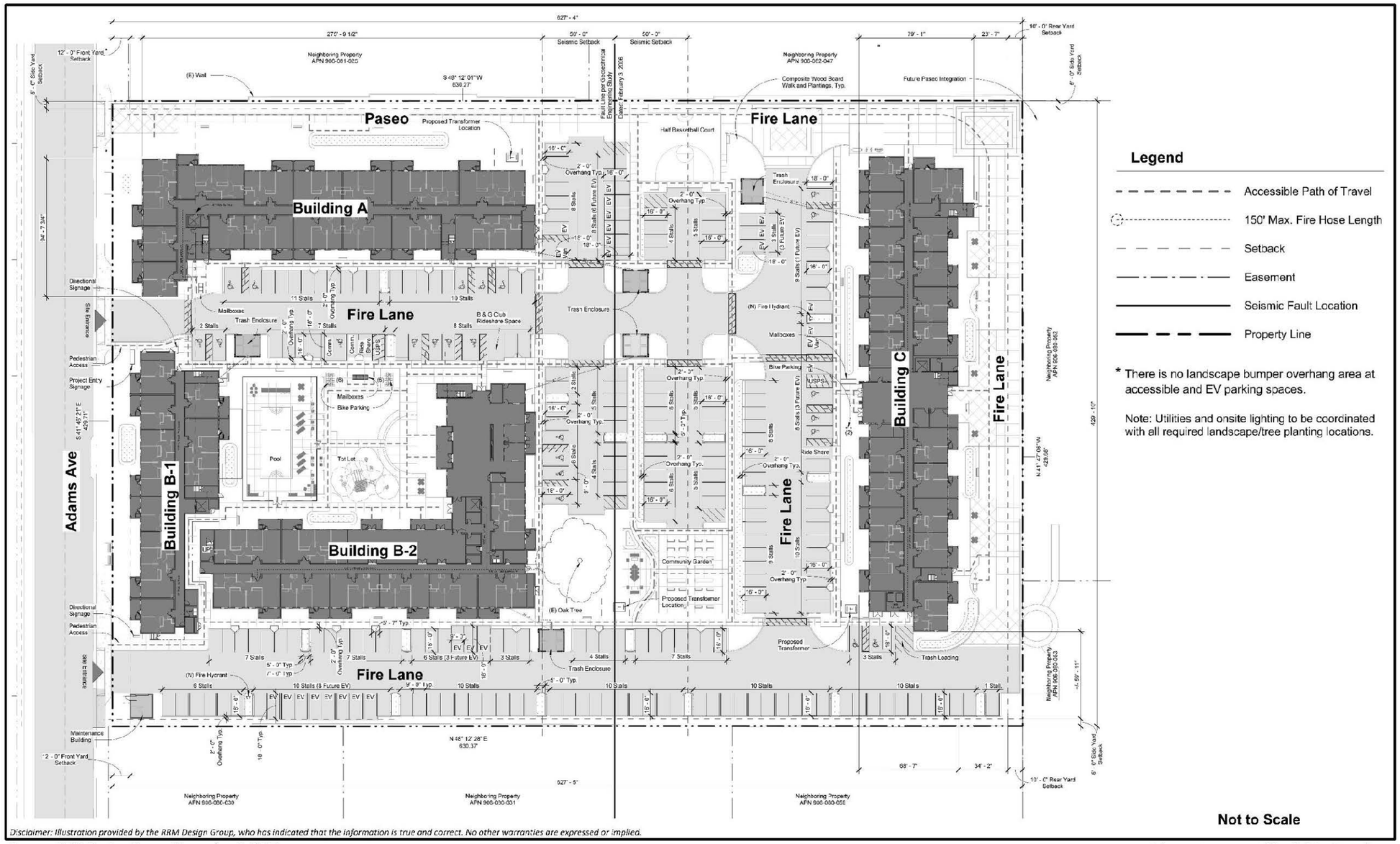
3.2 Project Outreach

The project applicant has been working with the City to receive input and provide information regarding the proposed project. The project appeared at the City of Murrieta City Council meeting on April 6, 2021. In that meeting, the City Council received an overview of the project and approved an Exclusive Negotiating Rights Agreement between the City's Housing Authority and National Community Renaissance for the project. The project applicant will engage directly with the community in a community workshop, which will be held in December of 2021. In that meeting, community members will have the opportunity to learn about, comment on, and ask questions about the project.

3.3 Project Overview

The project would consist of: (1) utilities improvements; (2) construction of four new residential buildings; and (3) project site amenities and landscaping. **Figure 3.2-1** is a site plan depicting the layout of the proposed project buildings and onsite amenities. **Table 3.2-1** summarizes the proposed project features.

Figure 3.3-1
SITE PLAN



Disclaimer: Illustration provided by the RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, November 1, 2021.

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Site Plan

Table 3.3-1
PROJECT SUMMARY

New Construction	Proposed Uses/Features	Gross Building Area (Square Feet)	Net Building Area (Square Feet)	No. of Stories	Approximate Maximum Building Height
Building A	8 one-bedroom units 23 two-bedroom units 11 three-bedroom units	53,215	43,090	4	54 feet 0 inches
Building B-1	12 one-bedroom units 8 three-bedroom units	24,021	24,423	4	52 feet 6 inches
Building B-2	3 one-bedroom units 38 two-bedroom units (this includes one Manager's unit) 16 three-bedroom units	76,677	60,388	4	52 feet 6 inches
Multifamily Housing, Subtotal	119 units	153,913	127,901	N/A	N/A
Building C (*Senior Housing*)	72 one-bedroom units 9 two-bedroom units (this includes one Manager's unit)	75,847	59,197	4	55 feet
Maintenance Building	Maintenance	266	194	1	N/A
Community Room	A community room is proposed on the first floor of Building B-2.	N/A	N/A	N/A	N/A
Senior Community Room	The Senior Community Room is proposed on the ground floor of Building C which will be programmed with services for seniors living in the proposed project.	N/A	N/A	N/A	N/A
Boys & Girls Club	A Boys and Girls Club is proposed on the first floor of Building B-2, and would be open to residents of the proposed project and residents of the surrounding community, as capacity allows.	N/A	N/A	N/A	N/A
Bicycle Parking	A total of 14 bicycle parking spaces	N/A	N/A	N/A	N/A
On-Site Paseos/Fire Lanes	The project proposes joint fire lanes/paseos on site as well as additional fire lanes.	N/A	N/A	N/A	N/A
Outdoor Pool	Located north of Building B-2	N/A	N/A	N/A	N/A
Children's Playground/ Tot Lot	Located north of Building B-2	N/A	N/A	N/A	N/A
Community Garden	A community garden is proposed east of Building B-2 adjacent to the oak tree that will be retained on site.	N/A	N/A	N/A	N/A
Half Basketball Court	Located adjacent to the northern boundary of the project site, northeast of Building A.	N/A	N/A	N/A	N/A

New Construction	Proposed Uses/Features	Gross Building Area (Square Feet)	Net Building Area (Square Feet)	No. of Stories	Approximate Maximum Building Height
Outdoor Fitness Stations & Conversation Area	Two outdoor fitness stations and a conversation area are proposed on the east side of Building C between Building C and the Fire Lane/Paseo.	N/A	N/A	N/A	N/A
Pet-Friendly Green Space	A pet friendly green space (pet area) is proposed at the northeast corner of the project site adjacent to Building C.	N/A	N/A	N/A	N/A
BBQ Area & Tables	There is a BBQ area (labeled outdoor kitchen) adjacent to the swimming pool in Building B.	N/A	N/A	N/A	N/A
Trash Enclosures	Five trash enclosures are located in the vicinity of the proposed buildings on site.	N/A	N/A	N/A	N/A
Composite Wood Board Walk & Plantings	Composite wood board walk and plantings are proposed between Buildings B and C on site.	N/A	N/A	N/A	N/A
Parking Spaces	The project proposes a total of 241 parking spaces. 23 of the parking spaces would be handicapped accessible and 26 would be electric vehicle spaces.	N/A	N/A	N/A	N/A
New Transformers	The project proposes a new transformer to be located outside the southeast corner of Building A, a new transformer to be located east of Building B-2 and a new transformer to be located south of Building C.	N/A	N/A	N/A	N/A
Existing	**Proposed Uses/Features**	**Area (square feet)**		**No. of Stories**	**Approximate Building Height**
Existing Barn	Existing barn to be relocated (not a part of the proposed project)	1,500		1	20 feet[1]
Oak Tree	The project proposes the preservation of an existing old oak tree on site.	N/A	N/A	N/A	N/A

Source: RRM Design Group, Project Plans dated November 1, 2021 and project description from the Applicant.

[1] Approximately 20 feet tall at the center at the ridge and tapering to only about eight feet tall on the sides.

N/A = Not Applicable

Table 3.3-2 below shows the anticipated range in population for the proposed project.

Table 3.3-2
ESTIMATED RANGE IN PROJECT POPULATION

Unit Size	Total Number of Bedrooms	Range of Persons based on unit size (minimum-maximum)[1]	Estimated Population Range (minimum to maximum)
One-bedroom	95	1-3 people	95-285
Two-bedroom	70	2-5 people	140-350
Three-bedroom	35	3-7 people	105-245
Total	**200**	--	**340-880 persons**

Source: UltraSystems, 2021
Notes: [1] The minimum and maximum number of persons per unit is per email correspondence between Margaret Partridge, UltraSystems and Cynthia Mejia of National Community Renaissance on March 8, 2021.

3.4 Proposed Project Features

3.4.1 New Residential Buildings

The proposed project includes the development of four residential buildings with a total of 200 units. Building A to be located near the northwest corner of the project site, would be a four-story rectangular building. Buildings B-1 and B-2 proposed near the southwest corner of the project site, would be four-stories. Building C proposed near the northeast corner of the project site, would be a four-story rectangular building. **Figure 3.4-1** shows conceptual views of the project buildings. The character and scale of surrounding neighborhood were carefully considered to ensure that the project architecture and massing blends in with the existing surrounding uses. The project proposes a gross building area of over 230,000 square feet of new residential buildings.

- Building A is designed for multi-family housing and would include a total of 42 units, comprised of eight one-bedroom units, 23 two-bedroom units, and 11 three-bedroom units.

- Building B-1 is designed for multi-family housing and would include a total of 20 units comprised of twelve one-bedroom units, and eight three-bedroom units.

- Building B-2 is designed for multi-family housing and would include a total of 57 units comprised of three one-bedroom units, thirty-eight two-bedroom units (including one two-bedroom manager's unit) and sixteen three-bedroom units. The multi-family housing in buildings A, B-1 and B-2 would be for households earning less than 60 percent of the Area Median Income (AMI).

- Building C is designed for senior housing and would include a total of 81 units comprised of 72 one-bedroom units, eight two-bedroom units, and one two-bedroom manager unit. The 80 senior units would be for people age 62 and above, and earning less than 60 percent of the AMI.

The project proposes an architectural style to complement the surrounding neighborhood. The project architecture includes both wall and roof plane articulation and would carry the design elements to each elevation, including the inner portions of the site and all detached structures, such as trash enclosures. The tallest of the proposed buildings is Building C, at approximately 54 feet 0 inches high.

Figure 3.4-1
CONCEPT VIEWS

Concept View From Northwest Corner, Building C

Concept View From Adams Ave & (N) Paseo

Disclaimer: Illustration provided by the RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, November 1, 2021.

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Concept Views

Once occupied with residents, the development will be staffed by two full time onsite property managers, one for the multifamily housing and one for the senior housing on site. Two or three additional property management personnel may be onsite throughout the week to assist with resident services and maintenance.

3.4.2 Maintenance Building

An approximately 266-square-foot maintenance building is proposed at the southwest corner of the project site.

3.4.3 Trash Enclosures

The project proposes a total of five trash enclosures on site.

3.4.4 Community Room, Senior Center and Boys and Girls Club

A community room and Boys and Girls Club are both proposed on the first floor of Building B. The Boys and Girls Club would be open to children residing onsite as well as children from the surrounding neighborhood, as capacity allows.

3.4.5 Onsite Amenities for Residents

The project includes several different amenities on site for residents, including: bicycle parking, an outdoor pool, children's playground/tot lot, a community garden, a half basketball court, outdoor fitness stations and conversation area, a pet-friendly green space, and a BBQ area with tables.

3.4.6 New Transformers

The project proposes three transformers: one located outside the southeast corner of Building A, one located east of Building B and one located south of Building C.

3.4.7 Landscaping

The site plan includes several landscaped areas. Included are a community garden, a play area, a basketball court, an outdoor kitchen and an outdoor fitness area. Landscaped areas would surround each of the three buildings and extend along the southern and western perimeter of the site and part of the northern perimeter; in addition to landscaped areas in the parking lots. Composite wood board walk and plantings are proposed between buildings A and C on site. **Figure 3.4-2** shows the landscaping envisioned for the proposed project.

3.4.8 Fire Lanes/Paseo

The project proposes a joint fire lane/paseo along the northern and eastern boundaries of the project site. The proposed paseo has been designed to connect to future offsite paseos near the southeast corner of the project site.

Three additional fire lanes are proposed on site, one south of building A, one west of building C and one along the southern boundary of the project site.

Figure 3.4-2
LANDSCAPE PLAN

TREE LEGEND

SYMBOL	SPECIES
	EVERGREEN STREET TREE
	EVERGREEN SHADE TREE
	EVERGREEN CANOPY TREE
	EVERGREEN COLUMNAR TREE
	SMALL ACCENT TREE
	DECIDUOUS FLOWERING TREE
	PALM TREE
	FLOWERING ENTRY TREE
	ACCENT TREE

LANDSCAPE NOTES

1. HARDY, LOW-GROWING GROUNDCOVER PROVIDED UNDER CAR OVERHANGS AND NOT COUNTED IN TOTAL LANDSCAPE AREA.
2. PLANT SPECIES SELECTED TO NOT REQUIRE TRIMMING UNLESS NOTED OTHERWISE TO PROVIDE A CLIPPED HEDGE.
3. PLANT SPECIES SELECTED FOR VARIETY OF TEXTURE, COLOR, AND CHARACTER TO AVOID THE APPEARANCE OF A "MONOCULTURE".
4. POOL ENCLOSURE SHALL BE 5' HIGH NON-CLIMBABLE COMBINATION OF FENCING AND WALLS WITH SELF-CLOSING, SELF-LATCHING GATES AND WILL SATISFY THE SWIMMING POOL SAFETY ACT REQUIREMENTS.
5. LANDSCAPE BULBS AND ENHANCED PAVING PROVIDED IN PEDESTRIAN WALKWAY ACROSS PARKING AREAS TO CONTRIBUTE TO "LANDSCAPE PLAZA" FEELING.
6. HARDSCAPE PATTERN TIES INTO ADJACENT PASEO CONNECTION.
7. PLANT MATERIAL WITHIN LINE OF SIGHT LESS THAN 30" HIGH.
8. THE PROPOSED PLANT LIST FOR THE IMPACTED AREAS FOR FIRE ARE ALL NON-WOODY LOW SHRUBS OR GRASSES.

LANDSCAPE PLAN KEY

1. CONCRETE PAVING
2. 6' WIDE CONCRETE WALK
3. BASKETBALL COURT
4. (E) OAK TREE
5. SIGHT TRIANGLE
6. BENCH
7. TABLE AND CHAIRS
8. CHAISE LOUNGES
9. LOUNGE FURNITURE
10. PLAY EQUIPMENT
11. LAWN PANEL
12. BIKE RACK
13. POOL
14. OUTDOOR KITCHEN
15. TRELLIS
16. INTEGRAL COLORED CONCRETE
17. OUTDOOR FITNESS STATION
18. LANDSCAPE BERM
19. COMMUNITY GARDEN
20. 2' WIDE PLANT AREA SCREENING AROUND TRASH ENCLOSURE
21. ENHANCED PLANTING AND BANDING OF ACCENT PAVING

NORTH

Disclaimer: Illustration provided by the RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Not to Scale

Source: RRM Design Group, October 28, 2021.

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Adams Avenue Affordable Housing
Multi-Family Development

Landscape Plan

3.4.9 Site Access, Circulation and Parking

Driveways

Two entry points to the site are proposed, comprised of two driveways off Adams Avenue.

Parking

The project proposes 241 parking spaces, including 23 handicapped accessible spaces and 26 electric vehicle spaces

3.4.10 Exterior Lighting

The project proposes area lighting throughout the project site. Lighting for the project would comply with the requirements of the City's Municipal Code. Specifically, the project would be required to comply with City of Murrieta Municipal Code § 16.18.100, resulting in light being reflected away from the public right-of-way and from adjacent residential properties. Murrieta Municipal Code Section 16.18.110 also sets forth regulations on outdoor lighting to limit interference with astronomical research at the Mount Palomar Observatory in northwest San Diego County.

3.4.11 Project Entry Signage

The project proposes signage at the southernmost project driveway.

4.14.1 Perimeter Fencing and Exterior Walls

The existing wall along the northern property line would remain. A retaining wall with a 5-foot maximum retaining height is proposed along a portion of the southern property boundary.

3.4.12 Utilities

The project would require a sewer, domestic water, fire water, irrigation and dry utilities connections to existing utility infrastructure in Adams Avenue and Ivy Street.

Sanitary Sewer - The project area is served by an existing sanitary sewer network. The nearest sewer main to the project site is a 12-inch vitrified clay pipe sewer in Ivy Street (WMWD, 2021). The project proposes new manholes and laterals to the existing sewer main in Ivy Street (**Appendix A**). These improvements would require trenching and exposing sewer lines for connections to existing mainlines and/or manholes in the public right-of-way.

Domestic Water - New domestic water meters would be installed as required to meet project demands in compliance with the requirements of the city's Public Works Department. Water would be provided by Western Municipal Water District, which serves part of the city of Murrieta. Construction would need to occur in the public right-of-way during installation of domestic water laterals from the street to the project site. Water would be connected to main lines on Adams Avenue.

Fire Water - The project proposes construction of new fire water lines from the street to the project site.

Dry Utilities -Southern California Edison would provide electricity to the project site. New electrical utilities will be undergrounded. Construction would need to occur in the public right of way during installation of a new utility connections to the project site.

Stormwater - Stormwater runoff would be collected by downspouts and area drains and discharged to the existing drainage system. As depicted on Sheet C-3 of **Appendix A,** the project proposes a storm drain cleanout in Adams Avenue as well as a private storm drain connection to the existing public curb inlet.

Trash Service - Trash service would be provided by Waste Management, which has a contract with the City of Murrieta to provide an array of trash, recycling and special waste handling services to residents and businesses (Murrieta Residential Services, 2021).

Cable Television - It is anticipated that new cable television connections would be needed to serve the project. Dish, DIRECTV, Spectrum, and Mediacom provide television service to the City of Murrieta (Cabletv.com, 2021).

3.5 Offsite Improvements

The project proposes the following offsite improvements:

- two proposed driveway aprons;
- replaced sidewalk, curb, and gutter;
- two-bench seating area;
- water, sewer, and storm drain utility connections; and
- upsizing of the public water main.

The project proposed to upsize the water line along Adams Avenue by removing the existing 6-inch water pipeline and replacing it with a 16-inch water pipe in the same trench, for approximately 700 linear feet. Construction would need to occur in Adams Avenue and Ivy Street to connect the utility lines for the proposed project to the existing main lines. All offsite utility construction would be conducted during Phase I of the project.

3.6 Construction Activities

For safety reasons, temporary barricades would be used to limit access to the site during project construction and maintain safe access for construction workers. Construction would occur during daylight and during regular business hours. Lighting for the construction site would be limited to the minimum amount of light needed for safety and security.

Site grading would involve raw cut of 6,930 cubic yards (cy); raw fill of 5,830 cy; and net export of approximately 1,100 cy of soil. After site preparation is completed, infrastructure such as sewer laterals and storm drains would be installed and/or connected to existing facilities. The building foundations would be poured and framing of the buildings would begin. The final steps of construction would involve interior furnishings, detail work, and completion of common areas and outside landscaping. The only offsite improvements would be installation of utility laterals and connections of laterals to mains. The construction contractor would use heavy equipment during grading; estimated numbers and types of equipment per construction phase are identified below in **Table 3.0-1**. Construction staging would be limited to the project site; no offsite areas would be used.

Construction Employees

Project construction workers would park their vehicles on the project site. Below is the anticipated number of construction employees by construction phase:

- **Grading:**
  - Phase I: 8-10 employees
  - Phase II: 6-8 employees

- **Offsite Phase:**
  - Phase I: 10-12 employees
  - Phase II: none

- **Vertical / Sitework Phase:**
  - Phase 1: 75 employees
  - Phase II: 65 employees

Construction Schedule and Equipment

Construction would occur in two phases and is broken down into different parts, as detailed in **Table 3.6-1** below. Project construction could start as early as the first quarter (Q1) of 2023 and project completion is anticipated for the third quarter (Q3) of 2025. Phase I would be construction of the family units, which is estimated to take approximately 20 months and involves construction of 2 buildings with 119 total units. Phase II would be construction of the senior units, which is estimated to take approximately 14 months and involves construction of one building with 81 units.

Table 3.6-1
CONSTRUCTION PHASING AND EQUIPMENT DETAILS

Phase/Months	Number of pieces of equipment	Equipment	Number of working days
Phase I			
Grading Phase: **3-4 months**	4	Scrapers	50 working days
	1	Blade	5 working days
	1	Loader	10 working days
	• +/- 60 truckloads of export- 14 yds per truck • 1 working day of trucking, Assuming 60 loads per day		
Offsite Phase: **2-3 months**	2	Backhoes/excavators	40 working days
	2	Loaders	40 working days
Vertical/Site Work Phase: **14-16 months**	2	Large forklift (Pettibone)	120 working days
	2	Bobcat (skid-steer)/ mini excavator	45 working days
	1	Standard Skiploader	20 working days
Phase II			
Grading Phase:	2	Scrapers	15 working days

Phase/Months	Number of pieces of equipment	Equipment	Number of working days
Phase I			
1.5 months	1	Blade	3 working days
	1	Loader	10 working days
	• +/- 10 truckloads of export- 14 yds per truck • 1 working day of trucking, Assuming 60 loads per day		
Vertical/Site Work Phase: 12 months	2	Large forklift (Pettibone)	100 working days
	2	Bobcat (skid-steer)/ mini excavator	30 working days
	1	Standard Skiploader	10 working days

Source: Cynthia Mejia National Community Renaissance, email correspondence on March 25, 2021 (Mejia, 2021).

3.7 Discretionary Actions

The proposed project includes applications for the following discretionary approvals by the City of Murrieta:

- A Tentative Parcel Map will be required to divide the existing parcel into three parcels for financing purposes. Parcel 1 will be an approximately 1.29 acre (56,422 square feet) rectangular parcel on the northwest portion of the site fronting Adams Avenue and extending horizontally on the site. Parcel 1 will include Building A which is a family affordable phase to be financed with 4% Low Income Housing Tax Credits. Parcel 2 will be an approximately 3.19 acre (138,873 square feet) rectangular parcel also extending horizontally on the southwest portion of the site fronting Adams Avenue. Parcel 2 will contain Buildings B1 and B2, which is also a family affordable phase to be financed with 9% Low Income Housing Tax Credits. Buildings A, B1, and B2 will be constructed concurrently but financed separately. Parcel 3 will be an approximately 1.71 acre (74,323 square feet) vertically rectangular parcel adjacent to the western paseo. Parcel 3 will contain Building C which will be a senior (age 62+) affordable housing phase that will be financed separately and constructed last.

- A Development Agreement.

- Site Plan approval and building permits

3.7.1 Other Permits and Approvals

Following the Lead Agency's approval of the Initial Study/Mitigated Negative Declaration, the following permits/approvals, as shown in **Table 3.7-1,** would be required prior to construction.

Table 3.7-1
PERMITS AND APPROVALS

Agency	Permit or Approval
City of Murrieta Building & Safety Division	Site Plan review and approval and Grading and Building Permits

Agency	Permit or Approval
City of Murrieta Planning Division	Development Review Development Agreement Tentative Parcel Map
Murrieta Fire and Rescue	Building plan check and approval. Review for compliance with the current California Fire Code, current California Building Code, California Health & Safety Code and City of Murrieta Municipal Code. Plans for fire detection and alarm systems, and automatic sprinklers.
San Diego Regional Water Quality Control Board (Region 9)	Water quality permits

4.0 ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" or as a "Potentially Significant Unless Mitigation Incorporated," as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agricultural and Forest Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology / Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology / Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☒ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities/Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

Determination (To Be Completed by the Lead Agency)

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

aaron rintamaki

Signature

12/7/2021

Date

Aaron Rintamaki

Printed Name

City of Murrieta

Evaluation of Environmental Impacts

(1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors, as well as general standards (e.g., the project would not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

(2) All answers must take into account the whole action involved, including offsite as well as onsite, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

(3) Once the lead agency has determined that a particular physical impact may occur then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

(4) "Negative Declaration: Less than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to less than significant level.

(5) Earlier analyses may be use where, pursuant to the tiering, Program EIR, or other CEQA process, an affect has been adequately analyzed in an earlier EIR or negative declaration. (See Section 15063(c)(3)(D) of the CEQA Guidelines. In this case, a brief discussion should identify the following:

Earlier Analyses Used. Identify and state where the earlier analysis available for review.

Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

(6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list should be attached and other sources used or individuals contacted should be cited in the discussion.

(7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

(8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

(9) The explanation of each issue should identify:

- The significance criteria or threshold, if any, used to evaluate each question; and
- The mitigation measure identified, if any, to reduce the impact to less than significant.

4.1 Aesthetics

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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, 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 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**		

A "visual environment" includes the built environment (development patterns, buildings, parking areas, and circulation elements) and natural environment (such as hills, vegetation, rock outcroppings, drainage pathways, and soils) features. Visual quality, viewer groups and sensitivity, duration, and visual resources characterize views. Visual quality refers to the general aesthetic quality of a view, such as vividness, intactness, and unity. Viewer groups identify who is most likely to experience the view. High-sensitivity land uses include residences, schools, playgrounds, religious institutions, and passive outdoor spaces such as parks, playgrounds, and recreation areas. Duration of a view is the amount of time that a particular view can be seen by a specific viewer group. Visual resources refer to unique views, and views identified in local plans, from scenic highways, or of specific unique structures or landscape features.

a) Would the project have a substantial adverse effect on a scenic vista?

Less than Significant Impact

Scenic vistas generally include extensive panoramic views of natural features, unusual terrain, or unique urban or historic features, for which the field of view can be wide and extend into the distance, and focal views that focus on a particular object, scene or feature of interest. Scenic vistas are visible from the project site and surroundings of the Santa Ana Mountains to the west and south; Palomar Mountain to the southeast; and the San Jacinto Mountains to the east. The Santa Ana Mountains are a prominent backdrop to the city to the west and south; Palomar Mountain and the San Jacinto

Mountains are distant and views of them are blocked by buildings and trees in places. The project site is surrounded by one- and two-story commercial and residential uses to the north, west, and south, and vacant land to the east. Project development would not block views of the Santa Ana Mountains to the west, as land east of the site is vacant. Project development would not substantially block vistas of the San Jacinto Mountains to the east from west of the project site, as only limited vistas are visible above existing buildings and trees. Therefore, impacts would be less than significant.

b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact

The California Department of Transportation (Caltrans) provides information regarding officially designated or eligible state scenic highways, designated as part of the California Scenic Highway Program. The nearest designated state scenic highway to the project site is State Route 74 (SR-74) in the San Jacinto Mountains approximately 26 miles to the east (Caltrans, 2021), as shown on **Figure 4.1-1.** Due to the large distance between the project site and SR-91, construction and implementation of the project would have no impacts on state scenic highways. Therefore, the project would have no impacts on trees, rock outcroppings and historic buildings within a state scenic highway.

c) In non-urbanized areas, would the project 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 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?

Less than Significant Impact

The project site is located in an urban setting characterized by a mix of residential and commercial land uses and vacant land. Views of the existing streetscape are characterized by low height (one-story to two-story) buildings, utilities (including utility lines, poles, and street lights) and landscaping. Refer to **Table 4.1-1**, which describes the existing visual character in the vicinity of the project site. **Figure 4.1-2** includes photographs of the project vicinity.

Figure 4.1-1
STATE SCENIC HIGHWAYS

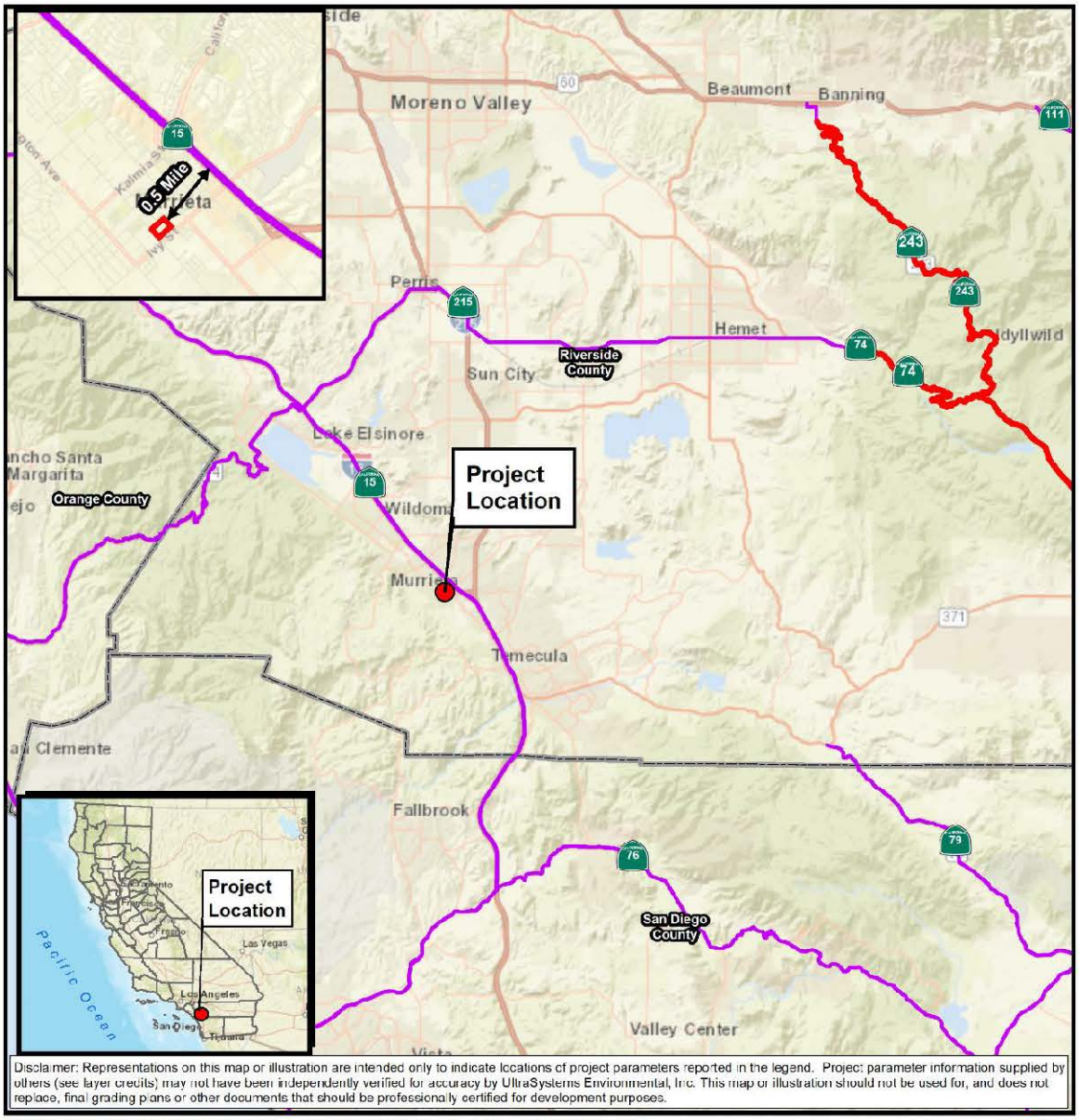

Table 4.1-1
EXISTING VISUAL CHARACTER AND LAND USES IN THE PROJECT AREA

Location	General Characteristics	Existing Lighting	Building Height and Design	Landscaping
Project Site	Undeveloped with the exception of a barn	None	One single-story barn with wooden exterior and wooden and metal roof	Grasses and a few shrubs and trees including one large oak tree just south of the barn.
Surrounding Areas				
North	Multifamily homes	Exterior lighting associated with the residential developments.	One-story to two-story buildings with sloping roofs and wooden and plastered exterior walls painted in varying colors.	Ornamental vegetation consisting of trees, grasses, and shrubs.
South	One- and two-story commercial buildings	Exterior lighting associated with the commercial developments and street lighting.	Single- to two-story buildings with tiled sloping roofs and plastered, wooden, and block exterior walls painted in varying colors.	Minimal landscaping including a few trees and ornamental vegetation.
East	Vacant land	None	Vacant land	Grasses and a few trees and shrubs
West	A mobile home park and two 1-story single-family residences and	Exterior lighting associated with the residential uses.	Two 1-story single-family residences with sloped roofs and stucco exteriors	Ornamental vegetation consisting of grasses, shrubs, and small trees

Source: UltraSystems, 2021 and Google Earth, 2021.

Figure 4.1-2
EXISTING VISUAL CHARACTER IN THE VICINITY OF THE PROJECT SITE

PHOTO 1: View from the center of the project site looking east; the barn to be removed from the site is just left of center.

PHOTO 2: View from the center of the project site looking northeast; multifamily residences opposite Jefferson Avenue are in the background.

PHOTO 3: View from the center of the project site looking north; multifamily residences northwest of the site are in the left background.

PHOTO 4: View from the southeast part of the project site looking northwest; multifamily residences northwest of the site are in the background.

Construction. Construction of the proposed project would result in views of construction activities, construction staging areas, grading, excavation, construction equipment, material storage areas, construction debris, and exposed trenches on the project site. During project construction, there would be certain elements on the project site that are not compatible with the project vicinity. These may include construction equipment, stockpiled materials, and construction-area barriers and fencing. While these elements would be removed following construction, they would nonetheless result in a temporary impact. However, during project construction, work areas would be screened from public view by temporary barriers/fencing. Project construction could temporarily degrade the existing visual character of the project area and its immediate surroundings. This impact would be short-term and thus would be less than significant.

Operation. The completed project would consist of four four-story buildings, taller than surrounding one- and two-story developments. The project proposes an architectural style to complement the surrounding neighborhood. The project architecture includes both wall and roof plane articulation and would carry the design elements to each elevation, including the inner portions of the site and all detached structures, such as trash enclosures. The maximum building height of the proposed buildings is Building C at approximately 55 feet. The buildings would have wood, stucco, and stone exteriors with sloped composite roofs. Exterior walls would be green, beige, and off-white and roof would be dark brown (RRM Design Group, 2021, p. A-10). The proposed residential project would not be out of character with the surrounding area, which consists of residential and commercial uses and vacant land, primarily single-family residences. **Figures 4.1-3** through **Figure 4.1-8** show conceptual renderings of the proposed project. The proposed project would not degrade the existing visual character of the site because new buildings would be consistent with the general character of surrounding neighborhood buildings in terms of architectural style and setbacks.

The overall site plan design and building placement would create several landscaped areas onsite. The project proposes a community garden in the south-central part the project site. **Figure 3.4-2** in **Section 3.0** depicts the landscaping envisioned for the proposed project. The project would improve an existing underutilized piece of land with affordable housing and landscaping, thereby resulting in a beneficial change to existing site conditions and would not adversely affect the existing visual character of the site and its surroundings.

Figure 4.1-3
BUILDING A ELEVATIONS

Building A - South Elevaton

Building A - East Elevation

Building A - West Elevation

Building A - North Elevation

Disclaimer: Illustration provided by the RRM Design Group, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group, November 1, 2021.

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Building A Elevations

Figure 4.1-4
BUILDING B-1 ELEVATIONS

Building B1 - North Elevation

Building B1 - South Elevation

Building B1 - East Elevation

Building B1 - West Elevation

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Building B1 Elevations

Figure 4.1-5
BUILDING B-2 ELEVATIONS

Building B2 - North Elevation

Building B2 - East Elevation

Building B2 - South Elevation

Building B2 - West Elevation

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Building B2 Elevations

Figure 4.1-6
BUILDING C ELEVATIONS

Building C - West Elevation

Building C - East Elevation

Building C - South Elevation

Building C - North Elevation

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Building C Elevations

Figure 4.1-7
CONCEPT VIEWS

Concept View From Northwest Corner, Building C

Concept View From Adams Ave & (N) Paseo

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Source: RRM Design Group, November 1, 2021.

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Concept Views

Figure 4.1-8
COLOR AND MATERIALS

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Source: RRM Design Group, November 1, 2021.

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Color and Materials

Shade and Shadow Impacts

Shadow-sensitive uses include all residential uses and routinely usable outdoor spaces associated with recreational or institutional uses, commercial uses such as pedestrian-oriented outdoor spaces or restaurants with outdoor eating areas, nurseries, and existing solar collectors. These uses are considered sensitive because sunlight is important to function, physical comfort, or commerce. Shade-sensitive uses in the project vicinity are limited to the residential uses directly north and west of the project site. However, "west" describing this project site is actually southwest due to the diagonal orientation of the site. Shadows do not extend southwest; they range from west to north to east in the summer and northwest to north to northeast in the winter. A project is considered to have a significant shadow impact if it casts shadows on shadow-sensitive uses for three hours or more during the hours of 9:00 AM to 3:00 PM on the Winter Solstice or 9:00 AM to 5:00 PM on the Summer Solstice (City of Los Angeles, 2006). Buildings A and C would each be set back approximately 38 feet from the northern site boundary.

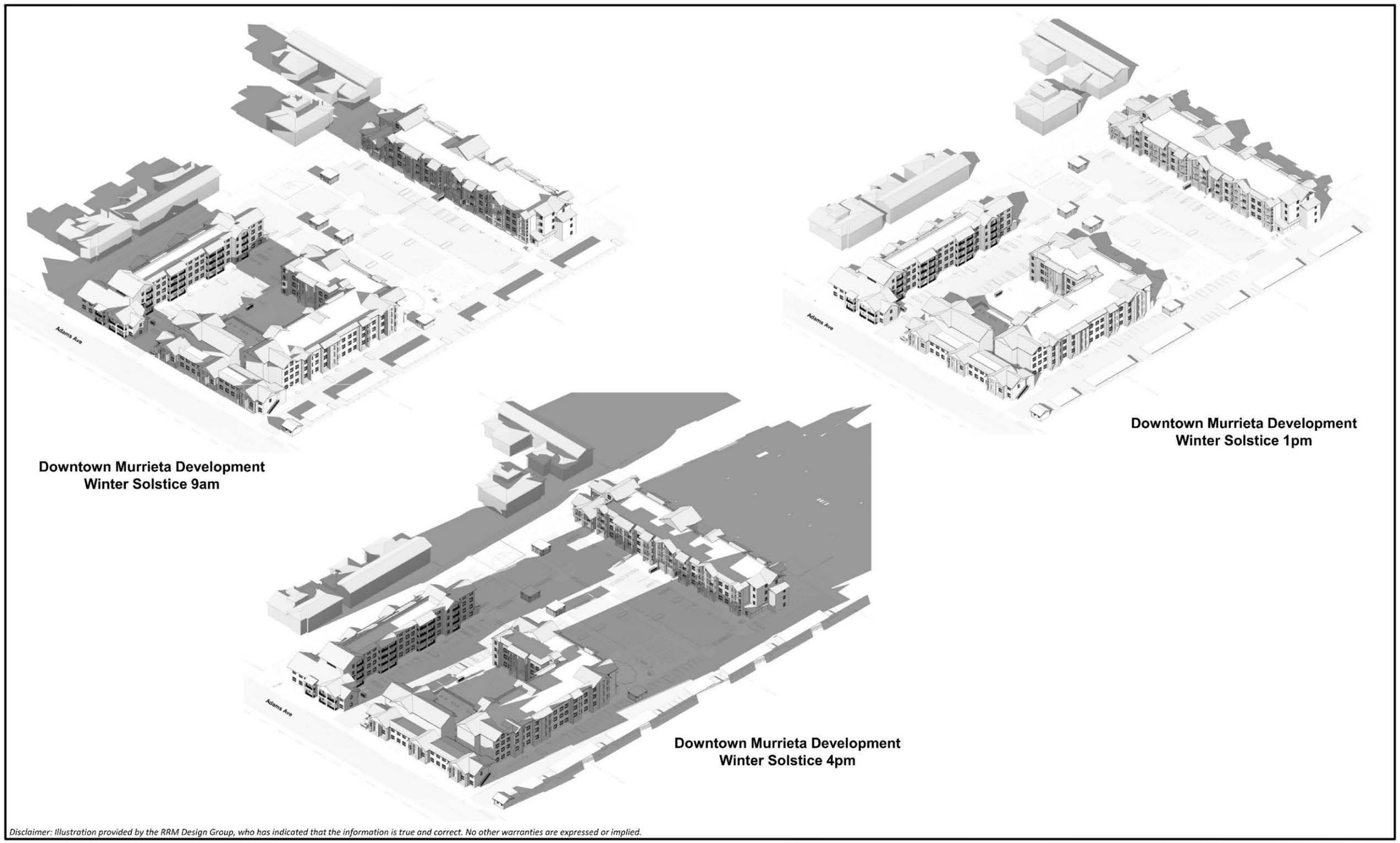
Winter Shadows

At 9 AM on the winter solstice—typically December 21st—the proposed buildings would cast shadows on parts of the multifamily residences north of the project site, and on some private landscaped area on that property (see **Figure 4.1-9**). However, the shadows would have moved off the neighboring multifamily residential property well before noon; note that by 1 p.m. shadows of the proposed buildings are very small and are oriented northeast, away from the neighboring property. As shadows would be cast on the neighboring residential property for less than three hours, impacts would be less than significant.

Summer Shadows

Shadows at the equinoxes (fall equinox, September 21st; and spring equinox, March 21st) are used for analysis of summer shadows, as shadows on the summer solstice (June 21st) are the shortest of any day of the year and thus are not useful for analyzing shadows over the three-month summer season. Shadows of the proposed buildings would not extend onto the neighboring multifamily residential property at either 9 a.m. or 1 p.m. on the equinoxes (see **Figure 4.1-10**). Thus, no shadow impact would occur during summer.

Figure 4.1-9
SHADE/SHADOW RENDERINGS, DECEMBER 21ST



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Source: RRM Design Group, November 1, 2021.

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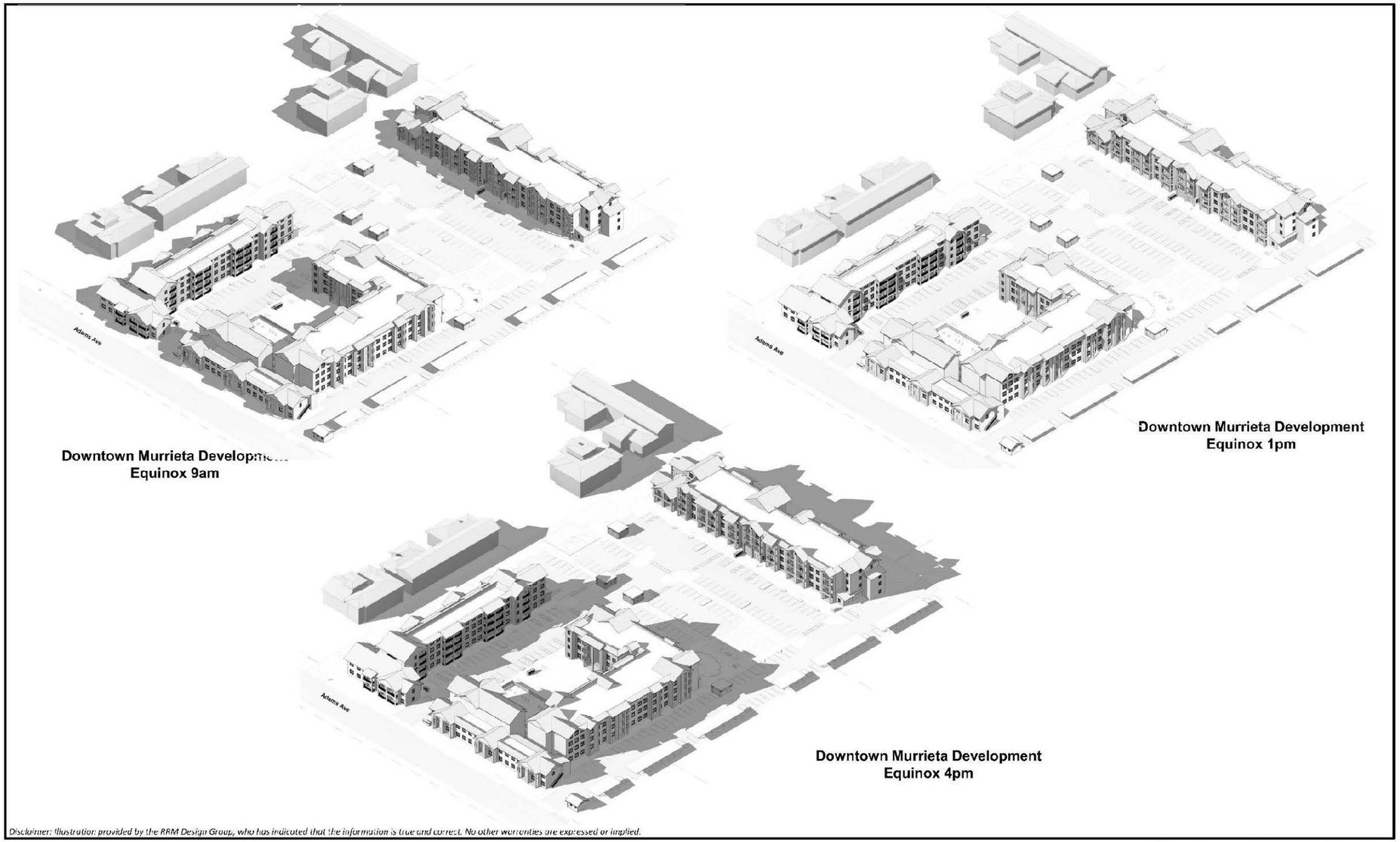
Shade/Shadow Renderings, December 21st

Figure 4.1-10
SHADE/SHADOW RENDERINGS, MARCH 21ST AND SEPTEMBER 21ST



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Source: RRM Design Group, November 1, 2021.

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Shade/Shadow Renderings, March 21st and September 21st

Further, the proposed project would adhere to the City's regulations and policies regarding aesthetics. **Table 4.1-2** details the applicable aesthetics policies from the City General Plan and how the project would adhere to them.

Table 4.1-2
PROJECT COMPLIANCE WITH APPLICABLE CITY OF MURRIETA GENERAL PLAN POLICIES REGARDING SCENIC QUALITY

General Plan Element	Project Compliance
Conservation Element: GOAL CSV-9 A community that promotes the growth of an urban forest and water-efficient landscaping, recognizing that plants provide natural services such as habitat, storm water management, soil retention, air filtration, and cooling, and also have aesthetic and economic value.	
Policy CSV-9.1 Identify and protect native trees, trees of historic or cultural significance, and mature trees, consistent with the Tree Preservation Ordinance.	The one large oak tree onsite would be retained and incorporated into the project. Therefore, the project would not conflict with this policy.

Source: (UltraSystems, 2021).

Based on the analysis above, the project would not conflict with applicable General Plan policies governing scenic quality. Therefore, impacts would be less than significant.

d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less Than Significant Impact with Mitigation Incorporated

Construction

During project construction there would be additional sources of light that would be used to provide security lighting for the construction staging area(s) on the project site. To ensure that construction lighting would not have a significant impact on surrounding residences, mitigation measure **AES-1** is recommended to reduce potential temporary construction lighting impacts to a less than significant level.

Project construction would not generate substantial glare that would adversely affect daytime or nighttime views in the area. Construction equipment consists of low-glare materials. Construction would occur between the hours of 7:00 a.m. to 7:00 p.m., and so would not involve long durations of nighttime work. The proposed exterior building materials, such as sand color exterior plaster and stone veneer, would not be highly reflective. Construction glare impacts would be less than significant, and no mitigation is required.

Mitigation Measure

MM AES-1 During project construction the project applicant shall place construction staging areas as far away as possible from adjacent residences so as to minimize, to the maximum extent possible, any potential lighting impacts to nearby residences. The

lighting used during project construction shall consist of the minimum amount of light necessary for safety and security on the project site.

Level of Significance After Mitigation

With implementation of **MM AES-1** and given that project construction would be temporary, the proposed project would have a less than significant impact regarding temporary construction lighting and glare.

Operation

The project proposes new exterior lighting throughout the site. Installation of exterior lighting would be necessary for safety and nighttime visibility throughout the proposed residential development. The new project lighting would be visible from the surrounding area. Therefore, the project's proposed exterior lighting is expected to contribute to ambient nighttime illumination in the project vicinity. The project site is located in an urban area, which is characterized by low to medium nighttime ambient light levels. Streetlights, traffic on local streets, and exterior lighting in surrounding developments are the primary sources of light that contribute to the ambient light levels in the project area. Light-sensitive uses in the project vicinity are limited to residences.

Murrieta Municipal Code Section 16.18.100 sets forth requirements for exterior lighting, as follows:

Exterior Lighting. Exterior lighting shall be: architecturally integrated with the character of adjacent structure(s); directed downward and shielded so that glare is confined within the boundaries of the subject parcel; installed so that lights do not blink, flash, or be of unusually high intensity or brightness; appropriate in height, intensity, and scale to the uses they are serving. Outside and parking lot lighting shall not exceed 0.3 footcandles at residential property lines.

Security Lighting. Security lighting shall be provided at all entrances/exits, to structures in multi-family zoning districts and nonresidential zoning districts. The minimum illumination shall be two-foot candles at ground level in front of the entrance/exit.

Shielded Lighting. Light sources shall be shielded to direct light rays onto the subject parcel only. The light source, whether bulb or tube, shall not be visible from an adjacent property. This section does not apply to residential uses, sign illumination, traffic safety lighting, or public street lighting.

Murrieta Municipal Code Section 16.18.110 also sets forth regulations on outdoor lighting to limit interference with astronomical research at the Mount Palomar Observatory (Observatory) in northwest San Diego County. The project site is within 30 miles of the Observatory, that is, in the Dark Sky Zone established in Section 16.18.110. Outdoor light fixtures must be shielded or constructed so that light rays emitted by the fixtures are projected below the horizontal plane passing through the lowest point on the fixture from which light is emitted. Requirements for lamp sources and shielding under Section 16.18.110 are listed below in **Table 4.1-3**.

Table 4.1-3
REQUIREMENTS FOR LAMP SOURCE AND SHIELDING

Lamp Type	Palomar Lighting Zone
Class I - Color Rendition Important	
Low Pressure Sodium	Allowed
Others above 4050 Lumens	Allowed if fully shielded
Others 4050 Lumens and below	Allowed
Class II - Parking Lots, Walkways, Security	
Low Pressure Sodium	Allowed
Others above 4050 Lumens	Prohibited
Others 4050 Lumens and below	Allowed
Class III - Decorative	
Low Pressure Sodium	Allowed
Others above 4050 Lumens	Prohibited
Others 4050 Lumens and below	Allowed

Source: American Legal Publishing Corporation. 2021. Murrieta Municipal Code.

Exterior lighting installed by the project would comply with requirements for lamp type, shielding, regarding light trespass set forth in Municipal Code Sections 16.18.100 and 16.18.110. According to the Institution of Lighting Engineers (ILE, 2005), now called the Institution of Lighting Professionals, and the Electric Power Research Institute (EPRI, 2000), light trespass[5] varies according to surrounding environmental characteristics. Areas that are more rural in character, and therefore have few existing artificial sources of light, are more susceptible to impacts resulting from the installation of new artificial lighting sources. In contrast, urbanized areas are characterized by a large number of existing artificial lighting sources and are thus less susceptible to adverse effects associated with new artificial lighting sources. To determine appropriate lighting standards that represent the existing lighting conditions, land uses are typically categorized into one of four environmental zones, as depicted in **Table 4.1-4** below. The project site and surrounding area can be characterized as an area of medium ambient brightness (E3 environmental zone). Based on these environmental zones, the ILE and EPRI have established recommendations for limiting light trespass onto adjacent properties. The recommendations established by the ILE are summarized in **Table 4.1-4** below.

Table 4.1-4
OBTRUSIVE LIGHT LIMITATIONS FOR EXTERIOR LIGHTING INSTALLATIONS

Environmental Zone	Light Trespass Illuminance			
	Pre-Curfew (Dusk – 11:00 p.m.)		Post Curfew (11:00 p.m. – 7:00 a.m.)	
ILE				
E1	2 lx	0.2 fc	1 lx	0.1 fc
E2	5 lx	0.5 fc	1 lx	0.1 fc
E3	**10 lx**	**0.9 fc**	**2 lx**	**0.2 fc**

[5] Light trespass (also known as obtrusive light or spill light) is the condition where poorly shielded or poorly aimed light fixtures cast light onto areas where it is unwanted or not needed.

Environmental Zone	Light Trespass Illuminance			
	Pre-Curfew (Dusk – 11:00 p.m.)		Post Curfew (11:00 p.m. – 7:00 a.m.)	
E4	25 lx	2.3 fc	5 lx	0.5 fc
EPRI				
E1	1 lx	0.1 fc	1 lx	0.1 fc
E2	3 lx	0.3 fc	1 lx	0.1 fc
E3	**9 lx**	**0.8 fc**	**3 lx**	**0.3 fc**
E4	16 lx	1.5 fc	7 lx	0.6 fc

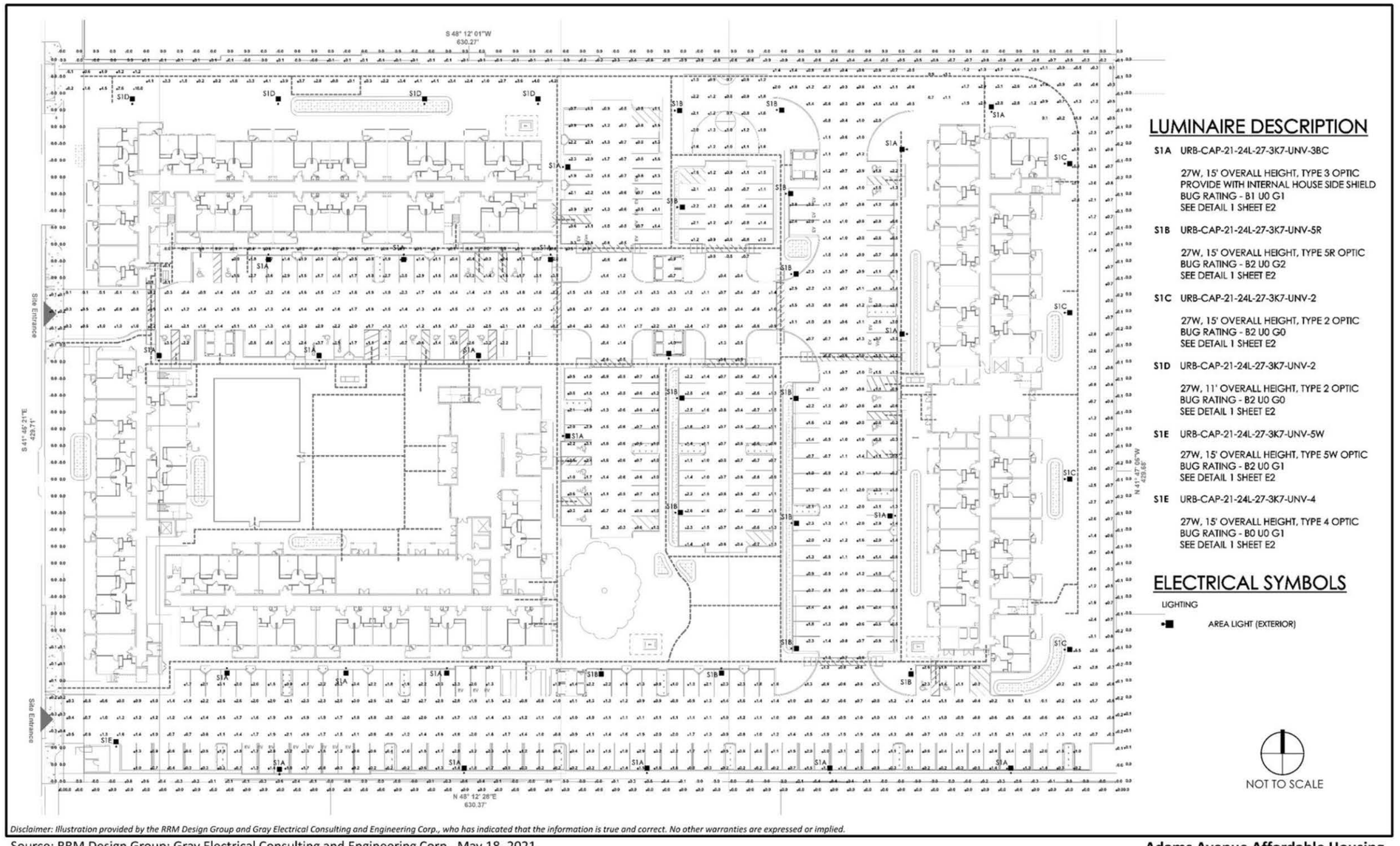
E1: natural surroundings, dark lighting conditions
E2: rural surroundings, low lighting conditions
E3: suburban surroundings, medium lighting conditions
E4: urban surroundings, high lighting conditions
lx = lux fc = foot-candles
Source: Adopted from ILE (2003) and EPRI (2000).

Curfew hours listed in the table are from the Institution of Lighting Engineers, Guidance Notes for the Reduction of Obtrusive Light, 2005 (ILE, 2005, p. 5), which states, "Curfew = the time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of use of lighting applied by the local planning authority. If not otherwise stated - 23.00 hrs [11:00 p.m.] is suggested." In the project area, light trespass impacts would be considered potentially significant if illuminance[6] produced by the project would impact sensitive receptors with lighting levels that exceed 0.8 foot-candles during pre-curfew hours (dusk to 11:00 p.m.) and 0.3 foot-candles during the post curfew hours (11:00 p.m. to 7:00 a.m.), as measured on the vertical and horizontal planes.[7] The project proposes new exterior lighting throughout the site, including area lighting and wall mounted lighting. Refer to **Figure 4.1-11**, which depicts the location and type of parking lot and walkway lighting proposed onsite. As shown in the figure below, the area lighting would be along the perimeter of the project site, within the parking lots, and in some of the proposed walkways and landscaped areas.

Maximum estimated light levels outside the project site property lines are 0.3 footcandles on the west; 0.8 on the south; and 0.2 on the east; (see **Figure 4.1-11**). Maximum estimated light levels on the north project site property line with the multifamily uses to the north are 0.9 footcandles (CEGE, 2021). Light trespass onto the multifamily residential property to the north would not reach the residential buildings. Light would fall on narrow side yards between the buildings and the property line. Thus, light trespass impacts on the multifamily uses to the north would be less than significant. The west project site property line is on the Adams Avenue right-of-way and not a residential property. Given the urban and built-up nature of the project's surroundings and that the project is in an area with existing nighttime lighting, the proposed project would have a less than significant impact regarding new sources of light.

6 Measured in foot-candles, illuminance is the intensity of light falling on a surface.
7 A full moonlit night in rural areas with negligible ambient light would equal approximately 0.02-0.03 foot-candle, while a typical 30-foot tall streetlamp would have an illumination of 1.3 foot-candles at a distance of 10 feet (NLPIP, 2007).

Figure 4.1-11
SITE PHOTOMETRIC PLAN



Disclaimer: Illustration provided by the RRM Design Group and Gray Electrical Consulting and Engineering Corp., who has indicated that the information is true and correct. No other warranties are expressed or implied.

Source: RRM Design Group; Gray Electrical Consulting and Engineering Corp., May 18, 2021.

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Site Plan Photometric

Headlight Impacts on Residents Opposite Adams Avenue from Project Site

Project access would be via two driveways from Adams Avenue, one in the central part of the site frontage on Adams Avenue, and one in the southern part. The driveway in the central part of the site would be opposite a single-family residence at 24923 Adams Avenue. The driveway in the southern part of the site would be opposite a landscape supply business that is not a light-sensitive land use. Vehicles exiting the project site at the driveway opposite the residence at 24923 Adams Avenue would wait at the driveway approach to Adams Avenue typically only a matter of seconds before turning onto Adams Avenue, when their headlights would no longer shine at the residence. In addition, most nighttime vehicle trips exiting the project are expected to be before 11:00 PM, that is, outside of the hours when limits on exterior lighting are strictest. Impacts would be less than significant because of the brief illumination on the residence and most traffic would be outside of the hours with greater lighting restrictions.

Sky Glow

Sky Glow is the brightening of the sky that occurs as a result of outdoor lighting fixtures emitting a portion of their light directly into the sky. The project site is within 30 miles of the Mount Palomar Observatory, which is still an important astronomical research facility. City of Murrieta Municipal Code Section 16.18.110 regulates the types, intensities, and hours of operation of outdoor lighting to minimize interference with use of the Observatory. Outdoor lighting installed and operated as part of the project would comply with Municipal Code Section 16.18.110. Sky glow impacts would be less than significant.

Glare

Glare is the objectionable brightness caused by over-illumination, as well as poorly shielded or poorly aimed light fixtures. The proposed project would introduce new outdoor artificial lighting elements, which have the potential to result in glare if the main beams of proposed lighting elements (i.e., the portion of the lamp with the greatest illuminance) are visible from offsite locations, resulting in excessive, uncontrolled brightness. However, the project would comply with the requirements of the City's Municipal Code Section 16.18.100, Lighting, which requires that exterior lighting be directed downward and shielded so that glare is confined within the boundaries of the subject parcel; installed so that lights not blink, flash, or be of unusually high intensity or brightness; and be appropriate in height, intensity, and scale to the uses they are serving. Outside and parking lot lighting shall not exceed 0.3 footcandles at residential property lines. Adherence to applicable municipal codes would ensure that new sources of light or glare would not adversely affect day or nighttime views in the area. Additionally, as detailed in **Figure 4.1-8**, the project would utilize light-colored building materials such as sand color exterior plaster and stone veneer with no use of highly reflective building materials. Therefore, impacts from new sources of substantial light or glare would be less than significant.

4.2 Agriculture and Forestry Resources

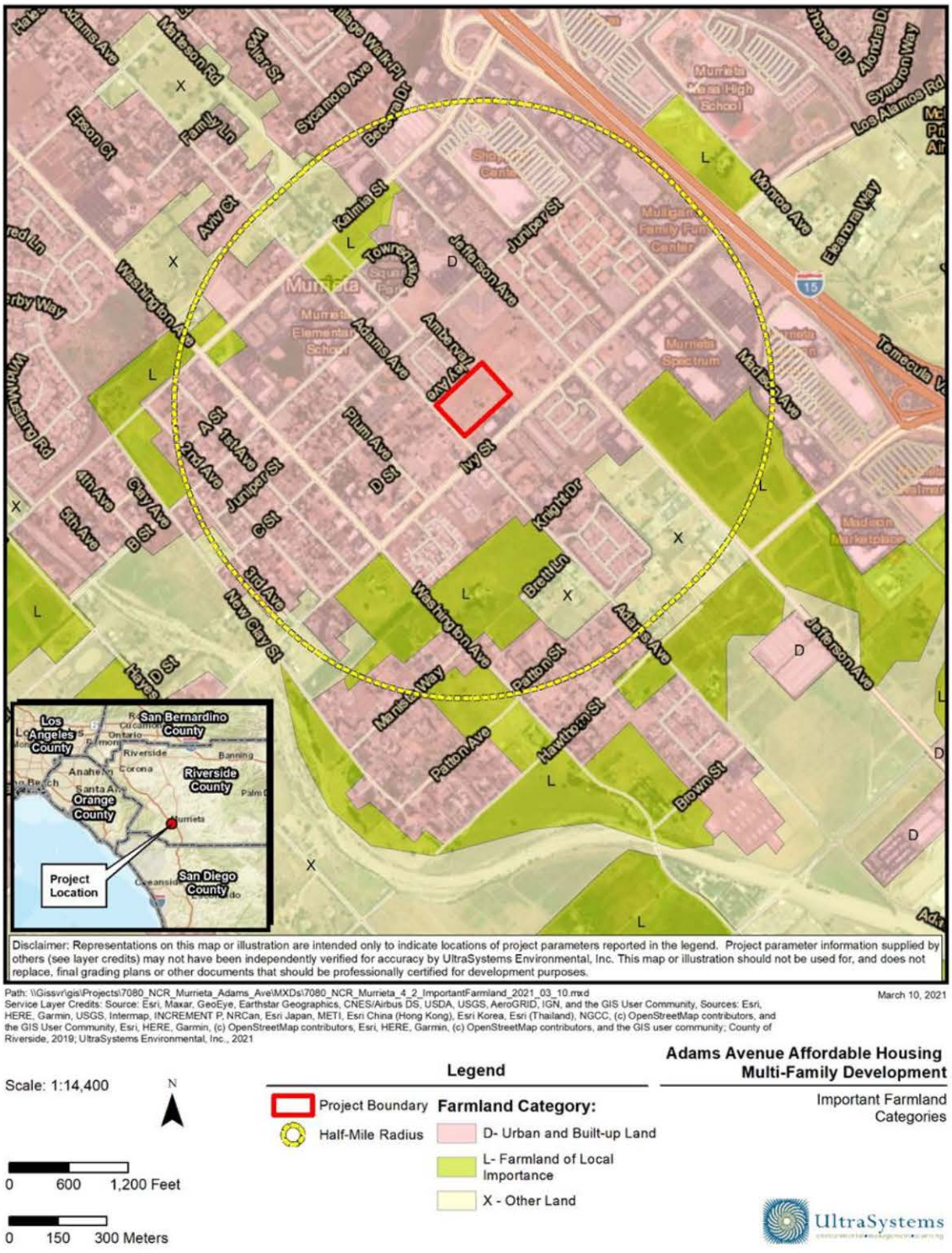
Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping 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**
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Codes § 4526), or timberland zoned Timberland Production (as defined by Government Code § 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**

a) Would the project 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?

No Impact

The California Department of Conservation (DOC) established the Farmland Mapping and Monitoring Program (FMMP) in 1982 to identify critical agricultural lands and track the conversion of these lands to other uses. The FMMP is a non-regulatory program and provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. As depicted in **Figure 4.2-1** below, the project site and surrounding uses are designated by the FMMP as "Urban and Built-Up Land," which means that no agricultural uses were mapped onsite (DOC, 2016). The project is located within an urban area, and construction activities and onsite improvements would occur within the project site. Vacant land directly to the north of the project site is slated for development as well. Therefore, no farmland would be converted to non-agricultural use and no impacts would occur.

Figure 4.2-1
IMPORTANT FARMLAND CATEGORIES



b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impact

The project site is zoned Specific Plan and is within the Downtown Murrieta Specific Plan (DMSP) area. The project site is designated for Multi-Family Residential use under the DMSP and is not zoned for agricultural use. Williamson Act contracts are made only on land within agricultural reserves; the project site is not within an agricultural reserve. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act contract and no impact would occur.

c) Would the project (c) conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code § 12220(g)), timberland (as defined by Public Resources Codes § 4526), or timberland zoned Timberland Production (as defined by Government Code § 51104(g))?

No Impact

The project site is located in an urbanized setting. The site's existing zoning of Specific Plan does not support the definitions provided by PRC § 42526 for timberland, PRC § 12220(g) for forestland, or California Government Code § 51104(g) for timberland zoned for production. PRC § 12220(g) defines forest land as "land that can support 10 percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Therefore, the proposed project would not conflict with zoning for forest land or timberland, and no impact would occur.

d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?

No Impact

The project site and surrounding land uses do not contain forest land. Therefore, project implementation would not result in the loss of forest land or conversion of forest land to non-forest use, and no impact would occur.

e) Would the project 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?

No Impact

The project site is a developed property located in an urbanized setting. Residential and commercial uses are located in the immediate vicinity of the project site. No existing farmland or forest land is located in the vicinity of the project. Therefore, implementation of the project would not result in changes to the environment, due to its location or nature, which could result in the conversion of farmland to non-agricultural use or conversion of forest land to non-forest use, and no impacts would occur.

4.3 Air Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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 pollutant for which the project region is nonattainment 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**	

4.3.1 Pollutants of Concern

Criteria pollutants are air pollutants for which acceptable levels of exposure can be determined and an ambient air quality standard has been established by the U.S. Environmental Protection Agency (USEPA) and/or the California Air Resources Board (ARB). The criteria air pollutants of concern are nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2), lead (Pb), and ozone, and their precursors, such as reactive organic gases (ROG) (which are ozone precursors). Since the Adams Avenue Affordable Housing Multi-Family Development (Adams Avenue Project or project) would not generate appreciable SO_2 or Pb emissions,[8] it is not necessary for the analysis to include those two pollutants. Presented below is a description of the air pollutants of concern and their known health effects.

The project is in the western Riverside County portion of the South Coast Air Basin (SCAB), for whose air pollution control the South Coast Air Quality Management District (SCAQMD) is substantially responsible. **Table 4.3-1** shows the attainment status of the SCAB for each criteria pollutant for both the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). Presented below is a description of the air pollutants of concern and their known health effects.

Nitrogen oxides (NO_X) serve as integral participants in the process of photochemical smog production and are precursors for certain particulate compounds that are formed in the atmosphere and for ozone. A precursor is a directly emitted air contaminant that, when released into the atmosphere, forms, causes to be formed, or contributes to the formation of a secondary air

8 Sulfur dioxide emissions will be below 0.09 pound per day during construction and operations.

contaminant for which an ambient air quality standard (AAQS) has been adopted, or whose presence in the atmosphere will contribute to the violation of one or more AAQSs. When NO_X and ROG are released in the atmosphere, they can chemically react with one another in the presence of sunlight to form ozone. The two major forms of NO_X are nitric oxide (NO) and NO_2. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. NO_2 is a reddish-brown pungent gas formed by the combination of NO and oxygen. NO_2 acts as an acute respiratory irritant and eye irritant and increases susceptibility to respiratory pathogens (USEPA, 2011).

Table 4.3-1
FEDERAL AND STATE ATTAINMENT STATUS

Pollutants	Federal Classification	State Classification
Ozone (O_3)	Nonattainment (Extreme)	Nonattainment
Particulate Matter (PM_{10})	Maintenance (Serious)	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment (Moderate)	Nonattainment
Carbon Monoxide (CO)	Maintenance (Serious)	Attainment
Nitrogen Dioxide (NO_2)	Maintenance	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Sulfates	No Federal Standards	Attainment
Lead (Pb)		Attainment
Hydrogen Sulfide (H_2S)		Attainment
Visibility Reducing Particles		Unclassified

Sources: ARB, 2019; USEPA, 2020a, 2020b, 2020c, 2020d, 2020e.

Carbon monoxide (CO) is a colorless, odorless non-reactive pollutant produced by incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas, such as the project location, automobile exhaust accounts for most CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly; therefore, ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions; primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February. The highest levels of CO typically occur during the colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions. High concentrations are lethal (USEPA, 2010).

Particulate matter (PM) consists of finely divided solids or liquids, such as soot, dust, aerosols, fumes and mists. Primary PM is emitted directly into the atmosphere from activities such as agricultural operations, industrial processes, construction and demolition activities, and

entrainment of road dust into the air. Secondary PM is formed in the atmosphere from predominantly gaseous combustion by-product precursors, such as sulfur oxides, NO_X, and ROGs.

Particle size is a critical characteristic of PM that primarily determines the location of PM deposition along the respiratory system (and associated health effects) as well as the degradation of visibility through light scattering. In the United States, federal and state agencies have focused on two types of PM. PM_{10} corresponds to the fraction of PM no greater than 10 micrometers in aerodynamic diameter and is commonly called respirable particulate matter, while $PM_{2.5}$ refers to the subset of PM_{10} of aerodynamic diameter smaller than 2.5 micrometers, which is commonly called fine particulate matter.

PM_{10} and $PM_{2.5}$ deposition in the lungs results in irritation that triggers a range of inflammation responses, such as mucus secretion and bronchoconstriction, and exacerbates pulmonary dysfunctions, such as asthma, emphysema, and chronic bronchitis. Sufficiently small particles may penetrate the bloodstream and impact functions such as blood coagulation, cardiac autonomic control, and mobilization of inflammatory cells from the bone marrow. Individuals susceptible to higher health risks from exposure to PM_{10} airborne pollution include children, the elderly, smokers, and people of all ages with low pulmonary/cardiovascular function. For these individuals, adverse health effects of PM_{10} pollution include coughing, wheezing, shortness of breath, phlegm, bronchitis, and aggravation of lung or heart disease, leading, for example, to increased risks of hospitalization and mortality from asthma attacks and heart attacks (USEPA, 2019a).

Reactive organic gases (ROG) are defined as any compound of carbon, excluding CO, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions. It should be noted that there are no state or national ambient air quality standards for ROG because ROGs are not classified as criteria pollutants. They are regulated, however, because a reduction in ROG emissions reduces certain chemical reactions that contribute to the formation of ozone. ROGs are also transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility. The term "ROG" is used by the ARB for this air quality analysis and is defined the same as the federal term "volatile organic compound" (VOC).

Ozone is a secondary pollutant produced through a series of photochemical reactions involving ROG and NO_X. Ozone creation requires ROG and NO_X to be available for approximately three hours in a stable atmosphere with strong sunlight. Because of the long reaction time, peak ozone concentrations frequently occur downwind of the sites where the precursor pollutants are emitted. Thus, ozone is considered a regional, rather than a local, pollutant. The health effects of ozone include eye and respiratory irritation, reduction of resistance to lung infection and possible aggravation of pulmonary conditions in persons with lung disease. Ozone is also damaging to vegetation and untreated rubber (USEPA, 2020f).

4.3.2 Climate/Meteorology

Air quality is affected by both the rate and location of pollutant emissions, and by meteorological conditions that influence movement and dispersal of pollutants. Atmospheric conditions such as wind speed, wind direction, and air temperature gradients, along with local topography, provide the link between air pollutant emissions and air quality.

The project site would be located wholly within the SCAB, which includes all of Orange County, as well as the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The

distinctive climate of the SCAB is determined by its terrain and geographical location. The SCAB is in a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. Thus, the climate is mild, tempered by cool sea breezes. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds (SCAQMD, 1993).

The annual average temperature varies little throughout the 6,600-square-mile SCAB, ranging from the low 60s to the high 80s. However, with a less pronounced oceanic influence, the inland portion shows greater variability in the annual minimum and maximum temperatures. The mean annual maximum and minimum temperatures in the project area—as determined from the nearest weather station in the City of Lake Elsinore (WRCC, 2021), which has a period of record from 1897 to 2016—are 80.6 degrees Fahrenheit (°F) and 47.2°F, respectively. The hottest month is June, with an average maximum temperature of 90.5°F and the coldest month is January, with an average minimum temperature of 36.4°F.

During the period of record, the average rainfall measured 12.01 inches, which occurs mostly during the winter and relatively infrequently during the summer. Monthly precipitation averages approximately 7.02 inches during the winter (December, January, and February), approximately 3.01 inches during the spring (March, April, and May), approximately 1.76 inch during the fall (September, October, and November), and approximately 0.22 inch during the summer (June, July, and August).

4.3.3 Local Air Quality

The SCAQMD has divided the SCAB into source receptor areas (SRAs), based on similar meteorological and topographical features. The project site is in SCAQMD's Temecula/Anza air monitoring area (SRA 26), and is served by the SCAQMD's Temecula – Lake Skinner station, 8.1 miles east-northeast at 33700 Borel Road in Winchester. This station monitors ozone and $PM_{2.5}$. The nearest station that monitors PM_{10} and NO_2 is Lake Elsinore on West Flint Street in Lake Elsinore, about 11.9 miles northwest of the project. All stations in the SCAB ceased monitoring CO in 2012. The ambient air quality data in the project vicinity as recorded from 2017 through 2019, along with applicable standards, are shown in **Table 4.3-2**.

Table 4.3-2
AMBIENT AIR QUALITY MONITORING DATA

Air Pollutant	Standard/Exceedance	2017	2018	2019
Ozone – Temecula	Max. 1-hour Concentration (ppm)	**0.104**	**0.107**	0.091
	Max. 8-hour Concentration (ppm)	**0.088**	**0.085**	**0.076**
	# Days > Federal 8-hour Std. of 0.070 ppm	47	15	6
	# Days > California 1-hour Std. of 0.09 ppm	4	2	0
	# Days > California 8-hour Std. of 0.070 ppm	49	18	7
PM_{10} - Lake Elsinore	Max. 24-hour Concentration (µg/m^3)	134.1	105.3	93.8
	Est. # Days > Fed. 24-hour Std. of 150 µg/m^3	0	0	0
	Federal Annual Arithmetic Mean (12 µg/m^3)	**23.6**	**23.3**	**19.7**
$PM_{2.5}$ - Temecula	Max. 24-hour Concentration (µg/m^3)	21.6	26.5	17.1
	# Days > Fed. 24-hour Std. of 35 µg/m^3	ND	ND	ND
	State Annual Average (12 µg/m^3)	10.0	7.1	7.6
NO_2 – Lake Elsinore	Max. 1-hour Concentration (ppm)	0.049	0.041	0.038
	State Annual Average (0.030 ppm)	0.008	0.008	0.006
	# Days > California 1-hour Std. of 0.18 ppm	0	0	0

Source: ARB, 2021.
ND - There was insufficient (or no) data available to determine the value.
Bold - exceedance

4.3.4 Air Quality Management Plan (AQMP)

The SCAQMD is required to produce plans to show how air quality would be improved in the region. The California Clean Air Act (CCAA) requires that these plans be updated triennially to incorporate the most recent available technical information.[9] A multi-level partnership of governmental agencies at the federal, state, regional, and local levels implement the programs contained in these plans. Agencies involved include the USEPA, ARB, local governments, Southern California Association of Governments (SCAG), and SCAQMD. The SCAQMD and the SCAG are responsible for formulating and implementing the Air Quality Management Plan (AQMP) for the SCAB. The SCAQMD updates its AQMP every three years.

The 2016 AQMP (SCAQMD, 2017b) was adopted by the SCAQMD Board on March 3, 2017, and on March 10, 2017 was submitted to the ARB (SCAQMD, 2017a) to become part of the State Implementation Plan (SIP)[10] (SCAQMD, 2017a). The AQMP was then submitted to the USEPA (ARB, 2017a). It focuses largely on reducing NO_X emissions as a means of attaining the 1979 1-hour ozone standard by 2022, the 1997 8-hour ozone standard by 2023, and the 2008 8-hour standard by 2031. The AQMP prescribes a variety of current and proposed new control measures, including a request to the USEPA for increased regulation of mobile source emissions. The NO_X control measures would also help the Basin attain the 24-hour standard for $PM_{2.5}$.

9 CCAA of 1988.
10 The State Implementation Plan (SIP) is a collection of local and regional plans, regulations, and rules for attaining ambient air quality standards. It is periodically submitted to the USEPA for approval.

4.3.5 Sensitive Receptors

Some people, such as individuals with respiratory illnesses or impaired lung function because of other illnesses, persons over 65 years of age, and children under 14, are particularly sensitive to certain pollutants. Facilities and structures where these sensitive people live or spend considerable amounts of time are known as sensitive receptors. For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain for 24 hours (Chico and Koizumi, 2008, p. 3-2). Commercial and industrial facilities are not included in the definition of sensitive receptor, because employees typically are present for shorter periods of time, such as eight hours. Therefore, applying a 24-hour standard for PM_{10} is appropriate not only because the averaging period for the state standard is 24 hours, but because the sensitive receptor would be present at the location for the full 24 hours.

The nearest sensitive receptors to the project site are single-family residences southwest of the project site, across Adams Avenue. Additionally, one school is within 0.5 mile of the project site: Murrieta Elementary School at 24725 Adams Avenue in the City of Murrieta, 0.25 mile from the project site.

4.3.6 Applicable South Coast Air Quality Management District Rules

Rule 403 (Fugitive Dust Rule)

During construction, the project would be subject to SCAQMD Rule 403 (fugitive dust). SCAQMD Rule 403 does not require a permit for construction activities, per se; rather, it sets forth general and specific requirements for all construction sites (as well as other fugitive dust sources) in the SCAB. The general requirement prohibits a person from causing or allowing emissions of fugitive dust from construction (or other fugitive dust source) such that the presence of such dust remains visible in the atmosphere beyond the property line of the emissions source. SCAQMD Rule 403 also prohibits construction activity from causing an incremental PM_{10} concentration impact, as the difference between upwind and downwind samples, at the property line of more than 50 micrograms per cubic meter as determined through PM_{10} high-volume sampling. The concentration standard and associated PM_{10} sampling do not apply if specific measures identified in the rules are implemented and appropriately documented.

Other requirements of Rule 403 include not causing or allowing emissions of fugitive dust that would remain visible beyond the property line; no track-out extending 25 feet or more in cumulative length and all track-out to be removed at conclusion of each workday; and using the applicable best available control measures included in Table 1 of Rule 403.

Rule 1113 (Architectural Coatings)

Construction of this project will include the application of architectural coatings and be subject to SCAQMD Rule 1113 (Architectural Coatings). Among other applicable entities, Rule 1113 requires who applies, stores at a worksite, or solicits the application of architectural coatings use coatings that contain VOC less than or equal to the VOC limits specified in Table 1 of the rule.

4.3.7 Impact Analysis

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less than significant Impact

The South Coast 2016 AQMP, discussed above, incorporates land use assumptions from local general plans and regional growth projections developed by the SCAG to estimate stationary and mobile air emissions associated with projected population and planned land uses. If the proposed land use is consistent with the local general plan, then the impact of the project is presumed to have been accounted for in the AQMP. This is because the land use and transportation control sections of the AQMP are based on the SCAG regional growth forecasts, which incorporate projections from local general plans. The proposed project is in compliance with the City's General Plan and Zoning designations and with the Downtown Murrieta Specific Plan.[11] Therefore, no General Plan amendment or Zone Change is required. The land use would continue to be consistent with the local plans and the impacts of the project are still accounted for in the AQMP.

Another measurement tool in evaluating consistency with the AQMP is to determine whether a project would generate population and employment growth and, if so, whether that growth would exceed the growth rates forecasted in the AQMP and how the project would accommodate the expected increase in population or employment. The project would create minimal increase in population and overall vehicle miles traveled (VMT), which would be included in the growth rates forecasted in the AQMP.

Additionally, to assist the implementation of the AQMP, projects must not create regionally significant emissions of regulated pollutants from either short-term construction or long-term operations. The SCAQMD (2019) has developed criteria in the form of emissions thresholds for determining whether emissions from a project are regionally significant. They are useful for estimating whether a project is likely to result in a violation of the NAAQS and/or whether the project is in conformity with plans to achieve attainment. SCAQMD's significance thresholds for criteria pollutant emissions during construction activities and project operation are summarized in **Table 4.3-3**. A project is considered to have a regional air quality impact if emissions from its construction and/or operational activities exceed the corresponding SCAQMD significance thresholds.

Table 4.3-3
SCAQMD THRESHOLDS OF SIGNIFICANCE

Pollutant	Construction Thresholds (lbs/day)	Operational Thresholds (lbs/day)
Volatile Organic Compounds (VOC)	75	55
Nitrogen Oxides (NO_x)	100	55
Carbon Monoxide (CO)	550	550
Sulfur Oxides (SO_x)	150	150

[11] See discussion in **Section 4.11.**

Pollutant	Construction Thresholds (lbs/day)	Operational Thresholds (lbs/day)
Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55

Note: lbs = pounds.
Source: SCAQMD, 2019.

Regional Construction Emissions

Construction activities for the project will be phased, with Phase I consisting of the 119 units of affordable housing. Phase I is anticipated to last 20 months and would begin in January 2023 and end in September 20243. Phase II would consist of 81 units of senior housing. Phase II would overlap with Phase I and is anticipated to begin in June 2024 and end in July 20254. Phase I would have five subphases and Phase II would have four subphases:

- Phase I
  - Grading.
  - Offsite improvements.
  - Building construction.
  - Paving.
  - Architectural coating.
- Phase II
  - Grading.
  - Building construction.
  - Paving.
  - Architectural coating.

Table 4.3-4 shows the project schedule used for the air quality, GHG emissions, and noise analyses.

Table 4.3-4
CONSTRUCTION SCHEDULE

Construction Phase	Start	End
Phase I Grading	January 1, 2023	April 1, 2023
Phase I Offsite Improvements	April 2, 2023	June 1, 2023
Phase I Building Construction	June 2, 2023	September 1, 2023
Phase I Paving	May 9, 2024	June1, 2024
Phase I Architectural Coating	August 8, 2024	September1, 2024
Phase II Grading	June 3, 2024	July 19, 2024
Phase II Building Construction	July 20, 2024	July 19, 2025
Phase II Paving	July 20, 2025	August 2, 2025
Phase II Architectural Coating	July 7, 2025	July 18, 2025

These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. Mobile sources (such as diesel-fueled equipment onsite and traveling to and from the project site) would primarily generate NO_X emissions. The quantity of emissions generated daily would vary, depending on the amount and types of construction activities occurring at the same time.

Estimated criteria pollutant emissions from the project's onsite and offsite project construction activities were calculated using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2 (CAPCOA, 2017). CalEEMod is a planning tool for estimating emissions related to land use projects. Model-predicted project emissions are compared with applicable thresholds to assess regional air quality impacts. Offroad construction equipment information was supplied by the client but CalEEMod defaults were used for onroad construction traffic inputs.

As shown in **Table 4.3-5**, construction emissions would not exceed SCAQMD regional thresholds. Therefore, the project's short-term regional air quality impacts would be less than significant. Refer to **Appendix B1** of this document for air quality calculations.

Table 4.3-5
MAXIMUM DAILY REGIONAL CONSTRUCTION EMISSIONS

Construction Activity	Maximum Emissions (lbs/day)				
	ROG	NO_x	CO	PM_{10}	$PM_{2.5}$
Maximum Emissions, 2023	1.6	14.5	19.4	1.5	0.7
Maximum Emissions, 2024	45.6	**17.0**	**22.9**	**1.8**	**1.0**
Maximum Emissions, 2025	**52.7**	14.6	19.0	1.4	0.8
SCAQMD Significance Thresholds	*75*	*100*	*550*	*150*	*55*
Significant? (Yes or No)	**No**	**No**	**No**	**No**	**No**

Source: Calculated by UltraSystems with CalEEMod (Version 2016.3.2) (CAPCOA, 2017).

Regional Operational Emissions

The project proposes 119 affordable and 81 age-restricted residential units (and one exempt manager's unit). Operational emissions generated by area sources, motor vehicles and energy demand would result from normal day-to-day activities of the project. Note that operational emissions were estimated with both phases in operation. Trip rates were adjusted to match data supplied by the Trip Generation Assessment Memorandum (DiPierro, 2021). The results of these calculations are presented in **Table 4.3-6**. As seen in the table, for each criteria pollutant, operational emissions would be below the pollutant's SCAQMD significance threshold. Therefore, regional operational emissions would be less than significant**.**

Table 4.3-6
MAXIMUM DAILY PROJECT OPERATIONAL EMISSIONS

Emission Source	Pollutant (lbs/day)				
	ROG	NO_X	CO	PM_{10}	$PM_{2.5}$
Area Source Emissions	4.80	0.19	16.48	0.09	0.09
Energy Source Emissions	0.09	0.75	0.32	0.06	0.06
Mobile Source Emissions	1.34	8.53	16.08	6.75	1.83
Total Operational Emissions	**6.2**	**9.5**	**32.9**	**6.9**	**2.0**
SCAQMD Significance Thresholds	*55*	*55*	*550*	*150*	*55*
Significant? (Yes or No)	**No**	**No**	**No**	**No**	**No**

Source: Calculated by UltraSystems with CalEEMod (Version 2016.3.2) (CAPCOA, 2017).

i) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact

Since the SCAB is currently in nonattainment for ozone and $PM_{2.5}$, related projects may exceed an air quality standard or contribute to an existing or projected air quality exceedance. The SCAQMD neither recommends quantified analyses of construction and/or operational emissions from multiple development projects nor provides methodologies or thresholds of significance to be used to assess the cumulative emissions generated by multiple cumulative projects. Instead, the District recommends that a project's potential contribution to cumulative impacts be assessed by utilizing the same significance criteria as those for project-specific impacts. Furthermore, the SCAQMD states that if an individual development project generates less-than-significant construction or operational emissions impacts, then the development project would not contribute to a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.

As discussed above, the mass daily construction and operational emissions generated by the project would not exceed any of the SCAQMD's significance thresholds. Also, as discussed below, localized emissions generated by the Project would not exceed the SCAQMD's Localized Significance Thresholds (LSTs). Therefore, the project would not contribute a cumulatively considerable increase in emissions for the pollutants which the SCAB is in nonattainment. Thus, cumulative air quality impacts associated with the project would be less than significant.

b) Would the project expose sensitive receptors to substantial pollutant concentrations?

Less than Significant Impact

Construction of the project would generate short-term and intermittent emissions. Following the SCAQMD's *Final Localized Significance Threshold Methodology* (Chico and Koizumi, 2008), only onsite construction emissions were considered in the localized significance analysis. The residence immediately northwest of the project site is the nearest sensitive receptor (less than 5 meters

away).[12] LSTs for projects in Source Receptor Area 6 (Temecula Valley) were obtained from tables in Appendix C of the aforementioned methodology. **Table 4.3-7** shows the results of the localized significance analysis for the project. Localized short-term air quality impacts from construction of the project would be less than significant.

Table 4.3-7
RESULTS OF UNMITIGATED LOCALIZED SIGNIFICANCE ANALYSIS

Nearest Sensitive Receptor	Maximum Onsite Construction Emissions (pounds/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum daily unmitigated emissions	14.4	19.0	0.91	0.80
SCAQMD LST for 5 acres @ 25 meters	*371*	*1,965*	*13*	*2*
Significant (Yes or No)	**No**	**No**	**No**	**No**

c) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact

A project-related significant adverse effect could occur if construction or operation of the proposed project would result in generation of odors that would be perceptible in adjacent sensitive areas. According to the SCAQMD *CEQA Air Quality Handbook (SCAQMD 1993)*, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. Potential sources that may emit odors during construction activities include equipment exhaust. Odors from these sources would be localized and generally confined to the immediate area surrounding the project. The project would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature.

The project would not create substantial objectionable odors and this impact would be less than significant.

[12] According to SCAQMD guidance, a receptor closer than 25 meters to the source may be assumed to be 25 meters away (Chico and Koizumi, 2008, p. 3-3).

4.4 Biological Resources

Would the project:	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	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, regulations or by the California Department of Fish and Game or US 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 nursery sites?			**X**	
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**		

4.4.1 Discussion of Impacts

a) Would the project 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?

Less Than Significant with Mitigation Incorporated

Plant and wildlife species listed under the federal Endangered Species Act (ESA) or under the California Endangered Species Act (CESA) are referred to collectively as "listed species" in this Section. Plant and wildlife species not listed under ESA or CESA but still protected by federal agencies, state agencies, local or regional plans such as the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), and/or nonprofit resource organizations, such as the California Native Plant Society (CNPS), are collectively referred to as "sensitive species" in this Section. The term "special-status species" is used when collectively referring to both listed and sensitive species.

Environmental Setting

The City of Murrieta is in the northern Temecula Valley in southwestern Riverside County, California. A mixture of residential, retail, commercial, and government developments, as well as vacant land, surround the project site and compose the biological study area (BSA), shown in **Figure 4.4-1**. The project site is located in a relatively-urbanized area, and provides low-value habitat for special status plant and wildlife species. The project site itself has a relatively flat topography, with the section in the southeastern part of the project site where two homes formerly stood being at a slightly higher elevation than the rest of the project site. Elevations on the project site range from 1,099 feet to 1,110 feet above mean sea level (AMSL). The project site is currently undeveloped except for an existing driveway, approximately 15 feet in width extending approximately 170 feet into the property, a historic barn, and an inactive water well. Stormwater runoff generated on the project site is discharged as sheet flow toward the west and southwest, and into a storm drain inlet installed on the property.

Habitat Assessment Survey

UltraSystems Environmental, Inc (UEI) biologists Mr. Matthew Sutton and Ms. Michelle Tollett conducted a habitat assessment survey on March 4, 2021 and Mr. Sutton completed the survey on April 5, 2021 to assess the habitats, plants and wildlife that occur within the BSA. Five land cover types occur within the BSA and they are each described later in this section where potential project impacts to sensitive plant communities are addressed see **Figure 4.4-2**. Non-native grassland dominated by barley grass and intermixed with ruderal and native forbs cover 94 percent of the project site. Several ornamental and native trees are distributed around the pads of the two former homes and the existing barn. Nine coast live oak trees occur individually and in small stands on the site. Plant and wildlife species were recorded during the habitat assessment survey and other surveys and these species lists can be viewed in an attachment of the Biological Resources Evaluation (hereafter, BRE; see Attachment G of **Appendix C1**.

A detailed analysis of the project site's biological resources and potential impacts of project construction and operation to these resources can be found in the BRE (see **Appendix C1**, produced by UEI).

Figure 4.4–1
PROJECT LOCATION AND BIOLOGICAL STUDY AREA

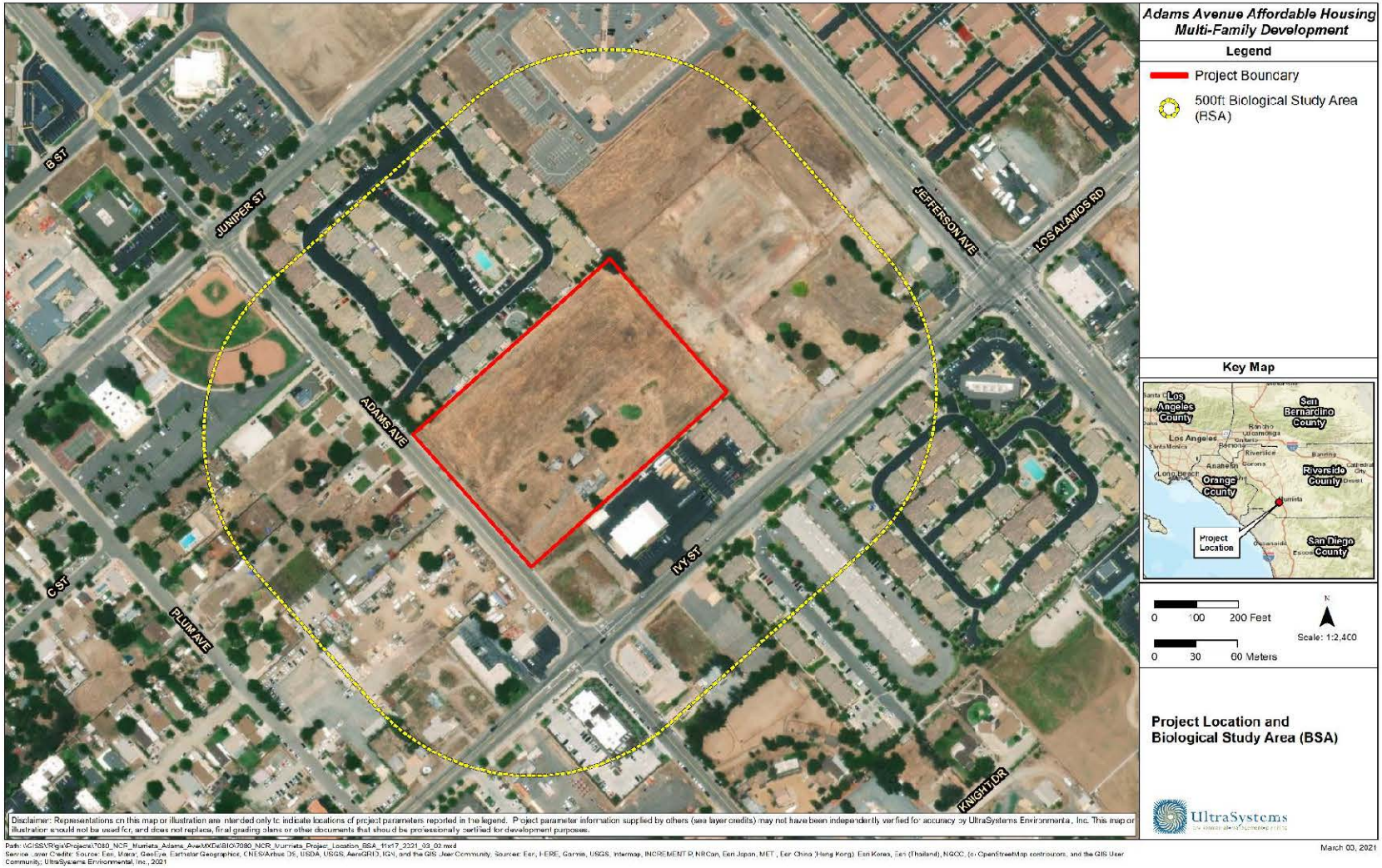
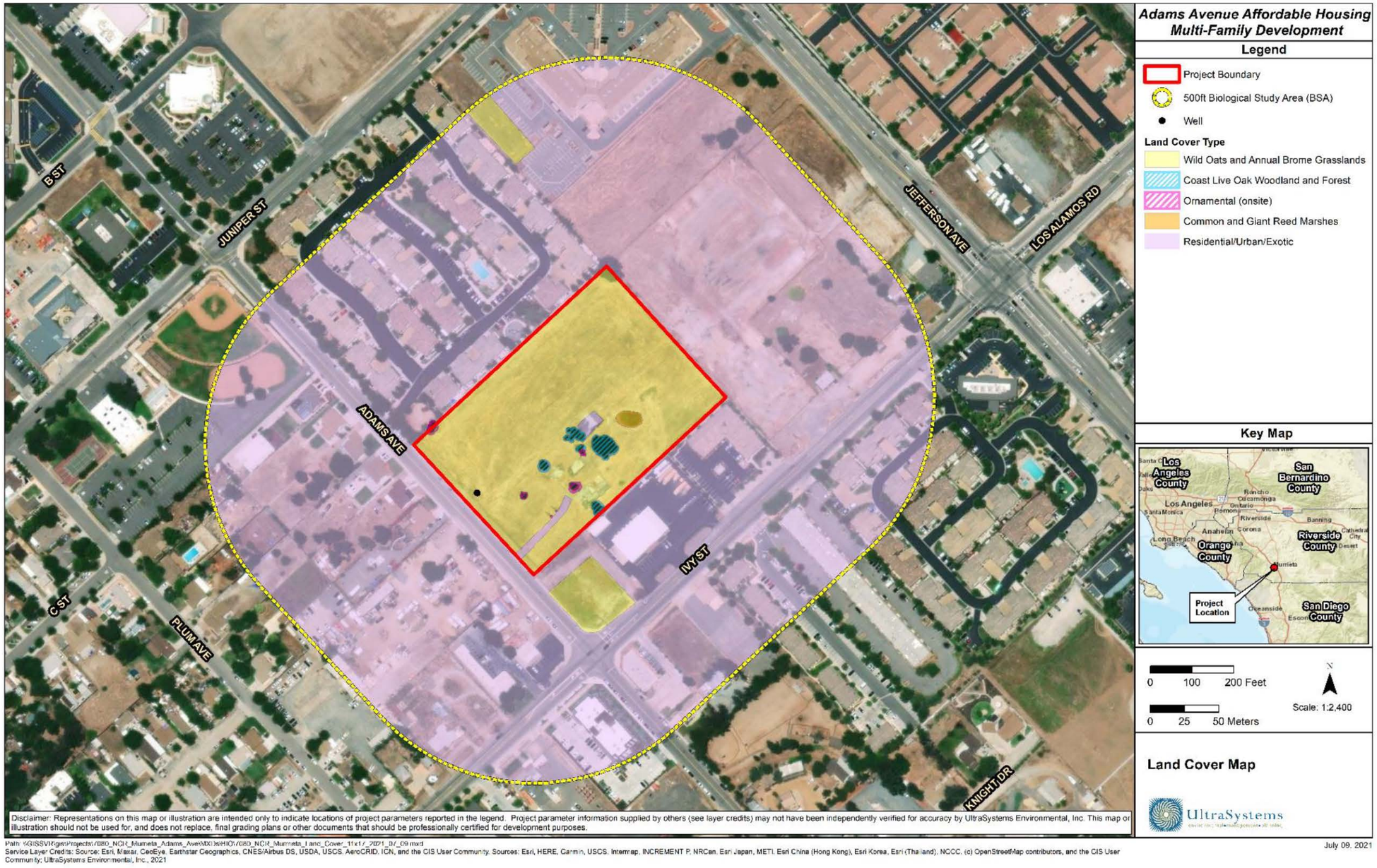


Figure 4.4–2
LAND COVER MAP



Impacts to Special Status Plants

Based on a literature review and query from publicly available databases (hereafter, plant inventory; USFWS 2021a, b, CNDDB 2021a) for reported occurrences within a ten-mile radius of the project site, there were 9 listed and 34 sensitive plant species identified by one of the following means: reported in the plant inventory, recognized as occurring based on previous surveys or knowledge of the area, or observed during the habitat assessment survey or other surveys, see **Figure 4.4-3**. Of those 43 total species, 1 listed and 3 sensitive plant species were determined to have a low potential to occur and these species are listed in Attachment F of **Appendix C1**. The project site lacks suitable habitat, or is outside the elevation or geographic range of all but four special-status plant species documented in the plant inventory. No special-status plant species were observed during the surveys, including the four special-status plant species determined to have a low potential to occur. Considering that none of the four special-status plant species determined to have a low potential to occur within the BSA were observed, it is anticipated that construction of the project will have less than a significant impact on special-status plant species within the BSA.

Impacts to Special-Status Wildlife

Literature Review Results and Discussion

Based on a literature review and query from publicly available databases (hereafter, wildlife inventory; USFWS 2021a, b, CNDDB 2021) for reported occurrences within a ten-mile radius of the project site, there were 17 listed and 35 sensitive wildlife species identified by one of the following means: reported in the wildlife inventory, recognized as occurring based on previous surveys or knowledge of the area, or observed during the habitat assessment survey or other surveys. Refer to **Figure 4.4-4**, which displays species identified in the CNDDB wildlife inventory within a two-mile radius of the BSA. Of those 52 total species, 1 listed and 7 sensitive wildlife species were determined to have at least a low potential to occur and these species are listed in Attachment F of **Appendix C1**. Six of the eight special-status wildlife species in the wildlife inventory were determined to have at least a low potential to occur in the BSA and it is anticipated that construction of the project will have less than a significant impact on any of those special-status plant species.

The following two species in the wildlife inventory were determined to have a moderate potential to occur in the project site; however, none of these species was observed during the surveys:

- Burrowing owl (*Athene cunicularia*)
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)

These two species may occur on the project site for foraging activities but were not observed during surveys and do not appear to reside permanently within the BSA. The BSA is surrounded by residences and commercial buildings which limit the availability of foraging habitat for species within the BSA. Another factor that reduces the likelihood that special-status wildlife would establish in the BSA is that there is a high level of traffic and traffic noise which may make the habitat less desirable for many special-status species to occupy. Thus, it is anticipated that construction of the project would have less than a significant impact on the San Diego black-tailed jackrabbit. However, because suitable habitat for burrowing owl (BUOW) occurs on the project site, there is the potential for BUOW to colonize the site. Refer to the section below which discusses BUOW.

Figure 4.4-3
CNDDB KNOWN OCCURRENCES PLANT SPECIES AND HABITATS

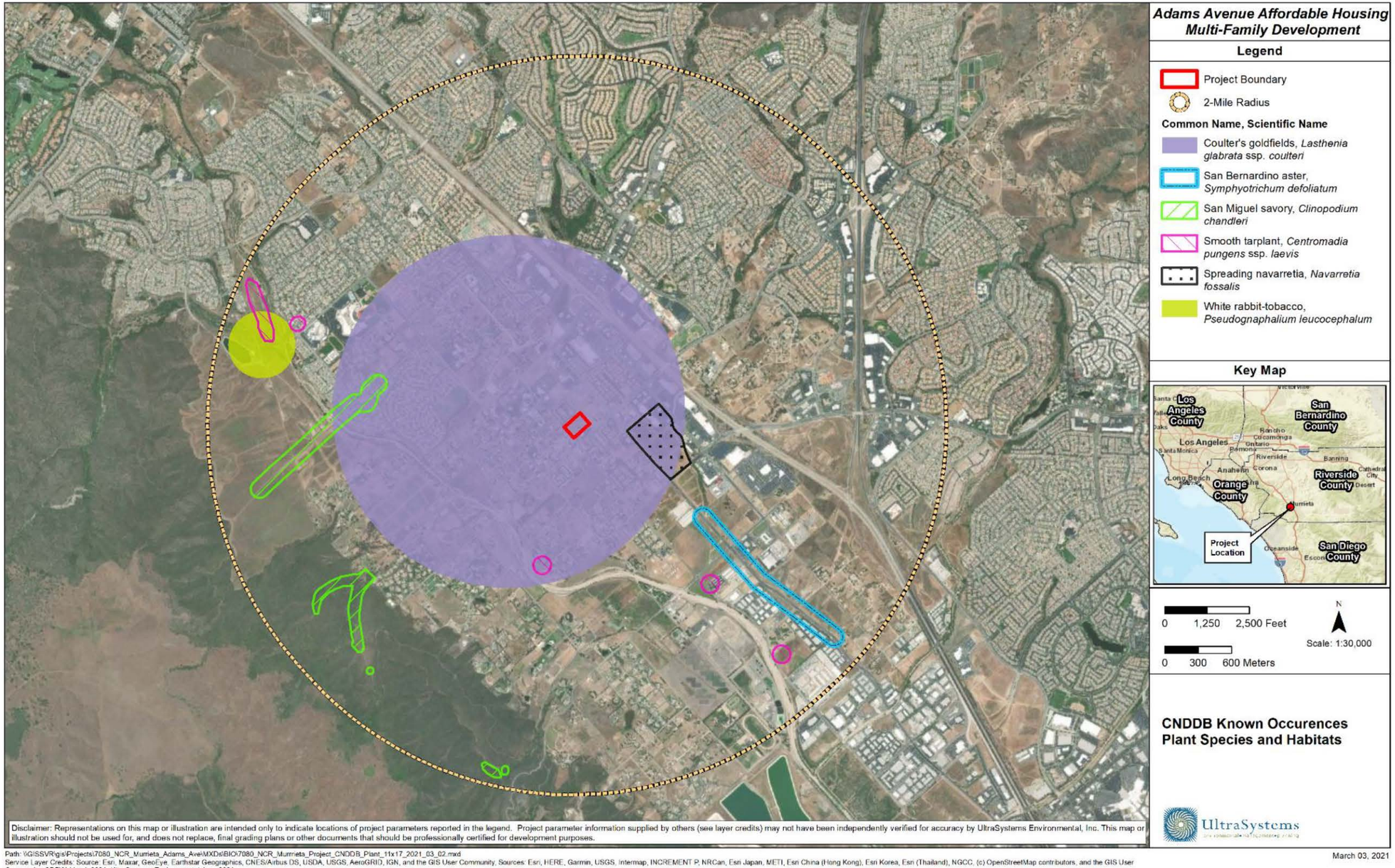
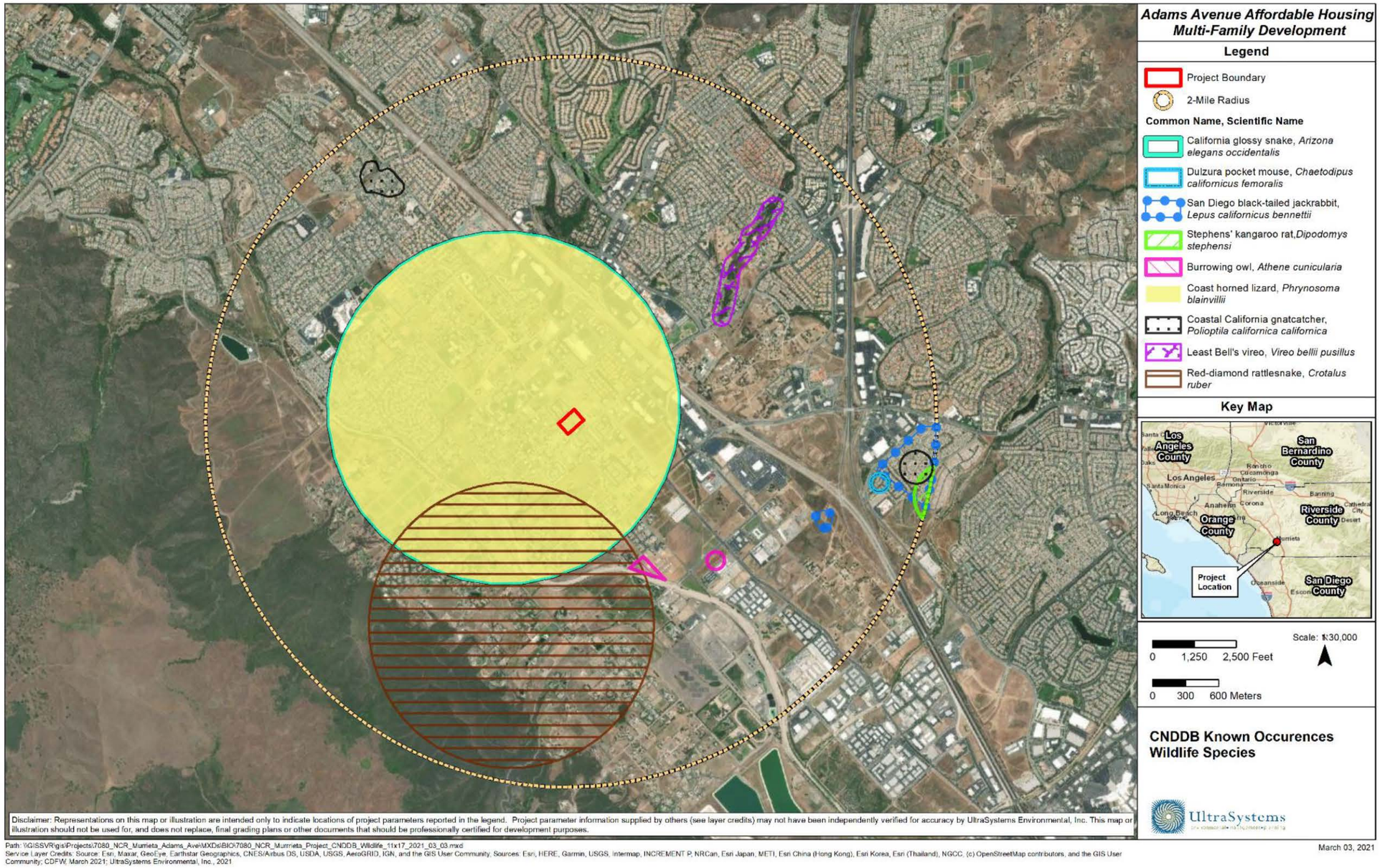


Figure 4.4-4
CNDDB KNOWN OCCURRENCES WILDLIFE SPECIES



Burrowing Owl Survey Results and Discussion

The BUOW is a small ground-inhabiting owl that is found throughout the southern United States. Typical BUOW habitat is open, dry, flat ground or low rolling hills with sparse vegetation, containing available burrows (Gallagher, 1997). In general, BUOW prefer to occupy open habitat with sparse tree and shrub cover because the sparse vegetative cover improves their ability to spot and hunt prey. Nest and roost burrows of the BUOW in California are most commonly dug by California ground squirrels (*Spermophilus beecheyi*), but may also be created by other mammals. Burrow openings are typically at least four inches in diameter. BUOW can also utilize artificial structures such as debris piles from which to hunt and to use as nest sites.

During the onsite habitat assessment, no BUOWs or BUOW signs were observed within the project site; however, several suitable burrows were observed in the non-native grassland habitat that covers 94% of the project site and less than 5% of the BSA offsite. In compliance with the MSHCP, a focused burrow survey and four focused BUOW surveys were conducted due to the presence of suitable BUOW habitat within the BSA. During the focused BUOW surveys, no BUOW or BUOW burrows were observed within the site, therefore it is presumed to be unoccupied by an owl at the time at which the surveys were conducted.

Due to the fact that there are multiple suitable burrows distributed across the project site that BUOW could occupy and use as nest sites, there is a potential for construction of the project to impact BUOW. Ground-disturbing activities associated with the project such as excavation, discing, trenching and soil compaction would directly impact any BUOW that would establish burrows on the project site. With the exception of the soils underneath the canopy of one large tree that will be preserved, all of the ground surfaces would be heavily disturbed and would result in the likely destruction of any existing burrows. As a result of potential impacts to BUOW and in compliance with the MSHCP, the project proponent will implement mitigation measure **BIO-1** to survey the site for the presence of BUOW prior to the commencement of construction activities. If any BUOW are observed during the pre-construction BUOW survey then the project proponent will confer with the City of Murrieta, the County of Riverside Environmental Programs Department (EPD) and CDFW to determine how to minimize impacts to existing BUOW. In addition, the project proponent would implement mitigation measure **BIO-2**, to conduct BUOW burrow exclusion and closure to reduce the likelihood of harm or fatality to BUOW due to construction of the project. Implementation of mitigation measures **BIO-1** and **BIO-2** would reduce impacts to BUOW to less than significant.

General Wildlife Surveys Results and Discussion

One of the ten species identified in the wildlife inventory, Cooper's hawk (*Accipiter cooperii*), was observed onsite, perched within the canopy of a coast live oak (*Quercus agrifolia*) tree. During the surveys, no raptors nests were observed within any of the trees within the BSA. Due to many disturbances within the BSA, including regular pruning and maintenance of many trees, frequent traffic noise, and a high level of human activity, it is not likely that raptors would build nests within the BSA. Moreover, there are not dense stands of trees with contiguous canopies to provide good cover for raptor's nests and thus, onsite trees do not provide optimal nesting habitat for this raptor.

Cooper's hawks are medium-sized hawks of the woodlands. These raptors are commonly sighted in parks, neighborhoods, over fields, and even along busy streets if there are large trees nearby for perching and adequate prey species such as other birds and small mammals. (CDFW, 2014; Cornell Lab of Ornithology, 2021). Cooper's hawk is a CDFW Watch List species and is a covered species under the MSHCP.

Project construction could cause several potential direct and indirect impacts on nesting and foraging behavior of Cooper's hawks. Tree removal of all but one of the existing onsite trees would directly impact Cooper's hawks by causing the destruction of any nests within those trees. Another potential direct impact would be the conversion of onsite vegetated areas, which support prey species such as small birds and mammals, to developed areas, resulting in the loss of foraging habitat. However, impacts due to foraging habitat loss would be less than significant because there are many alternative foraging areas that Cooper's hawks could utilize within the BSA and in surrounding areas. Another direct impact to Cooper's hawks may occur if work crews handle bird's nests or wildlife while on the project site. Noise and dust generated by construction activities would indirectly impact its foraging and nesting behavior. Another indirect impact may be contact with toxic liquids such as oil or gas that leak from machinery and which could contaminate soil surfaces or temporary onsite water sources. Cooper's hawks or other wildlife species could come into contact with these contaminated soils or waters either through direct contact or by consumption of prey species that have contacted contaminated soils or waters.

In addition to supporting habitat for the Cooper's hawk, the BSA contains large trees, and other physical features that could potentially provide foraging, nesting, and cover habitats to support a diverse assortment of bird species (year-round residents, seasonal residents, and migrants). A majority of the birds observed during the field surveys and those birds that could potentially breed within the BSA are protected by the MBTA and Fish and Game Code § 3503, § 3503.5, and § 3513. Refer to the recommended mitigation measures below which would reduce potential project impacts to biological resources.

Mitigation Measures

MM BIO-1: Pre-Construction Burrowing Owl Surveys Within 30 Days Prior to Construction

Although BUOW was not detected on site during the focused surveys, the BSA contains suitable habitat to potentially support BUOW in the future. Therefore, a 30-day pre-construction BUOW survey is required by the MSHCP. A qualified biologist would conduct a pre-construction BUOW survey in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (MSHCP Survey Guidelines; Riverside County TLMA, 2006) within 30 days prior to ground disturbance.

Following the completion of the pre-construction BUOW survey, the biologist would prepare a letter report in accordance with the MSHCP Survey Guidelines summarizing the results of the survey. The report would be submitted to the City of Murrieta prior to initiating any ground disturbance activities.

If no BUOWs or signs of BUOW are observed during the survey and concurrence is received from EPD and CDFW, project activities may begin and no further mitigation would be required.

If BUOW or signs of BUOW are observed during the survey, the site would be considered occupied. The biologist would implement mitigation measure **BIO-2** and contact the City of Murrieta, EPD, and CDFW to assist in the development of avoidance, minimization, and mitigation measures, prior to commencing project activities. The list of potential measures to avoid and minimize impacts to BUOWs described in the above section would be implemented.

MM BIO-2: BUOW Protection Measures

If BUOWs or signs of BUOW are observed during the survey, then the site would be considered occupied and the biologist shall contact the City of Murrieta, EPD, and CDFW to assist in the development of avoidance, minimization, and mitigation measures discussed below, prior to commencing project activities (Riverside County TLMA, 2006).

Planning BUOW Protection Measures

Grading, construction, and other project activities on all grassland habitat will be delayed until the qualified biologist has implemented burrow exclusion and closure. No ground-disturbing activities within 50 meters (165 feet) of an active BUOW burrow will be permitted until burrow exclusion and closure have been implemented. No destruction of foraging habitat will be permitted until burrow exclusion and closure have been implemented.

Preconstruction BUOW Protection Measures

Prior to the initiation of grading and construction activities, the biologist shall implement passive relocation of an active BUOW burrow by installing a one-way door and then permanently excluding the BUOW from returning once it is confirmed that no BUOW individuals remain in the burrow. A biological monitor will visit the site daily to verify that the burrow is empty by monitoring and scoping the burrow.

Considering that there is not adequate BUOW habitat of at least 6.6 acres to which an excluded BUOW pair can relocate, the project applicant shall pay a Local Development Mitigation Fee to the County of Riverside to offset the impacts to the BUOW pair and the loss of 5.75 acres of suitable BUOW habitat within the project site. All surveys and reporting required by the MSHCP will be complied with including a 30-day pre-construction BUOW survey.

Construction BUOW Protection Measures

A biological monitor will be onsite to monitor any BUOW or signs of BUOW. If any BUOW are observed then the biologist will consult with the County EPD and CDFW to determine the appropriate measures.

MM BIO-3: Pre-Construction Breeding Bird Survey

To be in compliance with the MBTA and Fish and Game Code, and to avoid impacts or take of migratory non-game breeding birds, their nests, young, and eggs, the following measures will be implemented. The measures below will help to reduce direct and indirect impacts caused by construction on migratory non-game breeding birds to less than significant levels.

- Project activities that will remove or disturb potential nest sites, such as open ground, trees, shrubs, grasses, or burrows, during the breeding season would be a potential significant impact if migratory non-game breeding birds are present. Project activities that will remove or disturb potential nest sites will

be scheduled outside the breeding bird season to avoid potential direct impacts on migratory non-game breeding birds protected by the MBTA and Fish and Game Code. The breeding bird nesting season is typically from February 15 through September 15, but can vary slightly from year to year, usually depending on weather conditions. Removing all physical features that could potentially serve as nest sites will also help to prevent birds from nesting within the project site during the breeding season and during construction activities.

- If project activities cannot be avoided during February 15 through September 15, a qualified biologist will conduct a pre-construction breeding bird survey for breeding birds and active nests or potential nesting sites within the limits of project disturbance. The survey will be conducted at least seven days prior to the onset of scheduled activities, such as mobilization and staging. It will end no more than three days prior to vegetation, substrate, and structure removal and/or disturbance.

- If no breeding birds or active nests are observed during the pre-construction survey or they are observed and will not be impacted, project activities may begin and no further mitigation will be required.

- If a breeding bird territory or an active bird nest is located during the pre-construction survey and will potentially be impacted, the site will be mapped on engineering drawings and a no activity buffer zone will be marked (fencing, stakes, flagging, orange snow fencing, etc.) a minimum of 100 feet in all directions or 500 feet in all directions for listed bird species and all raptors. The biologist will determine the appropriate buffer size based on the type of activities planned near the nest and the type of bird that created the nest. Some bird species are more tolerant than others of noise and activities occurring near their nest. This no-activity buffer zone will not be disturbed until a qualified biologist has determined that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities. Periodic monitoring by a biologist will be performed to determine when nesting is complete. Once the nesting cycle has finished, project activities may begin within the buffer zone.

- If listed bird species, such as the LBV, are observed within the project site during the pre-construction survey, the biologist will immediately map the area and notify the appropriate resource agency to determine suitable protection measures and/or mitigation measures and to determine if additional surveys or focused protocol surveys are necessary. Project activities may begin within the area only when concurrence is received from the appropriate resource agency.

- Birds or their active nests will not be disturbed, captured, handled or moved. Active nests cannot be removed or disturbed; however, nests can be removed or disturbed if determined inactive by a qualified biologist.

MM BIO-4: Worker Environmental Awareness Program (WEAP)

Prior to project construction activities, a qualified biologist will prepare and conduct a Worker Environmental Awareness Program (WEAP) that will describe the biological constraints of the project. All personnel who will work within the project site will attend the WEAP prior to performing any work. The WEAP will include, but not be limited to the following: results of pre-construction surveys; description of sensitive biological resources potentially present within the project site; legal protections afforded the sensitive biological resources; BMPs for protecting sensitive biological resources (i.e., restrictions, avoidance, protection, and minimization measures); individual responsibilities associated with the project; and, a training on grading to reduce impacts to biological resources. A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to the project site boundaries within which the project activities must be accomplished. The program will also include the reporting requirements if workers encounter a sensitive wildlife species (i.e., notifying the biological monitor or the construction foreman, who will then notify the biological monitor).

Training materials will be language-appropriate for all construction personnel. Upon completion of the WEAP, workers will sign a form stating that they attended the program, understand all protection measures, and will abide all the rules of the WEAP. A record of all trained personnel will be kept with the construction foreman at the project field construction office and will be made available to any resource agency personnel. If new construction personnel are added to the project later, the construction foreman will ensure that new personnel receive training before they start working. The biologist will provide written hard copies of the WEAP and photos of the sensitive biological resources to the construction foreman.

MM BIO-5: Biological Monitor

As per the MSHCP requirements stated in Volume 1, Appendix C of the MSHCP, A qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint (Riverside County, 2003).

A biological monitor shall monitor activities that result in tree or vegetation removal to minimize the likelihood of inadvertent impacts on nesting birds and special-status wildlife species, with special attention given to any protected species observed during the pre-construction breeding bird surveys. Monitoring shall also be conducted periodically during construction activities to ensure no new nests are built during any vegetation removal or building demolition activities between February 1 and August 31. The biological monitor shall ensure that all BMPs, avoidance, protection and

mitigation measures described in the relevant project permits and reports are in place and are adhered to.

The biological monitor will also monitor all installation of replacement trees and implementation of tree protection measures. The monitor will verify that installation of replacement trees is compliant with mitigation measure **BIO-9**, *Tree Replacement Protection Measures* (see **Section 4.4 (e)**). The monitor will also verify that protection measures established for the onsite preservation tree comply with mitigation measure **BIO-10**, *Preservation Tree Protection Measures*., (see **Section 4.4 (e)**).

The biological monitor shall have the authority to temporarily halt all construction activities and all non-emergency actions if sensitive species and/or nesting birds are identified and would be directly affected. The monitor shall notify the appropriate resource agency and consult if needed. If necessary, the biological monitor shall relocate the individual outside of the work area where it will not be harmed. Work can continue at the location if the applicant and the consulted resource agency determine that the activity will not result in adverse effects on the species.

The appropriate agencies shall be notified if a dead or injured protected species is located within the project site. Written notification shall be made within 15 days of the date and time of the finding or incident (if known) and must include; location of the carcass, a photograph, cause of death (if known), and other pertinent information

MM BIO-6: Construction Best Management Practices

Project work crews will be directed to use BMPs where applicable. These measures will be identified prior to construction and incorporated into the construction operations.

Implementation of this conservation measure will help to avoid, eliminate or reduce impacts on sensitive biological resources, such as special-status terrestrial wildlife species, to less than significant levels. Standard BMPs as outlined in the MSHCP (MSHCP, Volume 1, Appendix C) and that apply to construction of this project, and that are not incorporated to other mitigation measures proposed for this project are as follows:

- Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.

- Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, FWS, and CDFW, RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.

- The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.

MM BIO-7: Project Limits and Designated Areas

To avoid impacts on sensitive biological resources, the project proponent will implement the following measures prior to project construction and commencement of any ground-disturbing activities or vegetation removal.

- Specifications for the project boundary, limits of construction, project-related parking, storage areas, laydown sites, and equipment storage areas will be mapped and clearly marked in the field with temporary fencing, signs, stakes, flags, rope, cord, or other appropriate markers. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas. All markers will be maintained until the completion of activities in that area. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans.

- To minimize the amount of disturbance, the construction/laydown areas, parking areas, staging areas, storage areas, spoil areas, and equipment access areas will be restricted to designated areas. To the extent possible, designated areas will comprise, existing disturbed areas (parking lots, access roads, graded areas, etc.).

- Project related work limits will be defined and work crews will be restricted to designated work areas. Disturbance beyond the actual construction zone is prohibited without site specific surveys. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible. If sensitive biological resources are detected in the area to be impacted, then appropriate measures will be implemented to avoid impacts (i.e., flag and avoid, erect orange snow fencing, biological monitor present during work, etc.). However, if avoidance is not possible and the sensitive biological resources will be directly impacted by project activities, the biologist will mark and/or stake the site(s) and map the individuals on an aerial map and with a GPS unit. The biologist will then contact the appropriate resource agencies to develop additional avoidance, minimization and/or mitigation measures prior to commencing project activities.

- The project proponent will ensure that construction activities will include measures to prevent accidental falls into excavated areas. The construction crew will inspect excavated areas daily to detect the presence of trapped wildlife. All deep or steep-walled excavated areas will be covered with tarp

and either be furnished with escape ramps or be surrounded with exclusionary fencing in order to prevent wildlife from entering them. Wildlife found in excavation areas should be trapped and relocated out of harm's way to a suitable habitat outside of the project area, if possible.

MM BIO-8: General Vegetation and Wildlife Avoidance and Protection Measures

The BSA contains trees that qualify for protection under City of Murrieta's Tree Preservation Ordinance Section 16.42.050.

The BSA contains habitats which can support many wildlife species. The City of Murrieta will also implement the following general avoidance and protection measures to protect vegetation and wildlife, to the extent practical:

- Cleared or trimmed vegetation and woody debris will be disposed of in a legal manner at an approved disposal site. Cleared or trimmed non-native, invasive vegetation will be disposed of in a legal manner at an approved disposal site as soon as possible to prevent regrowth and the spread of weeds.

- The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species.

- Non-native species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.

- Vehicles and equipment will be free of caked mud or debris prior to entering the project site to avoid the introduction of new invasive weedy plant species.

- To minimize construction-related mortalities of nocturnally active species such as mammals and snakes, it is recommended that all work be conducted during daylight hours. Nighttime work (and use of artificial lighting) will not be permitted unless specifically authorized. If required, night lighting will be directed away from the preserved open space areas to protect species from direct night lighting. All unnecessary lights will be turned off at night to avoid attracting wildlife such as insects, migratory birds, and bats.

- If any wildlife is encountered during the course of project activities, said wildlife will be allowed to freely leave the area unharmed.

- Wildlife will not be disturbed, captured, harassed, or handled. Animal nests, burrows and dens will not be disturbed without prior survey and authorization from a qualified biologist.

- Active nests of special-status or otherwise protected bird species cannot be removed or disturbed. Nests can be removed or disturbed if determined inactive by a qualified biologist.

- To avoid impacts on wildlife and attracting predators of protected species, the project proponent will comply with all litter and pollution laws and will

institute a litter control program throughout project construction. All contractors, subcontractors, and employees will also obey these laws. These covered trash receptacles will be placed at each designated work site and the contents will be properly disposed at least once a week. Trash removal will reduce the attractiveness of the area to opportunistic predators such as common ravens, coyotes, northern raccoons, and Virginia opossums.

- Contractors, subcontractors, employees, and site visitors will be prohibited from feeding wildlife and collecting plants and wildlife.

- Disturbance near ponded water will be limited during the rainy season. It could serve as potential habitat for amphibians and sensitive invertebrates

Level of Significance After Mitigation

Special-status plants are not anticipated to occur within the BSA and thus there are anticipated to be less than significant. With implementation of mitigation measures **BIO-1** through **BIO-8,** the proposed project would have less than significant impacts, either directly or through habitat modifications, to special-status plant and wildlife species.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

No Impact

The project site is situated on relatively level ground, and no ephemeral, intermittent, or perennial streams or rivers were identified in the literature review or observed during the biological survey. Vegetation within the BSA primarily consists of non-native annual grasses and forbs, several ornamental and native trees, and landscaped areas with ornamental turf lawns and plants. The land cover types observed within the BSA are described below.

Land Cover Type Mapping

The five land cover types are briefly described below and are described in detail in the BRE (see **Appendix C1**) None of the five land cover types are classified as sensitive natural communities in the California Department of Fish and Wildlife's (CDFW's) *California Natural Community List* (CDFW, 2020). Therefore, there are no anticipated impacts to sensitive natural communities as a result of construction of the project.

Wild Oats and Annual Brome Grasslands:

Wild oats and annual brome grasslands occupy 5.74 acres of the project site, covering 94% of the property. The remainder of the wild oats and annual brome grasslands within the BSA occurs in a large field bordering the project site on the northeastern side, and in two smaller fields. The wild oats and annual brome grassland land cover is dominated by wall barley (*Hordeum murrinum*), and is interspersed with patches of other non-native annual grasses and mostly non-native annual forbs.

Residential/Urban/Exotic:

Residential/Urban/Exotic includes areas that often support man-made structures such as houses, sidewalks, buildings, parks, water tanks, flood control channels, transportation infrastructure (bridges and culverts), and ornamental landscaping, consisting of exotic, or non-native, plant species, that occurs in parks, gardens and yards. Approximately 0.12 acre of the project site is categorized as Residential/Urban/Exotic and includes a paved driveway and an old barn. The majority of this land cover occurs offsite within the BSA and consists of residences, commercial buildings, landscaped yards, and roadways and other developed surfaces.

Ornamental (on site):

Approximately 0.05 acre of the project site contains ornamental tree species. Ornamental trees are those propagated for aesthetic purposes typically in landscape design projects and gardens. Ornamental (onsite) land cover consists of the following non-native tree species: Peruvian pepper tree (*Schinus molle*), Italian cypress (*Cupressus sempervirens*), olive tree (*Olea europea*), and African sumac (*Searsia lancea*).

Coast Live Oak Woodland and Forest:

Coast live oak woodland and forest is characterized by the dominance of coast live oak (*Quercus agrifolia*) in densities of greater than 50% of relative cover in the tree canopy layer. Approximately 0.15 acre of this land cover occurs on the project site, and nowhere else within the BSA. There are nine mature coast live oak and two coast live oak saplings, as well as three blue elderberry trees that compose this habitat on the project site.

Common and Giant Reed Marshes:

Common and giant reed marshes is dominated onsite by non-native giant reed (*Arundo donax*). Once established, giant reed tends to form large, continuous, clonal root masses. Giant reed colonizes hydrophytic soils such as streambeds, drainages and drainages, and due to its extensive root masses, it often displaces most other plant species and can form near monospecific stands where it occurs. Giant reed is an invasive plant with a high ranking for invasiveness on the *California Invasive Plant Inventory* (Cal-IPC, 2006). A monospecific stand of giant reed occurs approximately 70 feet west of the barn structure. The giant reed stand covers an area of approximately 60 feet by 35 feet (0.05 acre).

The BSA does not support riparian habitat or other sensitive natural communities. Both the literature review (CNDDB, 2021) and results of the reconnaissance-level field survey indicate that riparian habitat or other sensitive natural communities do not occur on the project site. Therefore, construction of the project would not result in impacts on any riparian habitat, or sensitive natural communities identified in local, regional state, or federal plans, policies, or regulations. No impact would occur and no mitigation is proposed.

c) Would the project 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?

No Impact

Although drainages, depressions, and other topographic features that would be conducive to wetlands formation were not identified within the BSA, a stand of giant reed occurs on the project site; this stand is approximately 70 feet east of the barn, and covers an area of approximately 60 feet by 35 feet (0.05 acre). Giant reed occurs in wetlands and riparian areas where the water table is at or close to the surface, but is also found in non-wetlands (i.e., a facultative wetland species). A field investigation for wetlands and other waters of the U.S. or State determined that the project site does not contain drainages with a definable bed, bank, channel, or evidence of an ordinary high-water mark. Neither wetland hydrology, wetland soils, or wetland plants (with the possible exception of giant reed) were observed on the project site (Hernandez 2021, p. 1 – 2). It was determined that state or federal protected wetlands and other waters do not occur on the project site (see Attachment K of **Appendix C1**). No impact would occur and mitigation is not required.

d) Would the project 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?

Less Than Significant Impact

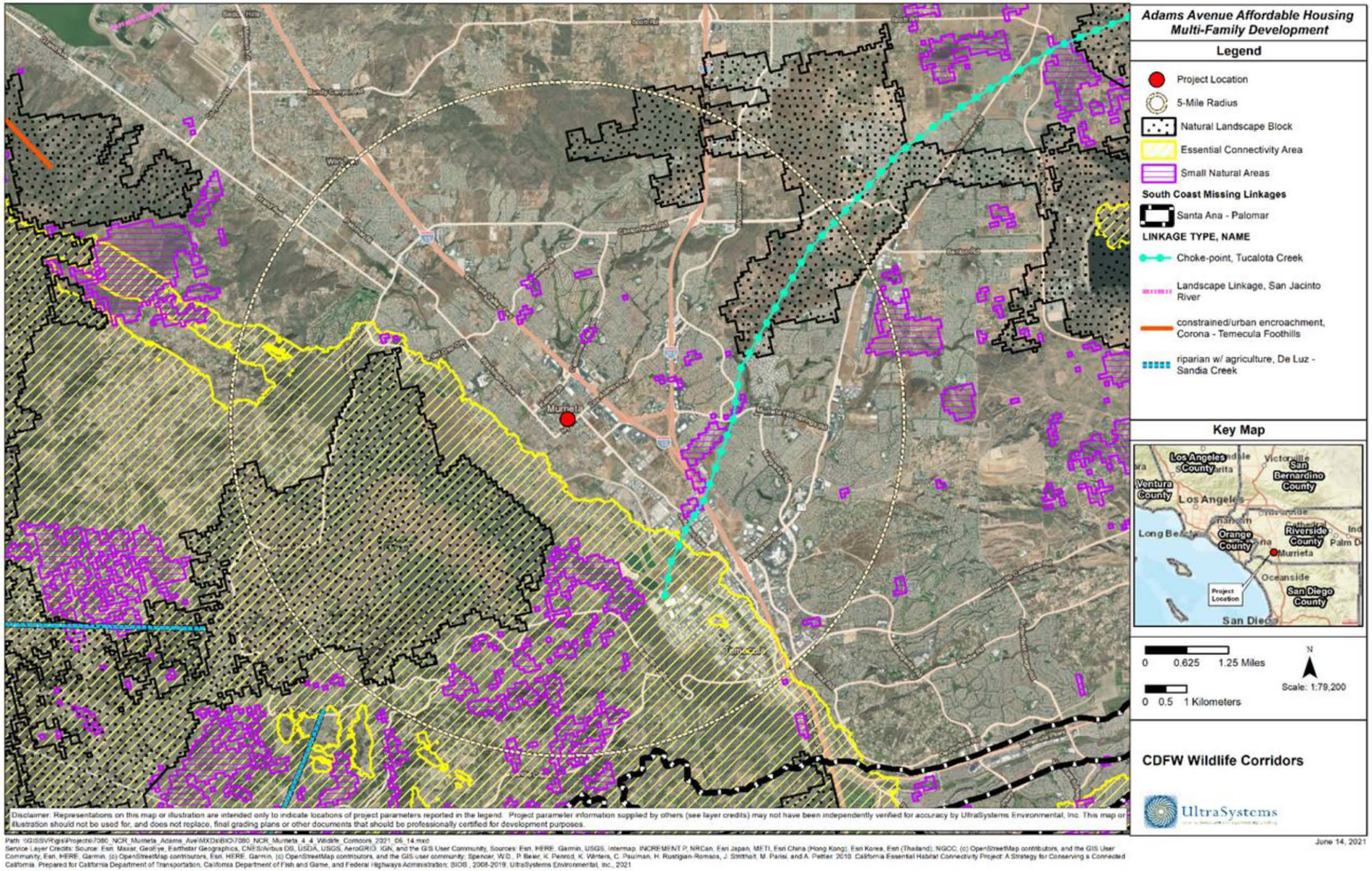
Reports, information, and databases associated with the MSHCP and the Western Riverside County – Regional Conservation Authority (RCA) MSHCP Information Map (MSHCP Information Map were used to identify criteria areas within the BSA (RCA, 2021). Per the MSHCP Information Map, the project site is not within a proposed/existing core, habitat block, or linkage. CDFW Natural Landscape Blocks and Essential Connectivity Areas are located in the hills east of the project site and in the Santa Rosa Plateau, west of the project site, see **Figure 4.4-5**.

Construction and operation of the proposed project would not interfere with the movement of any native resident or migratory fish or wildlife species or with native resident or migratory wildlife corridors. No impact would occur, and mitigation is not proposed.

By contrast, direct impacts are anticipated to native wildlife nursery sites of fossorial species. UEI biologists frequently observed California ground squirrels during surveys as well as several burrow complexes distributed throughout the project site that are likely used by ground squirrels. In addition, biologists observed a Botta's pocket gopher (Thomomys bottae) feeding from a burrow and several gopher mounds in areas with friable soils. These sightings of fossorial mammals and their burrows indicate that there may be resident populations of these species onsite. Thus, it is likely that fossorial mammal species give birth and raise young within the burrow complexes located onsite. Ground disturbing activities such as discing, bulldozing and excavating would lead to death and injury of fossorial species which do not typically evacuate their burrows during this type of disturbance.

Although there would likely be direct impacts to nursery sites of fossorial species as a result of construction of the project, it is not anticipated that these impacts will be significant. The CFGC classifies both California ground squirrels and Botta's pocket gophers as nongame animals, and as such, property owners can legally take these species (Baldwin, 2019; Quinn et al., 2018). No mitigation is required for the take of either of these fossorial species. The direct impacts of construction of the project to nursery sites of fossorial species would be less than significant.

Figure 4.4-5
CDFW WILDLIFE CORRIDORS



e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant with Mitigation Incorporated

The BSA contains trees that qualify for protection under the Murrieta Municipal Code Chapter 14, Article III, Section 42 *Tree Preservation* (City of Murrieta, 2019; hereafter, tree preservation ordinance). Murrieta Ordinance No. 553-19 § 5, 2019, Section 16.42.050 *Protected Trees* designates the following three types of trees that occur in the BSA as protected trees:
(1) mature native oak tree (i.e., native oak tree species with equal to or greater than 4-inch DSH),
(2) mature native tree (i.e., native tree species with equal to or greater than 4-inch DSH), and
(3) mature tree (i.e., non-native trees with equal to or greater than 9.5-inch DSH) (City of Murrieta, 2019)

According to Murrieta Ordinance No. 553-19 § 10, 2019, Section 16.42.095 *Protected Tree Replacement Standards,* replacement trees of equivalent size need to be planted onsite or offsite to mitigate the impact of the removal of a protected tree. This ordinance also stipulates that replacement trees should be of similar species and should be drought tolerant and fire resistant.

In addition to requiring that the appropriate replacement trees be planted to mitigate for removal of protected trees, the City of Murrieta also requires that onsite protected trees scheduled for preservation are protected during construction and project development. Murrieta Ordinance No. 553-19 § 9, 2019, Section 16.42.090 *Preservation of Protected Trees* requires that measures are implemented to reduce and minimize potential impacts to preservation trees during construction of the project.

In compliance with the tree preservation ordinance, a tree survey was conducted and an Arborist Report (**Appendix C2**) was prepared by UEI's ISA-certified arborists, Ms. Michelle Tollett and Mr. Matthew Sutton, on March 4, 2021 and again on April 5, 2021 by Mr. Sutton.

UEI arborists surveyed 24 onsite trees and saplings, and one offsite tree refer to **Figure 4.4-6**. Twenty-three trees are proposed for removal and are classified as removal trees, see **Figure 4.4-6**. Sixteen of the 23 removal trees are protected by the City of Murrieta and comprise eight mature coast live oaks (*Quercus agrifolia*), three mature blue elderberry trees (*Sambucus nigra*), and five mature trees of various non-native species. Refer to Attachment 1 of **Appendix C2**, for a complete record of the characteristics of the surveyed trees.

The surveyed offsite tree, red gum (*Eucalyptus camaldulensis*), was included in the survey because its canopy was overhanging the fencing at the northern corner of the project site and may have needed pruning in order to accommodate construction of the project. However, this offsite tree has been removed as part of construction activities on the property north of the project site.

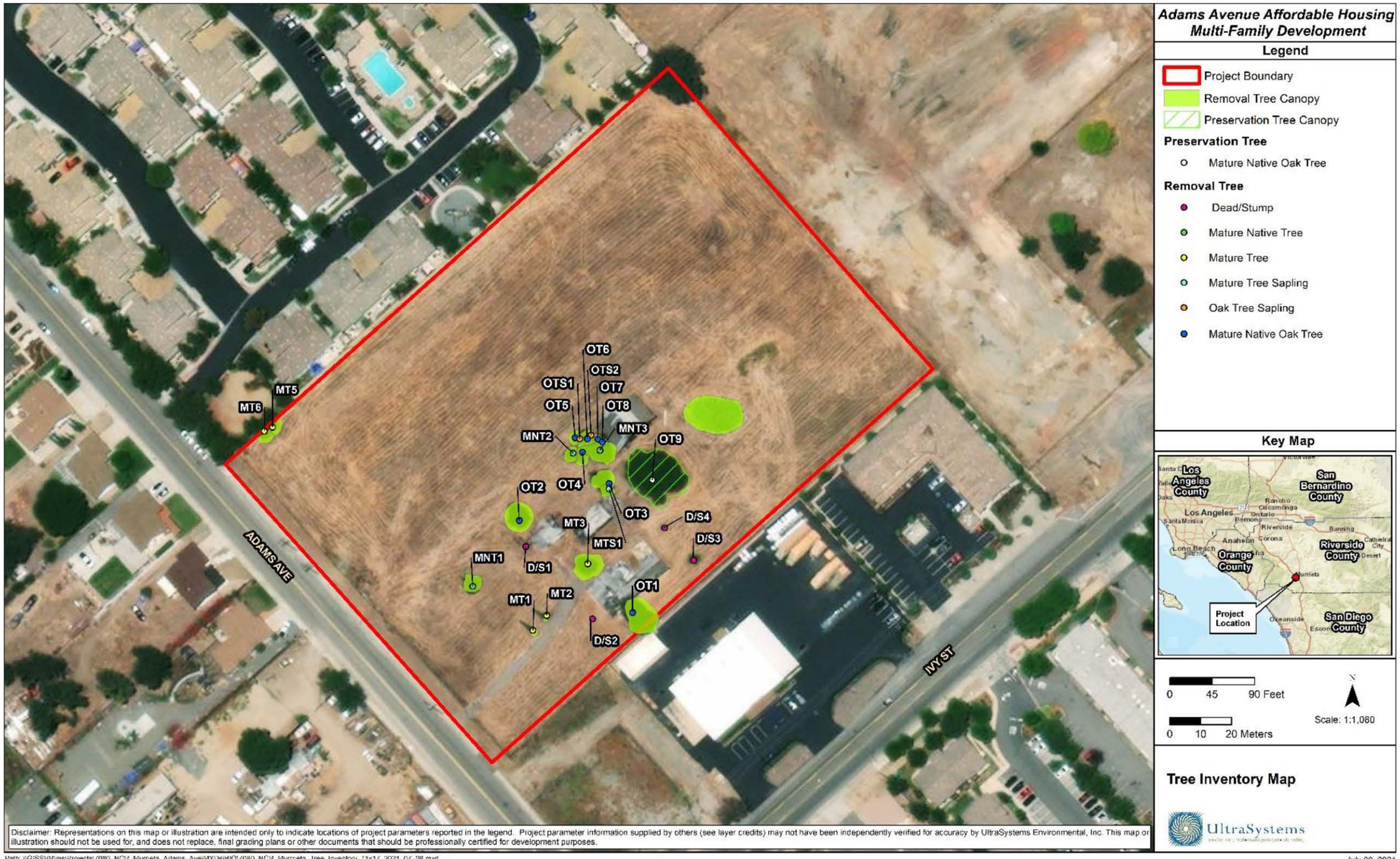
The remaining seven of the 23 removal trees include two native oak tree saplings (i.e., native trees with less than four-inch DSH), both coast live oak, one mature tree sapling (i.e., non-native trees with less than 9.5-inch DSH), olive tree (*Olea europea*), and four dead/unidentified tree stumps. Trees were considered saplings if they did not meet the tree preservation ordinance's requirements for a mature tree of its protected tree category. One mature native tree, Peruvian pepper tree (*Schinus molle*), and one mature tree sapling, olive tree, are classified as invasive species with a limited rating by the California Invasive Plant Council (Cal-IPC, 2006; SelecTree, 2021). There is one protected onsite tree that is classified as a preservation tree (see **Figure 4.4-6)**; this is an aesthetically

appealing tree and the largest onsite coast live oak, standing at 32 feet in height, with a trunk diameter at standard height of 30 inches

Based on the results of the tree survey and the findings of the arborist report (see **Figure 4.4-6)** the protected trees on the project site (sixteen protected removal trees and the one preservation tree), would be impacted directly and indirectly. The sixteen protected removal trees would be impacted directly by the complete removal of these trees during the construction of the project. Direct impacts to the preservation oak tree include ground disturbance activities such as bulldozing and grading that would damage roots that may extend beyond the tree protection zone that would approximately be at the tree's drip line. Indirect impacts to the preservation tree may include dust that is generated during construction activities; the dust may settle on the leaves and impede the tree's photosynthesis and growth.

To mitigate for the impacts to the protected removal trees, the project proponent will replace the trees with new trees onsite, which will be of similar size and species of the removed trees, as described in mitigation measure **BIO-9** below. To mitigate for the impacts to the onsite preservation tree, the project proponent will implement mitigation measure **BIO-10** described below.

Figure 4.4-6
TREE INVENTORY MAP



Mitigation Measures

MM BIO-9: Protected Tree Replacement Measures

There are 16 trees proposed for removal on the project site that are designated as protected trees as per the Murrieta Municipal Code Chapter 14, Article III, Section 42 Tree Preservation (City of Murrieta, 2019). These onsite protected trees comprise the following three categories of protected trees under the City's ordinance (the tree species and number of trees per category is listed parenthetically): mature native oak trees (coast live oak [8]), mature native trees (blue elderberry [3]), and mature trees (various ornamental species [5]).

According to Murrieta Ordinance No. 553-19 § 10, 2019, Section 16.42.095 Protected Tree Replacement Standards, replacement trees of equivalent size need to be planted onsite or offsite to mitigate the impact of the removal of a protected tree. This ordinance also stipulates that trees planted to replace mature trees should be drought tolerant and fire-resistant. In addition, the ordinance requires that native oak trees and native trees be replaced with the same species as those removed or an alternative species that is acceptable to the City Director.

The species palette, tree container size of stock, and the tree species of the replacement trees will be consistent with the requirement of the Murrieta tree ordinance and all replacement trees will be planted onsite. Tree replacement for all three categories of protected trees will be a one-to-one (1:1) replacement ratio. Tree replacement species for the protected removal trees will occur as follows: coast live oak trees and blue elderberry removal trees will be replaced by an equal or greater number of coast live oak trees that will be planted along Adams Avenue or in large planters in the Paseo area of the proposed development (see Attachment B of **Appendix C1**); and, the five protected removal trees classified as mature trees (Peruvian pepper, Italian cypress [2], and African sumac [2]) will be replaced by an equal or greater number of trees. All of the coast live oak trees will come from saplings that have been grown in containers of a minimum of 24 inches. All of the replacement trees for the five mature trees will have the following characteristics: fire-resistant, drought tolerant, and not classified as an invasive species on the California Invasive Plant Inventory (Cal-IPC, 2006).

All trees will be planted after ground-disturbing activities and most of the construction activities have finished in the planting area. Trees will be irrigated and maintained following BMPs for tree planting and care. A biological monitor will observe the tree planting activities and document the tree health and survivorship during the planting period. If any trees die or develop signs of adverse health such as insect infestation, then the biologist will create a report to send for the City of Murrieta's Planning Department to review. All dead or dying replacement trees will be replaced with a similar species and monitored by the biologist until they are established and healthy. In the event of unhealthy or dying replacement trees, the biologist will produce a final report documenting that all contingency replacement plantings have established and are in good health.

MM BIO-10: Protected Tree Preservation Measures

In accordance with Murrieta Ordinance No. 553-19 § 9, 2019, Section 16.42.090 *Preservation of Protected Trees*, the following tree preservation measures will be implemented to minimize or avoid impacts of construction and project development to the preservation tree:

- *Provision of sufficient growing areas as required by individual species;*
- *No disruption or removal of structural or feeder roots;*
- *Fencing of trees at or beyond their drip lines during grading and construction activities;*
- *No filling, cutting, development, or compaction of soils within the drip line;*
- *Preservation of oak leaf litter below the drip line; and*
- *Other measures required by the particular species of tree(s) to be preserved as recommended by the consulting arborist, horticulturist, or landscape architect.*

In addition to implementing the Murrieta tree ordinance measures listed above, the following recommendation for establishing a protection zone around a preserved oak tree provided in The Riverside County Oak Tree Management Guidelines will be incorporated into this conservation measure and will supersede the requirements for a protection zone stated in the Murrieta tree ordinance (Riverside County Planning Department, 1999):

> *Protection Zone – a circle whose center is within the base of an oak tree, the radius of which is equal to an oak tree's height or 10 feet, whichever is greater. Where the outermost edge of an oak tree's drip line extends beyond this radius, that portion of the drip line shall also be included as part of that tree's protected zone.*

Based on the protection measures outlined above, fencing will be installed around the preservation oak tree at a radius that is equal to the preservation tree's height or to the tree's drip line, whichever is greater. The height of the preservation oak tree is 32 feet and thus fencing will be erected around the perimeter of the tree with a minimum of a 32-foot radius around the trunk. The fencing will be erected prior to the initiation of ground-disturbing activities and will remain in place until the later phases of the construction and project development to allow for some minimal installation of paved surfaces around the perimeter of the tree's drip line.

Throughout project construction, a biological monitor will be onsite to determine that all project operations are compliant with the requirements of this conservation measure. If the biologist observes any action which is out of compliance with this measure or which imperils the preservation tree's health in some way, that biologist will contact the City of Murrieta Planning Department to evaluate what actions can be taken to prevent further instances of non-compliance. In the event that the preservation tree is adversely impacted such as major root damage or other injury

that may or may not cause the tree to exhibit signs of stress, an ISA-certified arborist will be enlisted to assess the tree's health. If the arborist determines the tree is irreparably wounded and poses a safety hazard if it were to remain in place, then the tree will be removed from the project site. In this event, the biologist will consult with the City of Murrieta Planning Department to evaluate the best way to mitigate the loss of the preservation tree.

Level of Significance After Mitigation

Implementing conservation measure **BIO-9** would reduce impacts of removals of the 16 protected trees to a less than significant level. Implementing the conservation measure **BIO-10** would reduce impacts would be less than significant.

f) Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less Than Significant with Mitigation Incorporated

The project site is located within the MSHCP plan area in Western Riverside County. Each project located within the plan area must be consistent with the MSHCP. **Table 4.4-1** provides a list of MSHCP conditions that were considered for this analysis.

Table 4.4-1
MSHCP PROJECT REVIEW CHECKLIST

MSHCP Conditions	Yes	No
Are riverine/riparian/wetland habitats or vernal pools present?	✓	
Is the project located in Narrow Endemic Plant Species Survey Area?		✓
Is the project located in a Criteria Area or Public/Quasi-Public Land?		✓
Is the project located in Criteria Area Amphibian Survey Area?		✓
Is the project located in Criteria Area Burrowing Owl Survey Area?	✓	
Is the project located in Criteria Area Mammal Survey Area?		✓
Is the project located adjacent to MSHCP Conservation Areas?		✓

A list of those resources that would potentially be impacted by construction of the project is listed below:

- Wildlife Species
- Vernal Pools

Wildlife Species

Based on the results of a literature search, general wildlife surveys, and a focused BUOW surveys, UEI biologists determined that construction of the project would potentially impact two special-status

wildlife species, BUOW and Cooper's hawk. As discussed in Section 4.4 (a) of this report, Cooper's hawk was observed onsite and it is recommended to conduct a pre-construction breeding bird survey to account for the possibility of a Cooper's hawk nest onsite. In addition, suitable BUOW habitat was identified onsite as described in the first section of this report. In accordance with guidelines of the MSHCP, a pre-construction BUOW survey would be conducted to account for possible occupation of BUOW onsite. With the implementation of mitigation measures **BIO-1** through **BIO-8,** impacts to MSHCP-covered wildlife species would be less than significant.

Vernal Pools

The BSA was assessed for areas meeting the MSHCP's definition of vernal pools and fairy shrimp habitat during the habitat assessment and other field surveys. It was determined that the BSA does not have vernal pools or wetlands that could support fairy shrimp species and none are expected to occur on the project site; therefore, listed fairy shrimp, such as the Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp, and vernal pool fairy shrimp, are not expected to be present within the BSA. No wetlands were identified onsite (see **Section 4.4 (c)** for further discussion). No impact would occur and no mitigation is required.

Other Potential Impacts to MSHCP Biological Resources

Although the primary biological resource that would potentially be impacted by construction of the project are wildlife species, there are other resources that may be impacted by the project. To comply with MSHCP requirements, various BMPs and other mitigation measures will be implemented so that impacts to biological resources covered by the MSHCP would be less than significant.

Level of Significance After Mitigation

With implementation of mitigation measures **BIO-1** through **BIO-10,** the proposed project would have less than significant impacts to biological resources covered by the MSHCP.

4.5 Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?				**X**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		**X**		
c) Disturb any human remains, including those interred outside of formal cemeteries?		**X**		

Information from UltraSystems' Cultural Resources Inventory Report, dated June 18, 2021 (see **Appendix D1**), prepared for the Adams Avenue Affordable Housing Multi-Family Development Project, City of Murrieta has been included within this section.

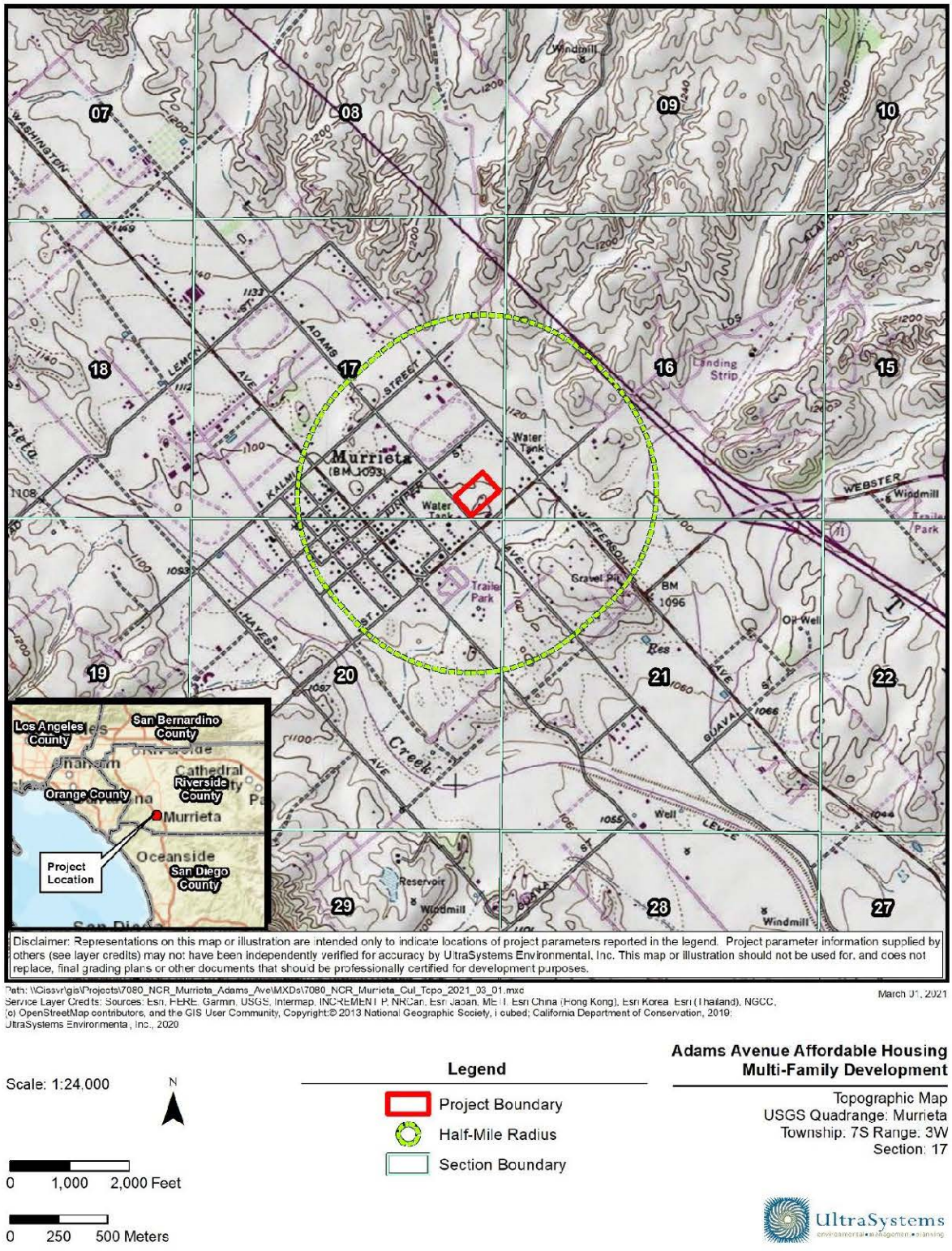
4.5.1 Methodology

A cultural resources inventory was requested March 3, 2021 for the Adams Avenue Affordable Housing Multi-Family Project site (**Figure 4.5-1**) that would include a California Historic Resources Inventory System (CHRIS) records and literature search at the Eastern Information Center (EIC) at the University of California at Riverside. Due to COVID-19 pandemic protocols that the EIC staff are working under, there was a delay in processing the record search request. The EIC records search was received May 7, 2021. Additionally, a request was made to the Native American Heritage Commission (NAHC) to conduct a search of their Sacred Lands File (SLF) for potential traditional cultural properties as well as to provide a list of local Native American tribal organizations to contact. The NAHC request was made on March 2, 2021, and a reply was received on March 11, 2021; letters were sent to the listed tribes on March 12, 2021 and follow-up telephone calls were conducted following conclusion of the 30-day response period on April 13, 2021. A pedestrian field survey of the project site was conducted on March 4, 2021.

4.5.2 Existing Conditions

A cultural resources records search was requested from the EIC, the local California Historical Resources Information System facility, on March 3, 2021, and the results were received May 7, 2021. No prehistoric or historic cultural resource sites are listed for the project parcel. No prior surveys included the project parcel, though four linear surveys were conducted along Adams Avenue on the southern boundary with negative results for the immediate area (See **Section 4.1** and **Tables 4.1-1** and **Table 4.1-2** in **Appendix D1**). The pedestrian field survey undertaken for this project noted the presence of an historic barn and debris from prior structures associated with the Sykes family farm (see **Section 4.3** in **Appendix D1**) but was negative for prehistoric resources.

Figure 4.5-1
TOPOGRAPHIC MAP



4.5.3 Impact Analysis

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?

No Impact

A historical resource is defined in § 15064.5(a)(3) of the *CEQA Guidelines* as any object, building, structure, site, area, place, record, or manuscript determined to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. Historical resources are further defined as being associated with significant events, important persons, or distinctive characteristics of a type, period or method of construction; representing the work of an important creative individual; or possessing high artistic values. Resources listed in or determined eligible for the California Register, included in a local register, or identified as significant in a historic resource survey are also considered as historical resources under CEQA.

Similarly, the National Register criteria (contained in Code of Federal Regulations Title 36 Section 60.4) are used to evaluate resources when complying with Section 106 of the National Historic Preservation Act. Specifically, the National Register criteria state that eligible resources comprise districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that (a) are associated with events that have made a significant contribution to the broad patterns of our history; or (b) that are associated with the lives of persons significant in our past; or (c) that embody the distinctive characteristics of a type, period, or method of construction, or that possess high artistic values, or that represent a significant distinguishable entity whose components may lack individual distinction; or (d) that have yielded or may be likely to yield, information important to history or prehistory.

A substantial adverse change in the significance of an historical resource, as a result of a project or development, is considered a significant impact on the environment. Substantial adverse change is defined as physical demolition, relocation, or alteration of a resource or its immediate surroundings such that the significance of the historical resource would be materially impaired. Direct impacts are those that cause substantial adverse physical change to a historic property. Indirect impacts are those that cause substantial adverse change to the immediate surroundings of a historic property, such that the significance of a historical resource would be materially impaired.

There was a farm complex of three structures that existed on the project site until the 2000s; an original residence-built in about 1898 (demolished and replaced by another house in the early 1960s), a barn built circa 1917, a small residence that was moved to the parcel in the early 20th century from another Sykes family farm, and a wood-working shed. These have all either been demolished or burned down within the past 5 to 10 years, with the exception of the barn.

Currently the City of Murrieta (City) intends to preserve the barn:

> The Barn is planned to be catalogued and selectively preserved. It is too fragile to attempt to move in one piece and not all of the structure is to be preserved. The Barn [was reviewed] with a historic architect from Spectra more than a year ago to get a better perspective on what [the City] needed to do with it. The City plans to issue an RFP for the Barn soon and to selectively preserve it as a separate City project that [the City] has budgeted for this year [2021] with it being removed in advance of National

> CORE starting construction on the proposed project. The Barn is historic in itself, but there is no longer agriculture in the area or on the property, nor has it been used as a Barn related to agriculture in decades. So it is a historic resource that's being preserved, but there is no longer an agricultural historic context to the site that ties it to the site or immediate area. (Stiehl 2021.)

The elements of the barn to be preserved will be disassembled and selectively preserved in a storage container, later to be reconstructed in the City of Murrieta's planned Heritage Park. There should also be a full recording of the barn and placed on file with the Eastern Information Center prior to its dismantling and removal; preparation of such a record of the barn is outside the scope of the proposed project. Also, during project construction, an archaeological monitor should be present to observe and record any historic (and prehistoric) artifacts that may still be present following the barn's removal.

With no project impacts to the barn anticipated, and the barn not meeting criteria to qualify as a significant historic resource, there would be no substantial adverse change in the significance of a historical resource pursuant to in § 15064.5, and therefore the project would have no impact in this regard.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Less than Significant Impact with Mitigation Incorporated

An archaeological resource is defined in § 15064.5(c) of the CEQA Guidelines as a site, area or place determined to be historically significant as defined in § 15064(a) of the CEQA Guidelines, or as a unique archaeological resource defined in § 21083.2 of the Public Resources Code as an artifact, object, or site that contains information needed to answer important scientific research questions of public interest or that has a special and particular quality such as being the oldest or best example of its type, or that is directly associated with a scientifically-recognized important prehistoric or historic event or person.

The past singular use of the project site for agriculture suggests that ground on the project site has been minimally disturbed, with the native surface soil remaining. The cultural resources investigation conducted by UltraSystems which included a CHRIS records search of the project site and buffer zone, a search of the SLF by the NAHC, and pedestrian field survey, suggests there is a low potential for undisturbed unique archeological resources exist on the project site.

Based on the EIC cultural resources records search, it was determined that there are no prehistoric or historic cultural resource previously recorded within the project site boundary. Within the half-mile buffer zone, there have been 61 recorded resources, seven of them prehistoric and 54 historic-era. **Table 4.1-1** summarizes these resources. The 54 historic-era resources break down to 40 residences, 12 commercial and civic buildings, and two linear features (see **Table 4.1-1**). The project site is situated just to the south of the original old town of Murrieta and the great majority of these resources are situated to the north and northwest from the farmstead, some within a couple blocks, but none adjacent to the project site.

Three prehistoric sites within the half-mile buffer of the project boundary (CA-RIV-1086, -13107, and -13977), three prehistoric isolates (P-33-012344, -012345, -028178) and the one historic isolate (P-33-028179), are consistently located to the south-southwest of the project boundary. The large

midden site of CA-RIV-1086 lies approximately 735 meters to the south-southwest of the project's southern corner along Ivy Street. First recorded in 1963 by Chace as "a low knoll and surrounding flat from which artifacts are reported" throughout a 40-acre parcel, approximately 150 meters northeast of Murrieta Creek, and possibly pot hunted (Chase 1963:1). Alter, as a result of subsequent surveys and cultural resource management projects it was eventually described by Aislin-Kay, Gillean and Sanka-Atkins in 2010 as being some 495 meters by 210 meters along the east side of Ivy Street extending from Washington Avenue on the north to New Clay Street on the south containing a flake, a mortar bowl fragment, a metate, and two manos recovered during monitoring. The site also contains an historic component of a domestic refuse deposit including a variety of ceramics, flatware, cans, metal fragments and glass bottles including items with manufacturing dates ranging from the 1910s through the 1950s (Atkins-Kay et al. 2010:5). In 2005 Shaver recording two fire-affected rock features here during monitoring activities. Resulting from survey work in this area along the east edge of Ivy Street, Shepard (2003a and 2003b) recorded two further prehistoric artifacts 670 meters south-southwest of the current project boundary, which are within the area Aislin-Kay et al. later associated with RIV-1086, extending the site boundary. The prehistoric material recorded as CA-RIV-13107, consisting of a scatter of artifacts including a broken metate, one lithic flake and one quartz core over an area that stretches 25.5 meters east/west, is located approximately 795 meters to the southwest of the project boundary's southern corner. Thus site 33-13107 and isolates 33-12344, 33-12345, 33-2817 and 33-28179 are all regarded as components of site CA-LAN-1086.

CA-RIV-13977 is located approximately 150 meters to the west of the project boundary and consists of a large scatter of prehistoric artifacts and ecofacts over an area that "measures 50 meters northwest-southeast and 30 meters northeast-southwest, covering an area of 1,288 [square] meters" (Ash 2004:1). The surface scatter consists of one andesite domed core/scraper, two fragments of fire effected cobble, and a fire effected mano fragment. There is also an historic component consisting of a glass bottle fragment (a Latchford Glass Co. bottle dating between 1925 – 1970), six ceramic sherds, a bowl, and two unidentified wares along with seeds pits and a rabbit and a large mammal bone (Ash 2004:1). This site is located within the Sykes farm as purchased in the 1920s, in the southwest corner of the original property. It was discovered during construction monitoring for the housing development that covers the western third of the original farm.

There have been 53 previous cultural resource studies within the one-half-mile buffer of the project (**Table 4.1-2**). None of these surveys intersects the current project boundary. However, four of these surveys were of linear features that touch along the southern edge of the project site along Adams Avenue, and another six of the reports concern surveys or monitoring of parcels that touch on the project boundary to the west or the north.

Two 1989 water pipeline route surveys reported on by Wade and Hector (RI-02502 and RI-03376) included Adams Avenue along the south edge of the current project site. Another water line survey that included Adams Avenue along the south edge of the current project was conducted in 2003 (RI-04877). Also, a sanitary sewer line survey of 13,000 – 18,000 linear feet throughout Murrieta, including Adams Avenue between Juniper and Ivy Streets, was conducted in 2004 (RI-06457). None of these surveys encountered prehistoric or historic resources adjacent to the current project area.

Development of Tract 30315 on the northeast corner of Juniper Street and Adams Avenue, abutting the current project boundary on its north side, called for a site assessment in 2003 (RI-04645) which reported negative findings for cultural resources on the parcel. Monitoring of the subsequent subsurface construction activities at this site (RI-06457) resulted in the recording of both a prehistoric and an historic-era artifact scatter, CA-RIV-13977, described above. There was a cultural

resources assessment of a small parcel touching on the current project parcel at its northwest corner (RI-06446) with negative results. Finally, there was a cultural resources assessment of the parcel along the current project's north boundary for the Jefferson and Ivy Ranch Apartment Homes Project in 2017 (RI-1000), followed by a construction monitoring plan for the same project in 2018 (RI-10460). Both of these reports noted the presence of two historic property records (33-015787 and 33-01578) which were not related to the current project site's history. (Refer to **Section 4.1** and **Tables 4.1-1** and **4.1-2** in **Appendix D1.**)

A NAHC SLF search was conducted on and within a half-mile buffer around the project site. The NAHC letter of March 11, 2021 indicated that there is the presence of traditional cultural property within this area. Eighteen representatives of 11 Native American tribes were contacted requesting a reply if they have knowledge of cultural resources in the area that they wished to share and asking if they had any questions or concerns regarding the project. These tribes included:

- Agua Caliente Band of Cahuilla Indians
- Juaneño Band of Mission Indians – Acjachemen Nation
- Pechanga Band of Mission Indians
- Quechan Tribe of the Fort Yuma Reservation
- Santa Rosa Band of Mission Indians
- La Jolla Band of Luiseño Indians
- Pala Band of Mission Indians
- Pauma Band of Luiseño Indians – Pauma & Yuima Reservation
- Soboba Band of Luiseño Indians
- Rincon Band of Luiseño Indians
- San Luis Rey Band of Mission Indians

There have been four responses to the outreach contacts from the 11 tribes. Arysa Gonzales Romero, the Historic Preservation Technician for the Agua Caliente Band of Cahuilla Indians, replied by email on March 23, 2021, stating that the project is not located within the Tribe's Traditional Use Area and will defer to those other tribes in the area. Lacy Padilla, archaeologist for the Agua Caliente Band of Cahuilla Indians, replied by email on April 1, 2021, also deferring to more local tribes. Jill McCormick, Historic Preservation Officer for the Quechan Tribe of the Fort Yuma Reservation replied by email on March 15, 2021 indicating that the tribe has no comments on this project and will defer to the more local Tribes and support their decisions on the project. Cheryl Madrigal, Tribal Historic Preservation Officer of the Rincon Band of Luiseno Indians replied by email on March 24, 2021 indicating that the project is "within the Territory of the Luiseño people, and is also within Rincon's specific area of Historic interest. We do not have knowledge of cultural resources within the proposed project area." They also requested records search material collected at the information center for this project. Mr. O'Neil responded that records and site location details are required to be confidential per agreements with the California Historical Resources Inventory System and suggested that they request a copy of the project's resulting cultural resources report from the Murrieta City Planning Department; Ms. Madrigal agreed that they would make this request.

Following up on the initial letter and email contacts, telephone calls were conducted by Archaeological Technician Megan B. Doukakis on April 13, 2021 to the eight tribes who had not previously replied by email or letter and had provided telephone numbers. Three of the telephone calls were placed with no answer and messages were left describing the project and requesting a response. These were to Joyce Perry and Chairperson Matias Belardes with the Juaneño Band of Mission Indians - Acjachemen Nation; Shasta Gaughan, Tribal Historic Preservation Officer with the Pala Band of Mission Indians; Paul Macarro, Cultural Resources Department of the Pechanga Band of

Luiseño Indians; and Isaiah Vivanco, Chairperson and Joseph Ontiveros, Cultural Resources Department, with the Soboba Band of Luiseño Indians.

A call to Norma Contreras, Chairperson of the La Jolla Band of Luiseño Indians, was answered by a receptionist who transferred Doukakis to the Chairperson's voicemail where a message was left. A call to Chairperson Temet Aguilar of the Pauma Band of Luiseño Indians was not answered but a voice mail was left; calling again a receptionist answered who transferred Doukakis to the Chairperson's extension where the Chairperson's assistant said that in her absence, UEI should email Yolanda Espinoza with the Band's Cultural Committee, which Doukakis did that day. A call to Chairperson Mark Macarro with the Pechanga Band of Mission Indians was transferred to his assistant who did not answer; a message was left. A call to the San Luis Rey Band of Mission Indians reached a receptionist who suggested calling Cami Mojado; Ms. Mojado answered, stating that the Band "would like to differ to Pechanga or Soboba." During the phone call to Lovina Redner, Chairperson of the Santa Rosa Band of Mission Indians, the receptionist replied that Chairperson Redner was on leave and to contact Mr. Steven Estrada, who was also not in and so the receptionist took the message; an email address for Mr. Estrada was provided, and Doukakis forwarded the original March 12, 2021 email and letter to him at that time. There have been no further responses to date (see contact record table in Attachment C, **Appendix D1**).

A pedestrian field survey of the project site was conducted on March 4, 2021. Systematic ten meter wide transects of the parcel were conducted for the survey. Transects began in the southeast corner and from there the survey proceeded to the west walking north/south transects until the west edge of the property was reached. The surface was generally covered with dense grass and some weeds that allowed approximately 20% surface visibility overall; there were several extensive patches of gopher or squirrel tunnel entrances and burrow mounds scattered throughout the project site that brought soil to the surface that could be observed.

Several historic features were observed. The farm house residence, which is no longer on site, had been on top of a small rise at the south-central edge of the parcel. There is still a driveway from Adams Avenue up to the west edge of the site of the residence, where there is light scattered debris remaining from the house being demolished; the surface scatter approximates the configuration of the house, consisting of brick, concrete, multiple-colors of brick, pale turquoise stucco on concrete, etc. The projected house outline is approximately 71 feet by 33 feet. From the projected front of the house facing north is a pathway to where a small residence and a woodworking shed once stood. Both the small house and shed have burned to the ground within the past 5-10 years with their debris still in-place. There is a considerable amount of burnt wood present, as well as bottles, window pane glass and concrete blocks (cinder block). Immediately east of the small residence site was the burnt shed where, along with similar debris to the small residence, as well as wall boards painted pale yellow.

A large intact wooden barn is located in the south-central portion of the project site, with its concrete foundations and the wooden framing and walls in place. The barn's roof has wooden shingles and corrugated metal sheets attached over that; half or more of the metal sheets have blown off and lay scattered on the ground to the east, south and northwest. The barn is approximately 53 feet long by 32.3 feet wide, and 21.3 feet high at the center of the peaked roof, with the long axis oriented east-west. The main barn door is situated in the center of the south side, being 58 inches wide and 15 feet high. The ends of the barn are 81 inches high. The interior is divided by framing into three rooms, with the center room having a concrete floor and the west and east rooms having dirt floors. The east

and west rooms have their own secondary openings on the south and north walls; the western south wall door is 47 inches high and 99 inches wide, and its counterparts are approximately the same.

The result of the pedestrian survey was negative for both prehistoric sites and isolates. The one remaining historic resource, the barn, is described in the report (see **Appendix C**, **Section 4.3**). While the results of the onsite field survey and interview with the past property owner suggested a low potential for the presence of prehistoric material, the EIC records search shows that subsurface cultural resources are to be found on the adjacent parcel to the west as well as larger deposits in the area toward Murrieta Creek. It is therefore determined that there is a moderate potential for the presence of cultural material at the project site and that prehistoric cultural resources may be adversely affected by subsurface construction work for the project.

Elements of the barn to be preserved will be disassembled and selectively preserved in a storage container, to be reconstructed in the City of Murrieta's planned Heritage Park (see **Appendix D1**, **Section 6.0**). Preparation of an Archaeological Site Record of the barn is not a part of the current effort. It is strongly suggested, however, that there should be a full recording of the barn prior to dismantling and removal placed on file with the EIC. Also, during project construction, an archaeological monitor should be present to recover any subsurface material associated with the barn and historic-era farm complex.

Grading activities would cause new subsurface disturbance and may result in the unanticipated discovery of prehistoric and/or historic archeological resources.

Mitigation Measure

MM CUL-1 If archaeological resources are discovered during construction activities, the contractor will halt construction activities in the immediate area and notify the City of Murrieta. The project applicant shall retain an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology who will be notified and afforded the necessary time to recover, analyze, and curate the find(s). The qualified archaeologist will recommend the extent of archaeological monitoring necessary to ensure the protection of any other resources that may be in the area. Any identified cultural resources shall be recorded on the appropriate DPR 523 (A-L) form and filed with the Eastern Information Center. Construction activities may continue on other parts of the project site while evaluation and treatment of prehistoric archaeological resources takes place.

Level of Significance After Mitigation

With implementation of Mitigation Measures **MM CUL-1** above, the project would result in less than significant impacts to archeological resources.

c) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact with Mitigation Incorporated

As previously discussed in **Section 4.5.b)** above**,** the project would be built on relatively undisturbed land that has not been previously graded and is in a suburban area. No human remains have been previously identified or recorded onsite.

The project proposes grading activities for the installation of infrastructure including water, sewer, and utility lines; and for construction of the proposed buildings. Grading would involve new subsurface disturbance and could result in the unanticipated discovery of unknown human remains, including those interred outside of formal cemeteries. In the unlikely event of an unexpected discovery, implementation of mitigation measure **CUL-2** would ensure that impacts related to the accidental discovery of human remains would be less than significant.

California Health and Safety Code § 7050.5 specifies the procedures to follow during the unlikely discovery of human remains. CEQA § 15064.5 describes determining the significance of impacts on archeological and historical resources. California Public Resources Code § 5097.98 stipulates the notification process during the discovery of Native American human remains, descendants, disposition of human remains, and associated grave goods.

Mitigation Measure

MM CUL-2 If human remains are encountered during excavations associated with this project, all work will stop within a 30-foot radius of the discovery and the Riverside County Coroner will be notified (§ 5097.98 of the Public Resources Code). The Coroner will determine whether the remains are recent human origin or older Native American ancestry. If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).

Level of Significance After Mitigation

With adherence to applicable codes and regulations protecting cultural resources and with implementation of Mitigation Measure **MM CUL-2** above, the proposed project would result in less than significant impacts to human remains.

4.6 Energy

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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**	

a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant Impact

According to CEQA Guidelines § 15126.2(d), "uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement that provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified." Therefore, the purpose of this analysis is to identify any significant irreversible environmental effects of project implementation that cannot be avoided.

Both construction and operation of the project would lead to the consumption of limited, slowly renewable, and non-renewable resources, committing such resources to uses that future generations would be unable to reverse. The new development would require the commitment of resources that include (1) building materials, (2) fuel and operational materials/resources, and (3) the transportation of goods and people to and from the project.

During project construction, energy would be consumed in the form of electricity associated with the conveyance of water used for dust control and, on a limited basis, powering lights, electronic equipment, or other construction activities necessitating electrical power. Construction activities for residential units and church buildings typically do not involve the consumption of natural gas. Project construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and delivery and haul truck trips hauling solid waste from and delivering building materials to the project site. During project operation, energy would be consumed for multiple purposes, including heating, air conditioning, appliances, and use of electronics.

During project operations, energy would also be required for water transport, solid waste disposal, and vehicle trips. Estimated project operation total energy usage, which was estimated by CalEEMod as part of the greenhouse gas emissions analysis,[13] is shown in **Table 4.6-1.** Vehicle miles traveled (VMT) were used as a surrogate for energy from consumption of transportation fuels. While a variety of factors govern the relationship between VMT and fuel energy, in general, an increase in VMT results from an increase in motor vehicle energy use. Note that the table does not include energy use by existing buildings and activities; to obtain a conservative estimate of energy use impact, existing use was assumed to be zero.

The new buildings would be designed and built-in compliance with the California Green Building Standards (CAL Green) Code (California Code of Regulations, Title 24, Part 11), which includes mandatory measures for both residential and nonresidential site development, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality (CDHCD, 2021).

In the interest of energy efficiency, the buildings are being designed to accept solar panels and battery storage, in addition to high-efficiency HVAC systems. Each building would have a rooftop photovoltaic system that can offset 100% of common area loads, which account for about one third of total building energy. HVAC systems will include Mitsubishi high-efficiency minisplits (ductless for one-bedroom units and ducted for two- and three-bedroom units), which are 40% more energy efficient than minimum systems prescribed by energy codes. This will assist in increasing reliance on renewable energy resources and decreasing reliance on natural gas and oil. Therefore, the energy usage of the new buildings would be substantially lower than it would be in absence of the Green Code. Additionally, the project would comply with all applicable regulations and codes which require achievement of various levels of energy efficiency in building construction, design and operation. The buildings will certify to meet LEED-H Gold standards.

The commitment of resources required for the construction and operation of the project would limit the availability of such resources for future generations or for other uses during the life of the project. However, the use of such resources would be reduced when compared to what they would be in the absence of complying with the CAL Green Code. Therefore, energy consumption would not result in a substantial increase in energy production for energy providers and the energy demand associated with the project would be less than significant.

Table 4.6-1
ESTIMATED PROJECT OPERATIONAL ENERGY USE

Energy Type	Units	Value	Per Capita[a]	
			Minimum	Maximum
Onroad Motor Vehicle Travel	Vehicle miles traveled per year	3,016,266	3,428	8,871
Natural Gas Use	1,000 BTU per year	2,958,820	3,362	8702
Electricity Use	Kilowatt-hours per year	913,542	1,038	2,686

[a]Based upon estimated range of residential population (340 to 880); see **Table 3.3-2**.

[13] See **Section 4.8** (Greenhouse Gas Emissions).

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less than Significant Impact

The proposed project would be in compliance with the California Green Building Standards (CALGreen) Code (California Code of Regulations, Title 24, Part 11), which includes mandatory measures for both residential and nonresidential site development, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental quality (CDHCD, 2021). The City of Murrieta does not have local energy plans. The City General Plan Sustainability Element has sustainability initiatives such as installing wind turbines on rural residential lots, which offers a renewable alternative to electric energy (RBF Consulting, 2011, p. 8-11). However, those programs do not apply to the proposed project because the proposed project would not be developed in a rural residential portion of the city. Further, given the area's warm climate, the most important alternative and renewable energy resource in the city is solar energy. This energy source has considerable potential and can be developed to substitute for oil, gas and other energy supplies. Solar energy's ability to substitute for fossil fuels can be an important tool in the battle against air pollution (Tom Dodson & Associates, 2019, p. 4.7-3). The proposed project would install a solar photovoltaic (PV) system atop the buildings, which would further the City's goal of sustainability. Therefore, the proposed project would not conflict with or obstruct an applicable state or local plan for renewable energy or energy efficiency, and there would be a less than significant impact in this regard.

4.7 Geology and Soils

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture 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**	
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 on a geologic 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 waste water disposal systems where sewers are not available for the disposal of waste water?				**X**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		**X**		

The information in this section is based on the following two technical reports:

- Geotechnical Evaluation Report, Proposed Residential Development, Assessor's Parcel Number (APN): 906-080-018, 24960 Adams Avenue, City of Murrieta, Riverside County,

California 92562. Prepared by EEI Engineering Solutions (EEI). dated March 21, 2021. A complete copy of this report is included as **Appendix E1** to this IS/MND.

- Paleontological Records Search for the proposed Adams Avenue Affordable Housing Development Project in the Murrieta, Riverside County. Prepared by Natural History Museum of Los Angeles County, dated March 6, 2021. A complete copy of this report is included as **Appendix D2** to this IS/MND.

a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture 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.

Less than Significant Impact

The Alquist-Priolo Zones Special Studies Act defines active faults as those that have experienced surface displacement or movement during the last 11,000 years. As shown in **Figure 4.7-1**, **t**he project site is located entirely within the Alquist-Priolo Earthquake Fault Zone for the Elsinore Fault Zone. A trace of the Temecula segment of the Elsinore Fault Zone is mapped passing through the east part of the project site northwest-southeast (EEI, 2021, Figure 5; see **Figure 4.7-1**). An additional segment of the Elsinore Fault Zone generally parallels Jefferson Avenue, approximately 600 feet northwest to southeast (EEI, 2021, p. 6).

A second Alquist-Priolo Earthquake Fault Zone, the Temecula section of the Elsinore Fault Zone, begins approximately 2.6 miles southeast of the project site (see **Figure 4.7-2**). The mapped northern extent of this fault zone splays north and northeast away from the proposed project site and neither splay is oriented such that a rupture of this fault segment would result in a surface rupture that would directly or indirectly cause substantial impacts to the proposed project.

EEI conducted a literature review of geotechnical/geologic reports prepared by other consultants for properties adjacent to the proposed project site. The literature review revealed that active faulting was observed on the adjacent property northwest of the project site, and the establishment of a 50-feet setback (i.e., Fault Setback Zone, or Restricted Use Zone) was recommended (EEI 2021, p. 7). This adjacent site is currently developed with single-family housing, and the Restricted Use Zone can be identified as the common recreation areas paralleling Valleywalk Street on the northwest.

Figure 4.7-1
ALQUIST PRIOLO FAULT ZONES

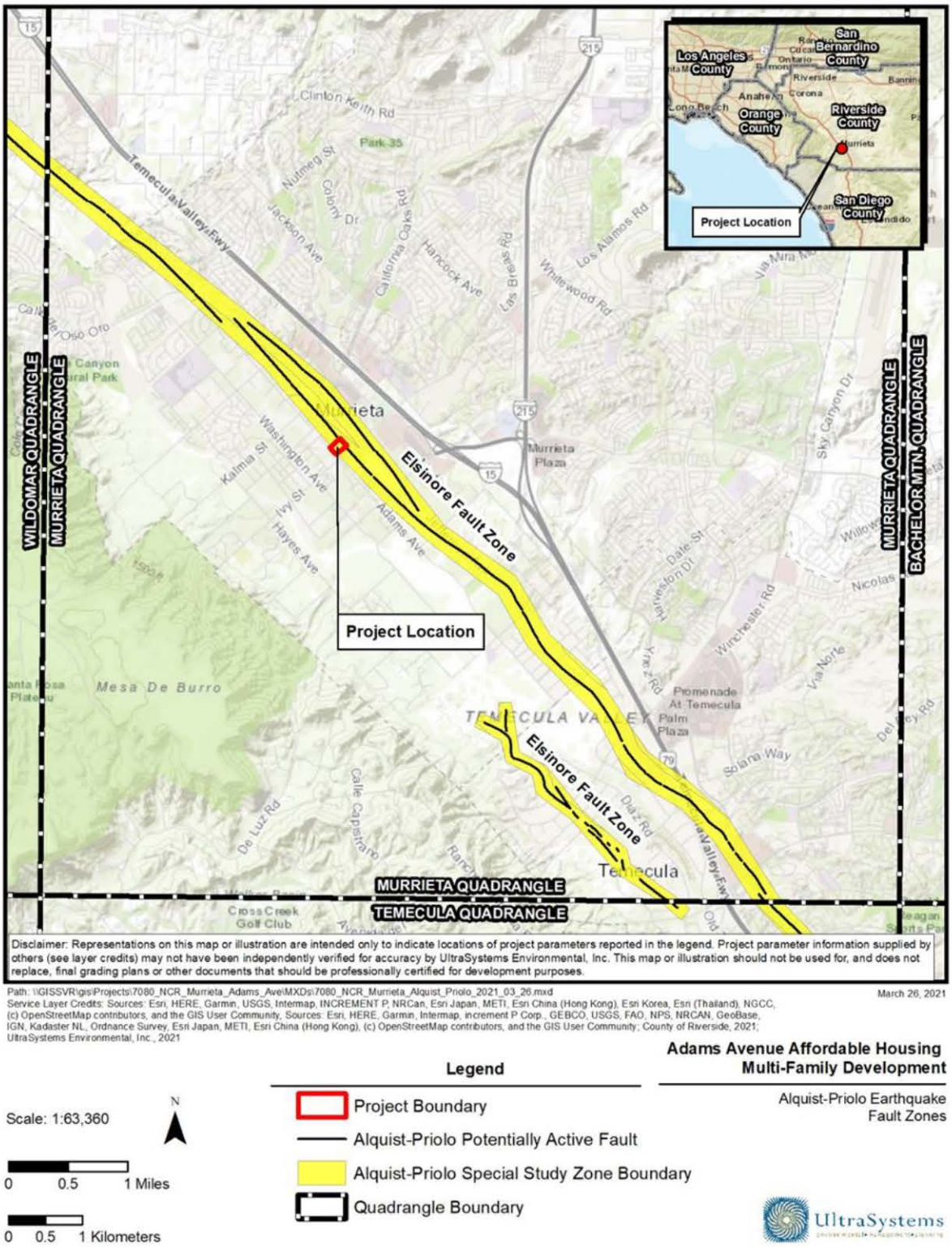
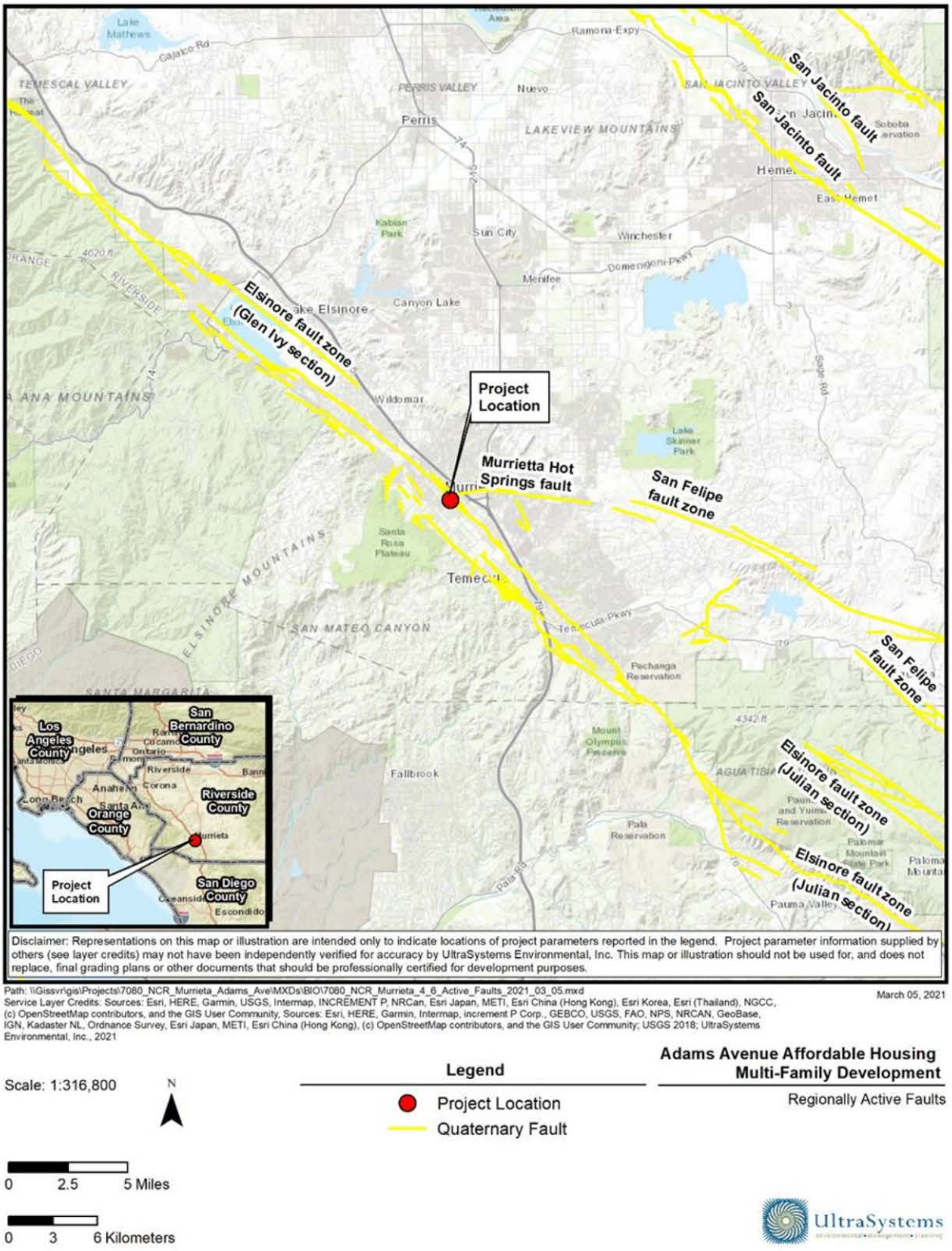


Figure 4.7-2
REGIONALLY ACTIVE FAULTS



Based on the results of their research of the pertinent available geotechnical data, it is the opinion of EEI that the faulting identified within the property immediately to the northwest of the proposed project site is highly probable to continue southeast through the project site. EEI recommends the establishment of a 50-foot wide "Restricted Use Zone" (RUZ) within the central portion of the proposed project site. The recommended RUZ within the project site shall be the continuation of the RUZ prepared for the neighboring property to the northwest (EEI 2021, pp. 7-8 [see **Appendix E2**]; for the email communication with EEI Engineer).

Implementation of a RUZ as recommended by EEI would avoid the placement of structures for human occupancy across the trace of active faults. Impacts arising from surface rupture of a known active fault would be less than significant and no mitigation is required.

ii) Strong seismic ground shaking?

Less than Significant Impact

As shown in **Figure 4.7-2**, the project is located within a seismically active region of Southern California, and all structures in the region are susceptible to collapse, buckling of walls, and damage to foundations from strong seismic ground shaking. Active segments of the Elsinore Fault Zone are in the vicinity of the proposed project site: maximum potential magnitudes of these faults range between 7.07 and 7.85 (EEI 2021, p. 6).

The effect of seismic shaking on future structures and land development projects within the City may be mitigated by adhering to adopted building codes. The California Building Code (CBC) regulates the design and construction of foundations, building frames, retaining walls, excavations, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions (City of Murrieta, 2011, p. 12-4).

The project would be constructed in accordance with the applicable 2019 California Building Code (CBC) issued by the California Building Standards Commission and used throughout the state (California Code of Regulations, Title 24). In addition, the CBC is adopted as Section 15.08.010 of the City's Municipal Code (City of Murrieta Building Standards Codes, 2019) and provides minimum standards to protect property and for public welfare by regulating the design and construction of excavations, foundations, building frames, retaining walls, and other building elements to mitigate the effects of seismic shaking and adverse soil conditions. The CBC contains provisions for earthquake safety based on factors including occupancy type, the types of soil and rock onsite, and the strength of ground motion with specified probability of occurring at the site.

Although the project site is susceptible to occasional moderate/high ground shaking from seismically active fault zones in the Southern California region, design and construction in accordance with the CBC would address issues related to potential seismic ground shaking at the site. For these reasons, impacts from strong seismic ground shaking would be less than significant and mitigation is not proposed.

iii) Seismic-related ground failure, including liquefaction?

Less than Significant Impact

General types of ground failures that might occur as a consequence of severe ground shaking typically include landslides, ground subsidence, ground lurching and shallow ground rupture. The probability

of occurrence of each type of ground failure depends on the severity of the earthquake, distance from the faults, topography, subsoils and relatively shallow groundwater tables (approximately 50 feet or less below ground surface), in addition to other factors.

Liquefaction typically occurs when saturated or partially saturated soils behave like a liquid, as a result of losses in strength and stiffness in response to an applied stress caused by ground shaking or other sudden change in stress conditions. The project site is in a zone of required investigation for liquefaction (see **Figure 4.7-3**) and the geotechnical subsurface investigation encountered groundwater at depths of approximately 17 to 41.5 feet below the existing ground surface (EEI 2021, p. 5).

A liquefaction evaluation was performed using geotechnical data obtained from a bore sample and based on adjusted peak ground acceleration data and a modal magnitude of 7.7, obtained from the United States Geological Survey (USGS). Groundwater depth was assumed to be 13 feet below the existing ground surface (EEI 2021, p, 8).

Based on the results of the liquefaction analysis, the project site is not considered to be susceptible to liquefaction, and seismically-induced settlement would be less than 0.25-inch and can be considered negligible (EEI 2021, p. 8). Compliance with federal, state, and local regulations, including the CBC and the City's Municipal Code, would minimize hazards from potential seismic-related ground failure, including liquefaction, that could be exacerbated by project development. Impacts would be less than significant, and mitigation is not proposed.

b) Landslides?

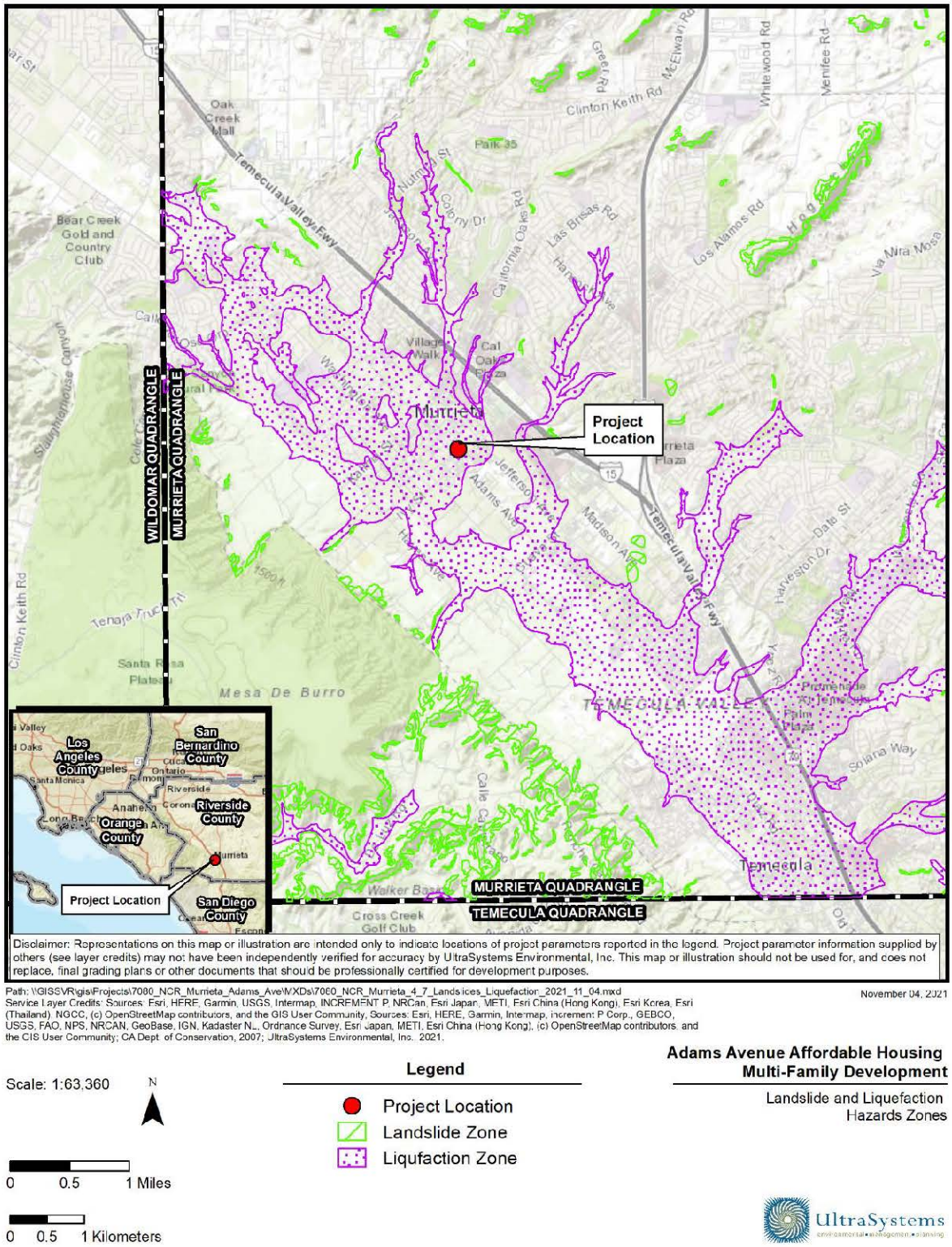
No Impact

Landslides occur when the stability of the slope changes from a stable to an unstable condition. A change in the stability of a slope can be caused by a number of factors, acting together or alone. Natural causes of landslides include groundwater (pore water) pressure acting to destabilize the slope, loss of vegetative structure, erosion of the toe of a slope by rivers or ocean waves, weakening of a slope through saturation by snow melt or heavy rains, earthquakes adding loads to a barely stable slope, earthquake-caused liquefaction destabilizing slopes, and volcanic eruptions.

Topography within the project site is relatively flat. The existing surface elevation at the proposed project site ranges from approximately 1,099 feet to 1,110 feet above mean sea level. Surface topography is generally flat to slightly sloping with the highest elevations in the northern portion of the site and the lowest surface elevations across the southern portions of the site (EEI 2021, p. 2).

Seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes; however, the project site relatively flat with very low onsite gradients, and the project site and project vicinity do not contain steep slopes or hills. Therefore, the potential for development of the project or being impacted by seismically induced landslide hazard is very low (EEI 2021, p. 8) and mitigation is not proposed. Impacts in this regard would be less than significant.

Figure 4.7-3
LANDSLIDES AND LIQUEFACTION



c) Would the project result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact

The onsite Geotechnical Evaluation Report encountered young alluvial valley deposits extending from the surface to depths of up to 26.5 feet below surface. These alluvial deposits generally consisted of very stiff to hard silty or sandy clay, medium-dense to dense clayey sand, and hard sandy silt. Undocumented artificial fill soils were encountered from the surface to a depth of six feet in boring B-2 (EEI 2021, p. 4), in the southern corner of the project site near the location of a residence that once occupied this section of the site. Refer to **Table 4.7-1** which presents the three soil units that have been mapped on the project site by the USDA Soil Survey.

Table 4.7-1
USDA SOILS MAPPED ON THE PROJECT SITE

Soil Name (Map Unit Designation)	K Factor (Whole Soil)	Wind Erodibility Group	Liquid Limit	Plasticity Index
Monserate sandy loam, 5 to 8 percent slopes, eroded (MmC2)	0.28	3	21.5	7.2
Porterville clay, 0 to 8 percent slopes (PoC)	0.24	4	55.0	29.4
Ramona very fine sandy loam, 0 to 8 percent slopes, eroded (ReC2)	0.49	3	29.6	8.1

SOURCE: USDA Web Soil Survey

Under current conditions, most of the project site consists of former agricultural land, with a small area of exposed soil. Ground-disturbing construction activities such as grading and excavation would remove the vegetation layer and increase the potential for erosion by water and wind.

Erosion factor K (refer to **Table 4.7-1**) indicates the susceptibility of a soil to sheet and rill erosion by water. K Factor is estimated based primarily on percentage of silt, sand, and organic matter, and on soil structure and saturated hydraulic conductivity (Ksat). Values of K range from 0.02 to 0.69 (median = 0.35). Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water (Soil Survey Staff, 2021, p. 17). Two of the soil units, Monserate sandy loam and Porterville clay (MmC2 and PoC) mapped on the project site have a K factors which indicate that these soils are moderately susceptible to sheet and rill erosion by water. The third soil unit, Ramona very fine sandy loam (ReC2) has a higher rating, indicating that this soil is more highly susceptible to sheet and rill erosion by water; however, this soil unit is mapped in only 0.08 percent of the proposed project site (Soil Survey Staff 2021a, p, 20).

A wind erodibility group (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible (Soil Survey Staff, 2021, p. 21). Approximately 73.4 percent of the proposed project site has been mapped as having PoC, which has a WEG rating of 4, indicating that this soil has a moderate susceptibility to wind erosion. The remainder of the project site is mapped with MmC2 and ReC2, which have a WEG rating of 3 (Soil Survey Staff, 2021, pp. 21). This soil has a moderately low potential for wind erosion.

Construction

The project site would be most susceptible to erosion during the construction phase, when soil is exposed, and before landscaped areas have been installed. To minimize the potential for water and wind erosion, the project would adopt construction best management practices (BMPs) in accordance with the City of Murrieta Jurisdictional Runoff Management Program (JRMP), Santa Margarita Region (Order No. R9-2013-0001, as amended). The JRMP requires construction sites to identify sources of erosion and sediment runoff and implement control practices that address soil erosion and sedimentation to avoid or minimize the transport of soil or contaminants offsite (City of Murrieta 2017, pp. 50-60). The project would also be required to implement site-specific construction stormwater BMPs designed to avoid or minimize wind- and water erosion, as described in the required Stormwater Pollution Prevention Program (SWPPP) (refer to **Section 4.10** of this document).

Operation

As designed, the project would be developed with a mix of impervious surfaces such as concrete and pavement and grass/landscaped areas, including landscaping along the site boundary. This combination of impervious surfaces and landscaped areas would reduce the potential of the project for soil erosion to a negligible level during project operations.

With the implementation of soil erosion and sedimentation BMPs during the construction phase and the proposed combination of impervious and landscaped surfaces during the operational phase, the project would have less than significant impacts related to soil erosion or loss of topsoil and mitigation is not proposed.

d) Would the project be located on a geologic 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?

Less than Significant Impact with Mitigation Incorporated

Below are descriptions of the soils/geologic units found on site. The proposed project site consists of two geologic units. The younger alluvial materials were encountered to depths between 10 feet and 26.5 feet below surface and generally consisted of yellowish-brown, reddish-brown, brown, dark brown, or greenish gray, slightly moist to moist, very stiff to hard silty or sandy clay; brown to reddish-brown, moist to wet, medium dense to dense clayey sand; and yellowish-brown, slightly moist, hard sandy silt (EEI 2021, p. 4). The following were also found on site:

- Undocumented fill soils found from the ground surface to a depth of six feet below existing grade within boring B-2 only, were generally dark brown to reddish brown, moist, medium dense fine to coarse grained clayey sand.

- Young Alluvial Valley Deposits are fluvial deposits along valley floors, and consist of unconsolidated sand, silt, and clay-nearing alluvium. These are surficial deposits, Holocene to Late Pleistocene in nature; and

- Bedrock: Pauba Formation: consists of gray, brown, dark brown, yellowish-brown or reddish-brown, slightly moist to wet, very soft to soft, fine to coarse-grained silty sandstone with minor clayey sandstone, clayey sandstone, and sandy siltstone (EEI, 2021, p. 4).

Impacts related to liquefaction and landslides are discussed above in **Section 4.7 a)**. Furthermore, as described in previous responses, the site possesses low probability of landslides and liquefaction. Additionally, the project would be constructed in accordance with the requirements of the City of Murrieta, the California Building Code, and the Occupational Safety and Health Administration, which are designed to assure safe construction and include building foundation requirements appropriate to site-specific conditions.

Lateral Spreading

Lateral spreading is the downslope movement of surface sediment due to liquefaction in a subsurface layer. The downslope movement is due to gravity and earthquake shaking combined. Lateral spreading of the ground surface during a seismic activity usually occurs along the weak shear zones within a liquefiable soil layer and has been observed to generally take place toward a free face (i.e., retaining wall, slope, or channel) and to lesser extent on ground surfaces with a very gentle slope. For the reasons discussed in **Section 4.7 a)** above, the potential for lateral spread on the project site would be less than significant (EEI 2021, p. 10).

Collapsible Soils

The existing onsite soils are unsuitable for the support of any engineered fill, structures, or buildings (EEI 2021, p. 10). The Geotechnical Evaluation Report recommends removal of existing soils to at least three feet below the bottoms of proposed foundations. Removed soils may be used as fill soil after proper moisture conditioning and re-compaction to at least 90 percent of maximum dry density (EEI, p. 11). Project site grading and project design and construction would comply with recommendations of the Geotechnical Evaluation Report as detailed in mitigation measure **GEO-1** below, and project development would not exacerbate hazards arising from collapsible soils.

Subsidence

The major cause of ground subsidence is the excessive withdrawal of groundwater. Soils with high silt or clay content are particularly susceptible to subsidence. The project site is not in an area of subsidence mapped by the USGS (USGS, 2021). Project development would not exacerbate hazards related to ground subsidence.

Impacts would be less than significant after implementation of mitigation measure **GEO-1** to comply with the recommendations of the Geotechnical Evaluation Report. Mitigation measure **GEO-1** is recommended to reduce potential impacts from settlement, subsidence, or collapse.

Mitigation Measure

MM GEO-1 To minimize potential impacts resulting from unstable soils, prior to the issuance of a certificate of occupancy, the project applicant shall implement applicable recommendations provided in Section 7.0 of the Geotechnical Evaluation Report dated March 12, 2021 for the proposed project prepared by EEI Engineering Solutions.

Level of Significance After Mitigation

Impacts resulting from unstable soils would be less than significant after implementation of mitigation measure **GEO-1**, which requires implementation of applicable recommendations from the Geotechnical Evaluation Report for the proposed project.

e) Would the project 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?

Less than Significant Impact with Mitigation Incorporated

Expansive soils shrink and swell with changes in soil moisture. Soil moisture may change from landscape irrigation, rainfall, and utility leakage. A measurement of expansion index in one subsurface soil sample conducted as part of the geotechnical evaluation yielded an expansion index of 49, indicating low to moderate expansion potential (EEI, p. 9). The Geotechnical Evaluation Report recommends a conventional continuous interconnected shallow foundation system (EEI, p. 10), designed to minimize hazards arising from expansive soils.

Additionally, the Geotechnical Evaluation report provided recommendations for the excavation and removal of existing undocumented fill soils and surficial loose alluvial deposits throughout the entire site (EEI 2021, p. 10). Implementation of **MM GEO-1** would further minimize hazards from expansive soils, in accordance with City of Murrieta and the CBC requirements.

The project would be designed and constructed in accordance with the requirements of the City of Murrieta and the CBC, which requires soil tests be performed on sites where expansive soils may occur (CBSC 2019, § 1803.5.3) and includes building foundation requirements appropriate to site-specific conditions, such as expansive soils.

Mitigation Measure

Implementation of Mitigation Measure **GEO-1** above.

Level of Significance After Mitigation

Impacts resulting from unstable soils would be less than significant after implementation of mitigation measure **GEO-1**, which requires implementation of applicable recommendations from the Geotechnical Evaluation Report for the proposed project. Impacts related to expansive soils would be less than significant.

f) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact

The project site would connect to the City of Murrieta's existing sewer system; therefore, the project would not use septic tanks or alternative wastewater disposal systems. For this reason, no impacts associated with septic tanks or alternative waste water disposal systems would occur.

g) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less than Significant Impact with Mitigation Incorporated

The project site boundary is encompassed entirely by a single geological deposit (Morton and Miller, 2005; Rogers 1965). The project site is underlain by the sandstone member of the Quaternary Pauba Formation Deposits (Qps) (Morton and Miller 2006); this same location and deposit had been noted as a Pleistocene non-marine terrace deposit by Rogers (1965). This deposit consists of lightly consolidated to cemented, undissected to slightly dissected deposits of unsorted boulders, cobbles, gravel, and sand and dates to the late Pleistocene (126,000 to 11,650 ybp). The soil immediately west and south of the project site is shown as Young Alluvial deposits (Qyva on Morton and Miller 2006) dating to the Holocene and Late Pleistocene, and would have been deposited by the Murrieta Creek.

Several paleontological resources have been discovered in the region. While no localities have been recorded within the project boundary itself, there are "fossil localities nearby from the same sedimentary deposits that occur in the proposed project area, either at surface or at depth" (Bell 2021:1). These include *Equus* (horse) and elephant family in Temecula at 5-10 feet deep; horse family specimens immediately southeast of Murrieta found during grading operations; and horse family and Mammoth specimens in Temecula; all in Pauba Formation strata (Bell 2021:1). Also, various reptile, amphibian and small mammal specimens were collected from younger alluvium sand and silt deposits farther south in Temecula, as well as Camel from a Pleistocene formation to the northwest near Lake Elsinore (Bell 2021:1-2). With these surrounding fossil localities in the same Pauba Formation as is present at the project site, paleontological resources could be present at the project site as well.

Excavations or grading that extend into the uppermost layers of soil and deeper excavation into the late Pleistocene sediments in the proposed project area may encounter significant fossil vertebrate remains. Any substantial excavations below the uppermost layers should be closely monitored to quickly and professionally collect any specimens. Grading and excavation activities associated with development of the proposed project would cause new subsurface disturbance and could result in the unanticipated discovery of paleontological resources, for which mitigation is required.

Mitigation Measure

MM GEO-2 Prior to the issuance of the grading permit, the applicant shall provide a letter to the City of Murrieta Planning Department, or designee, from a qualified paleontologist stating that the paleontologist has been retained to provide services for the project. The paleontologist shall develop, as needed, a Paleontological Resources Impact Mitigation Plan (PRIMP) to mitigate the potential impacts to unknown buried paleontological resources that may exist onsite for the review and approval by the City. The PRIMP shall require that the paleontologist perform paleontological monitoring of any ground disturbing activities within undisturbed native sediments during mass grading, site preparation, and underground utility installation. The project paleontologist may reevaluate the necessity for paleontological monitoring after 50 percent or greater of the excavations have been completed. In the event paleontological resources are encountered, ground-disturbing activity within 50 feet of the area of the discovery shall cease. The paleontologist shall examine the materials encountered, assess the nature and extent of the find, and recommend a course of action to further investigate and protect or recover and salvage those resources that

have been encountered. Criteria for discard of specific fossil specimens will be made explicit. If the qualified paleontologist determines that impacts to a sample containing significant paleontological resources cannot be avoided by project planning, then recovery may be applied. Actions may include recovering a sample of the fossiliferous material prior to construction, monitoring work and halting construction if a significant fossil needs to be recovered, and/or cleaning, identifying, and cataloging specimens for curation and research purposes. Recovery, salvage and treatment shall be done at the Applicant's expense. All recovered and salvaged resources shall be prepared to the point of identification and permanent preservation by the paleontologist. Resources shall be identified and curated into an established accredited professional repository. The paleontologist shall have a repository agreement in hand prior to initiating recovery of the resource.

Level of Significance After Mitigation

With implementation of **MM GEO-2**, potential impacts to paleontological resources would be reduced to a less than significant level.

4.8 Greenhouse Gas Emissions

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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**	

4.8.1 Background Information on Greenhouse Gas Emissions

Life on earth depends on energy coming from the sun. About half the light reaching Earth's atmosphere passes through the air and clouds to the surface, where it is absorbed and then radiated upward in the form of infrared heat. About 90% of this heat is then absorbed by carbon dioxide (CO_2) and other greenhouse gases (GHG) and radiated back toward the surface, which is warmed to a life-supporting average of 59 degrees Fahrenheit (°F) (NASA, 2018).

Human activities are changing the natural greenhouse. Over the last century, the burning of fossil fuels such as coal and oil has increased the concentration of atmospheric CO_2. This happens because the coal or oil burning process combines carbon in the fuel with oxygen in the air to make CO_2. To a lesser extent, the clearing of land for agriculture, industry, and other human activities has increased concentrations of GHGs (NASA, 2018).

GHGs are defined under the California Global Warming Solutions Act of 2006 (AB 32) as CO_2, methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF_6).[14]

Associated with each GHG species is a "global warming potential" (GWP), which is a value used to compare the abilities of different GHGs to trap heat in the atmosphere. GWPs are based on the heat-absorbing ability of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the atmosphere over a given number of years). The GWPs of CH_4 and N_2O are 25 and 298, respectively (GMI, 2019). "Carbon dioxide equivalent" (CO_2e) emissions are calculated by weighting each GHG compound's emissions by its GWP and then summing the products. HFCs, PFCs, and SF_6 would not be emitted in significant amounts by Adams Avenue Affordable Housing Multi-Family Development (Adams Avenue Project or project) sources, so they are not discussed further.

Carbon Dioxide (CO_2). Carbon dioxide is a colorless, odorless gas consisting of molecules made up of two oxygen atoms and one carbon atom. CO_2 is produced when an organic carbon compound (such as wood) or fossilized organic matter (such as coal, oil, or natural gas) is burned in the presence of

[14] http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf.

oxygen. Since the industrial revolution began in the mid-1700s, industrial activities have increased in scale and distribution. Prior to the industrial revolution, CO_2 concentrations were stable at a range of 275 to 285 ppm (IPCC, 2007a). The National Oceanic and Atmospheric Administration's Earth System Research Laboratory indicates that global concentration of CO_2 was 413.67 parts per million (ppm) in March 2020 (ESRL, 2020). These concentrations of CO_2 exceed by far the natural range over the last 650,000 years (180 to 300 ppm) as determined from ice cores.

Methane (CH_4). Methane is a colorless, odorless non-toxic gas consisting of molecules made up of four hydrogen atoms and one carbon atom. CH_4 is combustible, and is the main constituent of natural gas, a fossil fuel. CH_4 is released when organic matter decomposes in low oxygen environments. Natural sources include wetlands, swamps and marshes, termites, and oceans. Anthropogenic sources include the mining of fossil fuels and transportation of natural gas, digestive processes in ruminant animals such as cattle, rice paddies, and the buried waste in landfills. Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropogenic sources include fossil-fuel combustion and biomass burning.

Nitrous Oxide (N_2O). Nitrous oxide is a colorless, non-flammable gas with a sweetish odor, commonly known as "laughing gas," and sometimes used as an anesthetic. N_2O is naturally produced in the oceans and in rainforests (USEPA, 2019b). Manmade sources of N_2O include the use of fertilizers in agriculture, nylon and nitric acid production, cars with catalytic converters and the burning of organic matter. Concentrations of N_2O also began to rise at the beginning of the industrial revolution.

4.8.2 Regulatory Setting

GHGs are regulated at the national, state, and air basin level; each agency has a different degree of control. The United States Environmental Protection Agency (USEPA) regulates at the national level; the California Air Resources Board (ARB) regulates at the state level; and the South Coast Air Quality Management District (SCAQMD) regulates at the air basin level in the Adams Avenue project area.

Federal Regulations

The USEPA collects several types of GHG emissions data. These data help policy makers, businesses, and the USEPA track GHG emissions trends and identify opportunities for reducing emissions and increasing efficiency. The USEPA has been maintaining a national inventory of GHG emissions since 1990 and in 2009 established mandatory reporting of GHG emissions from large GHG emissions sources.

EPA is also getting GHG reductions through partnerships and initiatives; evaluating policy options, costs, and benefits; advancing the science; partnering internationally and with states, localities, and tribes; and helping communities adapt.

Corporate Average Fuel Economy (CAFE) Standards

In May 2010, the USEPA finalized the first-ever national GHG emissions standards under the Clean Air Act, and the National Highway Traffic Safety Administration (NHTSA) finalized Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act (USEPA, 2021a). The 2010 CAFE standards were for model year 2012 through 2016 light-duty vehicles. In April 2020, NHTSA and USEPA amended the CAFE and GHG emissions standards for passenger cars

and light trucks and established new less stringent standards, covering model years 2021 through 2026 (USEPS, 2021b).

Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule

On September 27, 2019, the USEPA and the NHTSA published the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program (ARB, 2020a), revoked California's authority to set its own GHG emissions standards and set zero emission vehicle (ZEV) mandates in California. The loss of the ZEV sales requirements will likely result in additional gasoline-fueled vehicles being sold in the State and criteria emissions increasing. On April 30, 2020, USEPA and NHTSA issued the Final SAFE Rule, (ARB, 2020b) which relaxed the federal GHG emissions and CAFE standards resulting in the probable increase of CO_2 emissions.

State Regulations

Executive Order S 3-05

On June 1, 2005, the governor issued EO S 3-05, which set the following GHG emission reduction targets:

By 2010, reduce GHG emissions to 2000 levels;
By 2020, reduce GHG emissions to 1990 levels;
By 2050, reduce GHG emissions to 80% below 1990 levels.

To meet these targets, the Climate Action Team (CAT)[15] prepared a report to the Governor in 2006 that contained recommendations and strategies to help ensure that the targets in EO S-3-05 are met.

Assembly Bill 32 (AB 32)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006, also known as AB 32. AB 32 focuses on reducing GHG emissions in California. GHGs, as defined under AB 32, include CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. The ARB is the state agency charged with monitoring and regulating sources of emissions of GHGs that cause global warming. AB 32 also required that by January 1, 2008, the ARB determine what the statewide GHG emissions level was in 1990, and it must approve a statewide GHG emissions limit, so it may be applied to the 2020 benchmark. The ARB approved a 1990 GHG emissions level of 427 million metric tons of CO_2e ($MMTCO_2e$), on December 6, 2007, in its Staff Report. Therefore, in 2020, emissions in California are required to be at or below 427 $MMTCO_2e$.

Under the "business as usual or (BAU)" scenario established in 2008, statewide emissions were increasing at a rate of approximately one percent per year as noted below. It was estimated that the 2020 estimated BAU of 596 $MMTCO_2e$ would have required a 28% reduction to reach the 1990 level of 427 $MMTCO_2e$.

[15] The Climate Action Team (CAT) members are state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency (Cal/EPA). They coordinate statewide efforts to implement global warming emission reduction programs and the state's Climate Adaptation Strategy.

Climate Change Scoping Plan

The Scoping Plan released by the ARB in 2008 (ARB, 2008) outlined the state's strategy to achieve the AB 32 goals. This Scoping Plan, developed by ARB in coordination with the CAT, proposed a comprehensive set of actions designed to reduce overall GHG emissions in California, improve the environment, reduce dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health. It was adopted by ARB at its December 2008 meeting. According to the Scoping Plan, the 2020 target of 427 $MMTCO_2e$ requires the reduction of 169 $MMTCO_2e$, or approximately 28.3%, from the state's projected 2020 BAU emissions level of 596 $MMTCO_2e$.

In August 2011, the Scoping Plan was re-approved by the Board and includes the Final Supplement to the Scoping Plan Functional Equivalent Document (ARB, 2011). This document includes expanded analysis of project alternatives and updates the 2020 emission projections by considering updated economic forecasts. The updated 2020 BAU estimate of 507 $MMTCO_2e$ yielded that only a 16% reduction below the estimated new BAU levels would be necessary to return to 1990 levels by 2020. The 2011 Scoping Plan expands the list of nine Early Action Measures into a list of 39 Recommended Actions contained in Appendices C and E of the Plan.

In May 2014, ARB developed, in collaboration with the CAT, the First Update to California's Climate Change Scoping Plan (Update) (ARB, 2014), which shows that California is on track to meet the near-term 2020 GHG limit and is well positioned to maintain and continue reductions beyond 2020 as required by AB 32. In accordance with the United Nations Framework Convention on Climate Change, ARB has mostly transitioned to the use of the Intergovernmental Panel on Climate Change's (IPCC's) Fourth Assessment Report (AR4)'s 100-year GWP (IPCC, 2007b) in its climate change programs. ARB recalculated the 1990 GHG emissions level with the AR4 GWPs to be 431 $MMTCO_2e$; therefore the 2020 GHG emissions limit established in response to AB 32 is now slightly higher than the 427 $MMTCO_2e$ in the initial Scoping Plan.

In November 2017, ARB published the 2017 Scoping Plan (ARB, 2017b) which builds upon the former Scoping Plan and Update by outlining priorities and recommendations for the state to achieve its target of a 40% reduction in GHGs by 2030, compared to 1990 levels. The major elements of the framework proposed are enhancement of the Renewables Portfolio Standard (RPS) and the Low Carbon Fuel Standard; a Mobile Source Strategy, Sustainable Freight Action Plan, Short-Lived Climate Pollutant Reduction Strategy, Sustainable Communities Strategies, and a Post-2020 Cap-and-Trade Program; a 20% reduction in GHG emissions from the refinery sector; and an Integrated Natural and Working Lands Action Plan.

Renewables Portfolio Standard (Scoping Action E-3)

The California Energy Commission estimates that in 2000 about 12% of California's retail electric load was met with renewable resources. Renewable energy includes (but is not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas. California's current RPS is intended to increase that share to 33% by 2020. Increased use of renewables will decrease California's reliance on fossil fuels, thus reducing emissions of GHGs from the electricity sector. Most recently, Governor Brown signed into legislation Senate Bill (SB) 350 in October 2015, which requires retail sellers and publicly-owned utilities to procure 50% of their electricity from eligible renewable energy resources by 2030.

Senate Bill 375 (SB 375)

Senate Bill (SB) 375 passed the Senate on August 30, 2008, and was signed by the Governor on September 30, 2008. Per SB 375, the transportation sector is the largest contributor of GHG emissions and contributes approximately 45 percent of the GHG emissions in California, with automobiles and light trucks alone contributing almost 30 percent. SB 375 indicates that GHGs from automobiles and light trucks can be reduced by new vehicle technology. However, significant reductions from changed land use patterns and improved transportation also are necessary. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Executive Order B-30-15

On April 29, 2015, the Governor issued EO B-30-15 which added an interim target of GHG emissions reductions to help ensure the State meets its 80 percent reduction by 2050, as set in EO S-3-05. The interim target is reducing GHG emissions by 40 percent by 2030. It also directs State agencies to update the Scoping Plan, update Adaptation Strategy every 3 years, and take climate change into account in their planning and investment strategies. Additionally, it requires the State's Five-Year Infrastructure Plan will take current and future climate change impacts into account in all infrastructure projects.

Title 24

Although not originally intended to reduce GHGs, California Code of Regulations Title 24 Part 6: California's Building Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. The 2016 standards have been published and became effective July 1, 2017. The requirement for when the 2008 standards must be followed is dependent on when the application for the building permit is submitted. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 Standards improve upon the 2016 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Buildings whose permit applications are dated on or after January 1, 2020, must comply with the 2019 Standards. The 2019 Standards is a major step towards meeting the Zero Net Energy goal by the year 2030 and is the last of three updates to move California towards achieving that goal. The California Energy Commission updates the standards every three years[16].

South Coast Air Quality Management District (SCAQMD)

In the process of fulfilling its mandate to reduce local air pollution, the SCAQMD has promoted a few programs to combat climate change, e.g., energy conservation, low-carbon fuel technologies, renewable energy, vehicle miles traveled (VMT) reduction programs, and market incentive programs.

[16] 2019 Building Energy Efficiency Standards. California Energy Commission. Became effective January 1, 2020.

Air Quality-Related Energy Policy

In 2011, the SCAQMD Board adopted an Air Quality-Related Energy Policy (SCAQMD, 2011) that integrates air quality, energy, and climate change issues in a coordinated and consolidated manner. The Energy Policy presents policies to guide and coordinate SCAQMD efforts and actions to support the policies.

Local Regulations

The City of Murrieta's updated General Plan (City of Murrieta, 2011) includes goals and policies in several elements that also effect a reduction in GHG emissions by:

- Establishing land use patterns and urban design that support healthy and sustainable lifestyles and businesses through implementing Goal LU-9.
- Establishing a community that provides pedestrian-friendly environments for residential, commercial, business, and recreation uses through implementing Goal LU-10.
- Providing alternative travel modes and facilities to serve residents and employers/employees and reduce vehicle miles traveled through implementing Goal CIR-6.
- Prioritizing energy conservation and the generation of energy from renewable sources as part of an overall strategy to reduce greenhouse gas emissions through implementing Goal CSV-12.
- Diverting solid waste from landfills through waste reduction, re-use, and recycling through implementing Goal CSV-13.
- Encouraging and incentivizing the sustainable development of buildings and neighborhoods, particularly with respect to durability, energy and water use, and transportation impacts through implementing Goal CSV-14.
- Providing a community taking a leadership role in resource conservation and reduction of greenhouse gas emissions by implementing programs to improve municipal operations through implementing Goal CSV-15.
- Improving air quality through an efficient circulation system, reduced traffic congestion, and reduced vehicle miles traveled through implementing AQ-5.

Additionally, the GP added an optional Climate Action Plan as Appendix P that explains the City's commitment to GHG emissions reduction through Climate Action Strategies as listed below:

- Community Involvement Strategy. The community involvement strategy is intended to foster a sense of ownership of the ideas and actions to be carried out within the city. The goal is to create a successful plan that is supported by the community, who will ultimately make these changes.
- Land Use and Community Vision Strategy. The land use and community vision strategy encourage changes in the land use pattern to enable residents to reduce dependence on their cars to get around town.
- Transportation and Mobility Strategy. The transportation and mobility strategy identifies opportunities to improve mobility such as walking, bicycling, and transit use, and to decrease the need to drive.

- Energy Use and Conservation Strategy. The energy use and efficiency strategy recommends ways to increase energy efficiency in existing buildings, enhance energy performance for new construction, and increase use of renewable energy.
- Water Use and Efficiency Strategy. The intent of this strategy is to conserve water through efficient use and conservation.
- Waste Reduction and Recycling Strategy. The strategy builds on past City successes by increasing waste diversion, reducing consumption of materials that otherwise end up in landfills, and increasing recycling.
- Open Space Strategy. This strategy expands the utilization of open spaces for habitat, storm water management, soil retention, air filtration, and cooling, aesthetic and economic value, local food security, increased and improved parks, preservation, and to create new open spaces.

4.8.3 GHG Emissions

National Emissions

The United States is the second largest emitter of GHGs globally (behind China) and emitted approximately 6.0 billion metric tons of CO_2 equivalent ($MTCO_2e$) in 2018 (WRI, 2021a), not including GHG absorbed by forests and agricultural land. The largest source of GHG in the United States (34.2 percent) comes from electrical power generation (WRI, 2021b). Burning fossil fuels for transportation accounted for the second largest portion (28.4 percent). The remaining 37.1 percent of U.S. GHG emissions were contributed by the building, manufacturing/construction, agriculture, fugitive, industrial, waste, bunker fuels, and other fuels.

State Emissions

The World Resources Institute (WRI) reports that in 2018, the average GHG emissions per capita in the United States was 17.74 $MTCO_2e$ (WRI, 2011c) but with a total GHG emissions in California of 425.3 $MMTCO_2e$ in 2018 (ARB, 2020c), California had an average GHG emissions per capita of only 10.76 $MTCO_2e$ (USCB, 2021). California had a larger percentage of its total GHG emissions coming from the transportation sector (40%) and a smaller percentage of its total GHG emissions from the electricity generation sector; i.e., California has 12 percent.

Local Emissions

Appendix P to the Murrieta General Plan (City of Murrieta, 2011) is a Climate Action Plan (CAP) showing existing and projected GHG emissions. The city's existing (2009) community-wide GHG emissions were 0.390 $MMTCO_2e$ and its projected 2020 and 2035 inventories were 0.789 $MMTCO_2e$ and 1.344 $MMCO_2e$, respectively. **Table 4.8-1** shows the results of the community-wide baseline inventory, the projected 2020 inventory, and the projected 2035 inventory. The emissions forecast estimates future emissions under a Business as Usual (BAU) scenario. The BAU scenario assumes that no effort has been made to reduce emissions. Therefore, the future emissions depicted in **Table 4.8-1** present how GHG emissions may increase in Murrieta if no reduction programs are implemented.

Table 4.8-1
BASELINE, 2020, AND 2035 COMMUNITY-WIDE BUISINESS AS USUAL GREENHOUSE GAS INVENTORIES

Source	2009 Baseline		2020 Projected		2035 Projected	
	$MTCO_2e/yr$	% of total	$MTCO_2e/yr$	% of total	$MTCO_2e/yr$	% of total
Residential	91,492	23.5	105,148	13.3	123,770	9.3
Commercial						
Commercial	60,153	15.4	96,636	12.3	146,386	11.0
Office	12,711	3.3	232,750	29.5	532,806	39.9
Business Park	8,332	2.1	23,398	3.0	43,942	3.3
Civic/Institutional	9,333	2.4	8,309	1.1	6,914	0.5
Mixed Use	-	-	3,113	0.4	7,358	0.6
Industrial	3,463	0.9	4,241	0.5	5,302	0.4
Transportation	188,136	48.3	296,651	37.6	444,625	33.3
Waste	14,795	3.8	18,419	2.3	23,363	1.8
Community Totals	**389,717**	**100**	**788,666**	**100**	**1,334,466**	**100**

GHG Thresholds

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, the South Coast Air Quality Management District (SCAQMD) Board adopted an Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans (SCAQMD, 2008). The Interim Guidance uses a tiered approach to determining significance. Although this Interim Guidance was developed primarily to apply to stationary source industrial projects where the SCAQMD is the lead agency under CEQA, in absence of more directly applicable policy, the SCAQMD's Interim Guidance is often used as general guidance by local agencies to address the long-term adverse impacts associated with global climate change.

4.8.4 Impact Thresholds

The following thresholds of significance are based on criteria in Appendix G of the State CEQA Guidelines. A project has the potential to create a significant environmental impact if it would:

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

4.8.5 Impact Analysis

Methodology

Short-term construction GHG emissions and long-term operational GHG emissions were assessed using the California Environmental Emissions Estimator Model (CalEEMod) Version 2016.3.2 (CAPCOA, 2017). This analysis focused upon emissions of CO_2, CH_4, and N_2O only. HFCs, PFCs, and SF_6 would be emitted in negligible quantities by Adams Avenue Project sources, so they are not discussed further.

a) Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant Impact

California has enacted several pieces of legislation that relate to GHG emissions and climate change, much of which set aggressive goals for GHG reductions within the state. Per Senate Bill 97, the California Natural Resources Agency adopted amendments to the CEQA Guidelines, which address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment. However, neither a threshold of significance nor any specific mitigations are included or provided in these CEQA Guideline amendments.

GHG Significance Threshold

Neither the City of Murrieta, the SCAQMD, nor the State CEQA Guidelines Amendments has adopted quantitative thresholds of significance for addressing a project's GHG emissions. Nonetheless, § 15064.4 of the CEQA Guidelines serves to assist lead agencies in determining the significance of the impacts of GHGs. As required in § 15064.4 of the CEQA Guidelines, this analysis includes an impact determination based on the following: (1) an estimate of the amount of GHG emissions resulting from the Adams Avenue Project; (2) a qualitative analysis or performance based standards; (3) a quantification of the extent to which the Adams Avenue Project increases GHG emissions as compared to the existing environmental setting; and (4) the extent to which the Adams Avenue Project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

SCAQMD's guidance (SCAQMD, 2008) uses a tiered approach rather than a single numerical emissions threshold. If a project's GHG emissions "fail" the non-significance of a given tier, then one goes to the next tier.

The threshold selected for this analysis is Tier 3, which establishes a screening significance threshold level to determine significance using a 90% emission capture rate. For Tier 3, the SCAQMD estimated that at a threshold of approximately 3,500 metric tons CO_2e per year emissions would capture 90% of the GHG emissions from new residential projects. Thus, this analysis uses 3,500 $MTCO_2e$ per year as the significance threshold under the first impact criterion in **Section 4.8.3**.

Construction GHG Emissions

Construction is an episodic, temporary source of GHG emissions. Emissions are generally associated with the operation of construction equipment and the disposal of construction waste. To be consistent with the guidance from the SCAQMD for calculating criteria pollutants from construction activities, only GHG emissions from onsite construction activities and offsite hauling and construction worker commuting are considered as project-generated. As explained by the CAPCOA in its 2008 white paper (CAPCOA, 2008), the information needed to characterize GHG emissions from manufacture, transport, and end-of-life of construction materials would be speculative at the CEQA analysis level. CEQA does not require an evaluation of speculative impacts (*CEQA Guidelines* § 15145). Therefore, the construction analysis does not consider such GHG emissions, but does consider non-speculative onsite construction activities, and offsite hauling, and construction worker trips. All GHG emissions are identified on an annual basis.

Estimated criteria pollutant emissions from the Adams Avenue Project's onsite and offsite project construction activities were calculated using CalEEMod, Version 2016.3.2, which was described in **Section 4.3.6**. The results of this analysis are presented in **Table 4.8-2**. The increase in GHG emissions from Adams Avenue Project's Phase I construction activities would be 323 metric tons in 2023 and 252 metric tons in 2024. Phase II construction activities would emit 196 metric tons in 2023 and 210 metric tons in 2025. Total construction GHG emissions would be 981 metric tons. Consistent with SCAQMD recommendations (SCAQMD, 2008, p. 3-10) and to ensure that construction emissions are assessed in a quantitative sense, construction GHG emissions have been amortized over a 30-year period. The amortized value, **32.7 $MTCO_2e$**, has been added to the Adams Avenue project's annual operational GHG emissions. (See below.) Modeling results are in **Appendix B2**.

Table 4.8-2
PROJECT CONSTRUCTION-RELATED GHG EMISSIONS

Year/Phase	Annual Emissions (MT)			
	CO_2	CH_4	N_2O	CO_2e
2023/Phase I	321.1	0.0642	0	322.7
2024/Phase I	251.2	0.0369	0	252.1
2024/Phase II	195.1	0.0344	0	195.9
2025/Phase II	209.4	0.0324	0	210.2
Total	**977**	**0.17**	**0**	**981**

Operational GHG Emissions

For a reasonable maximum emissions case, it was assumed that GHG emissions from the Adams Avenue Project site are currently zero. Operational GHG emissions calculated by CalEEMod are shown in **Table 4.8-3**. Total annual unmitigated emissions from the Adams Avenue Project would be 1,861 $MTCO_2e$ per year. Energy production and mobile sources account for about 92% of annual operational emissions and about 90% of total annual emissions.[17]

Table 4.8-3
PROJECT OPERATIONAL GHG EMISSIONS

Emissions Source	Estimated Project Generated CO_2e Emissions (Metric Tons per Year)
Area Sources	3.45
Energy Demand (Electricity & Natural Gas)	450.95
Mobile (Motor Vehicles)	1,226.11
Solid Waste Generation	46.27
Water Demand	101.18

[17] Calculations are provided in **Appendix B2**.

Emissions Source	Estimated Project Generated CO_2e Emissions (Metric Tons per Year)
Construction Emissions[a]	32.7
Total	**1,861**

[a] *Total construction GHG emissions were amortized over 30 years and added to those resulting from the operation of the project.*

Therefore, under the first significance criterion, GHG emissions would be less than significant, and no mitigation is necessary.

b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG?

Less than Significant Impact

As was noted in **Section 4.8.3.3**, the Climate Action Plan (CAP), as presented in the City's General Plan (City of Murrieta, 2011), has established a streamlined review process for proposed new development projects that are subject to discretionary review and trigger environmental review pursuant to the California Environmental Quality Act (CEQA). To comply with the CAP, the applicant must analyze GHG impacts with a CAP Consistency Checklist (Checklist). This Checklist contains strategies that are required to be implemented by a project if applicable to ensure that the specified emissions targets identified in the CAP are achieved. If a project is consistent with the Checklist, it would therefore not conflict with the CAP and would have a less than significant effect.

Following is a synopsis of the Checklist for this project. The project's completed Checklist is presented in **Appendix B2**.

STEP 1: Land Use Consistency

- Are the proposed land uses in the project consistent with the existing General Plan land use and zoning designations?

  *The Project complies with a special provision of the Downtown Murrieta Specific Plan (see **Section 4.11**)*

STEP 2: CAP Strategies Consistency

1. Zero Net Energy Standards (Measure BE-3)

a) For residential projects, would the project or a portion of the project be subject to building permitting (i.e., building permits issued) on or after January 1, 2023?

The Project's building permits will be issued prior to January 1, 2023.

d) Would the project or portions of the project permitted after January 1, 2023, for residential projects and after January 1, 2025, for nonresidential projects be designed and constructed to comply with the Zero Net Energy standard?

The Project's building permits will be issued prior to January 1, 2023, therefore will not be subject to the Zero Net Energy standard.

2. Construction Waste Diversion (Measure SW-2)

a) For residential projects, recycle and/or salvage for reuse a minimum of 80 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4 of the California Code of Regulations, Title 24?

The Project will comply with Section 4.408.2 of the Title 24 by preparing a Construction Waste Management Plan that will conform with Items 1 through 5 of the Section and be updated as necessary and be available during construction for examination by the enforcing agency.

3. Transportation Demand Management Program (Measure T-7)

a) For the construction of nonresidential projects that would include 50 or more employees, would the project include a transportation demand management plan that meets requirements of Section 16.40 "Transportation Demand Management" of the City's Municipal Code and has been reviewed and approved by the City of Murrieta Public Works Department?

Not Applicable - the Project is a residential project.

4. Electric Vehicle Service Equipment (EVSE) (Measure T-2)

b) Multi-Family Residential Projects: Would 6% of the total parking spaces required, or a minimum of two spaces, whichever is greater, include Electric Vehicle Service Equipment (EVSE) to allow for electric vehicle charging by the resident(s)?

The Project has a total of 241 parking spaces of which 26 will be reserved for electric vehicles for a total of 10.7 percent.

5. Tree Planting (Measure LU-2)

a) For residential and non-residential projects, would the project include the planting of new trees where required by Section 16.26 "Landscaping Standards and Water Efficient Landscaping" of the City's Municipal Code?

The Project will comply with Section 26 of the City's Municipal Code regarding water efficient landscaping by providing for review a Landscape Concept Plan, an acceptable Landscape Documentation Package, and be issued a Certificate of Completion and Security.

4.9 Hazards and Hazardous Materials

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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**	
b) Create a significant hazard to the public or the environment through 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**

The analysis for this section refers to the Phase I Environmental Site Assessment (referred as Phase I or Phase I ESA) by TA-Group DD, LLC (TA-Group) dated January 21, 2021 (Refer to **Appendix F2**); and Limited Phase II ESA Pesticide Sampling Letter Report (referred to as Phase II) by TA-Group DD dated February 17, 2021 (refer to **Appendix F3**). A Phase I report presents information conducted from a site reconnaissance of the project area, historical developments of the project site, and a comprehensive database search to determine if the project site contains potentially Recognized

Environmental Conditions (RECs). The Limited Phase II consisted of soil sampling using a shovel and scoop; and testing using EPA methods 8181A and 6010B. Method 8181A tests for 22 organochlorine pesticides, and Method 6010B for arsenic. Arsenic is used in insecticides and weed killers (DTSC, 2021).

a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact

Construction

A Phase I ESA (refer to **Appendix F2**) was conducted for the project site and revealed a recognized environmental condition (REC) in connection with the subject property (TA Group, 2021, p. 3).[18] The project site appeared developed for agricultural use from as early as the mid-1930's to the mid-1980's. Therefore, agricultural chemical residues could be present in shallow site soils, which is a REC for the project site. The Phase I ESA recommended that limited soil sampling be performed to rule out any potential agricultural chemical residues within shallow soils associated with the historical agricultural use performed onsite, and to determine whether such residues are present in site soils above environmental screening levels for residential use (TA-Group, 2021, p.2).

The barn onsite was present before the oldest (1938) aerial photograph of the site available, based on topographic maps. The barn may contain asbestos-containing materials (ACMs) and/or lead-based paint (LBP). The barn will be dismantled and removed from the site before site preparation for the proposed project would begin. Therefore, ACMs and/or LBP potentially present in or on the barn would not pose hazards to future project residents or construction workers. Impacts would be less than significant.

Agricultural Chemical Residues

The Phase II ESA tested samples of shallow site soils for organochlorine pesticides (OCPs) and arsenic. No OCPs were detected. Arsenic was detected in one out of 12 samples at a concentration of 2.7 mg/kg, well below the environmental screening level (ESL) of 12 mg/kg. Agricultural chemical residues in shallow site soils would not pose a substantial hazard to future project residents because the only agricultural chemical residues detected were at concentrations well below the applicable ESL. Therefore, the project would have a less than significant impact regarding agricultural chemical residues and no mitigation is needed.

Operation

The project would require the transport, storage, use, and disposal of certain chemicals typically used for cleaning and landscaping purposes, such as commercial cleansers, paints, and lubricants for maintenance and upkeep of the proposed buildings and landscaping. These materials would be stored, handled, and disposed of in accordance with applicable regulations. The proposed project would not involve the routine transport, use, or disposal of quantities of hazardous materials that

[18] A recognized environmental condition is the presence or likely presence of any hazardous substances or petroleum products in, at or on a property due to any release to the environment; under conditions indicative of a release to the environment; under conditions that pose a material threat of a future release to the environment (TA Group, 2021, p. 1).

may create a significant hazard to the public or environment. Therefore, hazardous materials impacts from project operation would be less than significant.

b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact

Construction

Project Construction would involve transport, storage, and use of chemical agents, solvents, paints, and other hazardous materials commonly associated with construction activities. Chemical transport, storage, and use would comply with Resource Conservation and Recovery Act (RCRA); Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); Occupational Safety and Health Administration (OSHA); California hazardous waste control law (California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control); California Division of Safety and Health (DOSH); SCAQMD; and Riverside County Department of Environmental Health (RCDEH) requirements. The construction contractor would maintain equipment and supplies onsite for containing and cleaning up small spills of hazardous materials; and in the event of a release of hazardous materials of quantity and/or toxicity that onsite workers could not safely contain and clean up, would notify the RCDEH immediately.[19] Therefore, compliance with applicable laws and regulations during project construction would reduce the potential for accidental releases of hazardous materials, and construction hazards impacts would be less than significant.

ACMs and/or LBPs that could be present in the barn onsite would not pose hazards to future project residents or construction workers, as substantiated above in **Section 4.9.a**. Impacts would be less than significant.

Operation

Project operation would involve the handling and storage of materials such as commercial cleansers, solvents and other janitorial or industrial-use materials, paints, and landscape fertilizers/pesticides during project operations. However, these materials would be stored, handled, and disposed of in accordance with applicable regulations and would not be stored in amounts that would create a significant hazard to the public or the environment through accidental release. The project would have a less than significant impact in this regard.

[19] The Riverside County Department of Environmental Health (RCDEH) is the Certified Unified Program Agency (CUPA) for most of Riverside County including the City of Murrieta; the Certified Unified Program coordinates and makes consistent enforcement of several state and federal regulations governing hazardous materials. The RCDEH is also one of the agencies providing emergency responses to hazardous materials incidents in Riverside County (RCDEH, 2021).

c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant Impact

Murrieta Elementary School, located at 27425 Adams Avenue, is approximately 1,080 feet, or 0.2 mile, west of the project site (Google Earth Pro, 2021).

Construction

During construction, the project would entail the use and handling of limited volumes of commonly used hazardous materials. Project personnel would ensure that use of hazardous materials during construction would adhere to applicable local, state, and/or federal regulations. Project construction would not subject persons at Murrieta Elementary School to substantial hazards, therefore impacts would be less than significant.

Operation

During project operations, the project would result in the handling and storage of materials such as commercial cleansers, solvents and other janitorial or industrial-use materials, paints, and landscape fertilizers/pesticides. However, these materials would be stored, handled, and disposed of in accordance with applicable regulations and would not be stored in amounts that would pose a hazard to persons at Murrieta Elementary School. Therefore, the project would have less than significant impacts in this regard.

d) Would the project 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?

Less than Significant Impact

Government Code § 65962.5 requires the Department of Toxic Substances Control (DTSC) to compile and update, at least annually, lists of the following:

- Hazardous waste and substances sites from the DTSC EnviroStor database.
- Leaking Underground Storage Tank (LUST) sites by county and fiscal year in the State Water Resources Control Board (SWRCB) GeoTracker database.
- Solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside waste management units.
- SWRCB Cease and Desist Orders (CDOs), and Cleanup and Abatement Orders (CAOs).
- Hazardous waste facilities subject to corrective action pursuant to § 25187.5 of the Health and Safety Code, identified by DTSC.

These lists are collectively referred to as the "Cortese List." The project site is not included on the Cortese List.

The Phase I ESA (ESA) included a regulatory database search that identified 31 hazardous materials sites within one mile of the project site. The ESA assessed the 31 sites using a five-criteria screening evaluation of environmental hazard. Two offsite hazardous materials sites met the screening criteria:

- Murrieta Nursery is a cleanup site about 370 feet east of the project site. A gasoline release affected soil and groundwater; the case was closed in 2013.
- Stan's Service is a cleanup site approximately 1,270 feet southwest of the project site. A gasoline release affected soil and groundwater; the case was closed in 2011.

Neither of the above listed sites are considered environmental concerns for the project site (TA Group, 2021). The Phase I ESA identified the potential presence of agricultural chemical residues in site soils as a REC for the project site. The Phase II ESA for the project site did not detect organochlorine pesticides in tests of samples of site soils; and detected arsenic at a concentration well below environmental screening levels. Agricultural chemical residues are not present in site soils at concentrations that would pose substantial hazards to future project residents. Therefore, impacts would be less than significant.

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?

No Impact

The nearest public-use airport to the project site is French Valley Airport approximately 4.4 miles to the east (Caltrans, 2021). The project site is outside of zones surrounding French Valley Airport where land uses are regulated to minimize aviation-related hazards to persons on the ground; and outside of noise compatibility contours for the airport (RCALUC, 2012). Project development would not cause airport-related hazards. No impact would occur and no mitigation is required.

f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant Impact

Construction

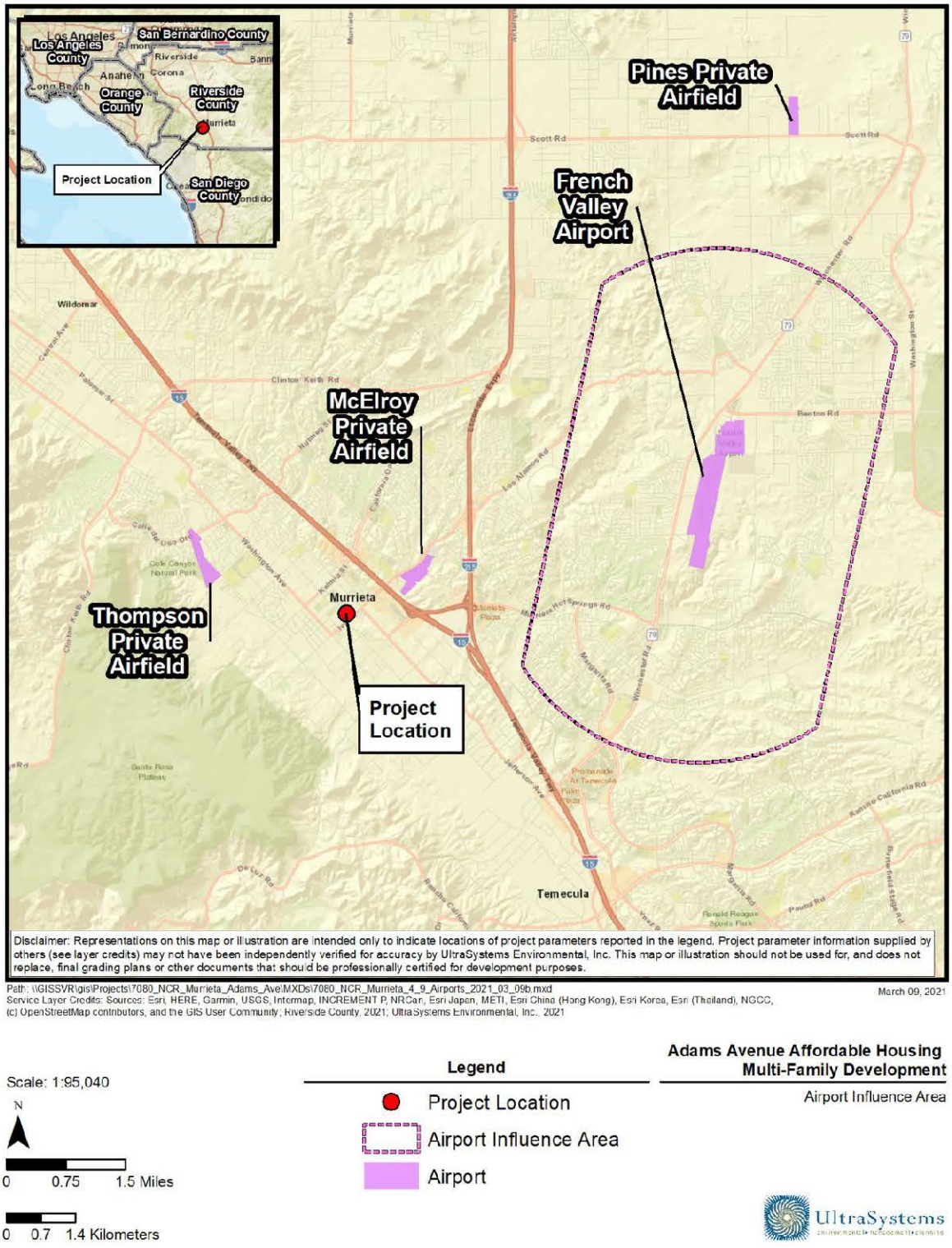
The emergency response plan in effect in the City of Murrieta is the Emergency Operations Plan approved by the City Council in 2017. Jefferson Avenue, Washington Avenue, and Ivy Street are evacuation routes designated by the Western Riverside Council of Governments (WRCOG, 2020, p. 48). The project site is approximately 220 feet west of Ivy Street and 610 feet south of Jefferson Avenue.

As further detailed in **Section 4.17**, the project could temporarily impact street traffic adjacent to the project site during the construction phase due to construction activities into the right-of-way (ROW). Project construction could temporarily reduce the number of lanes or temporarily close a portion of Adams Avenue. The city requires that projects conducting construction work in City roadway rights-of-way get encroachment permits approved by the City Department of Public Works. Emergency access must be maintained. Compliance with city requirements for traffic management during construction in the public ROW would ensure that the project would have a less than significant impact.

Operation

The project site is not located along any of the city's evacuation routes. Additionally, as further detailed in **Section 4.17**, the proposed project would not alter the surrounding roadways that would

Figure 4.9-1
AIRPORT INFLUENCE AREA MAP FOR FRENCH VALLEY AIRPORT



interfere with emergency response in the project area. Therefore, the proposed project would not interfere with the city's evacuation routes and would have less than significant impacts in regard to the city's evacuation plan. Two proposed driveway entrances from Adams Avenue would be designed to meet the development standards of the city and would not result in uses or design features that would create traffic hazards. Therefore, there would be less than significant impacts.

g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact

The California Department of Forestry and Fire Protection (CAL FIRE) developed Fire Hazard Severity Zones (FHSZ) for State Responsibility Areas (SRA) and Local Responsibility Areas (LRA).

Very High Fire Hazard Severity Zone (VHFHSZ) designation refers to either:

a) wildland areas supporting high-to-extreme fire behavior resulting from climax fuels typified by well-developed surface fuel profiles (e.g., mature chaparral) or forested systems where crown fire is likely. Additional site elements include steep and mixed topography and climate/fire weather patterns that include seasonal extreme weather conditions of strong winds and dry fuel moistures. Burn frequency is typically high, and should be evidenced by numerous historical large fires in the area. Firebrands from both short- (<200 yards) and long-range sources are often abundant.

OR

b) developed/urban areas typically with high vegetation density (>70% cover) and associated high fuel continuity, allowing for frontal flame spread over much of the area to progress impeded by only isolated non-burnable fractions. Often where tree cover is abundant, these areas look very similar to adjacent wildland areas. Developed areas may have less vegetation cover and still be in this class when in the immediate vicinity (0.25 mile) of wildland areas zoned as Very High (see above).

The proposed project would include required fire suppression design features (i.e., fire-resistant building materials, where appropriate, smoke detection and fire alarm systems, automatic sprinkler systems, portable fire extinguishers, emergency signage in all buildings, and fuel modification/brush clearance) identified in the latest edition of the California Building Code. The project site is located in a densely urban and developed area that is presently afforded fire protection and Emergency Medical Services (EMS). The project site is not located within a VHFHSV within an LRA or SRA as depicted in **Figures 4.9-2** and **4.9-3**, respectively. Therefore, no impacts would occur and mitigation is not required.

Figure 4.9-2
FIRE HAZARD SEVERITY ZONES – LOCAL RESPONSIBILITY AREA

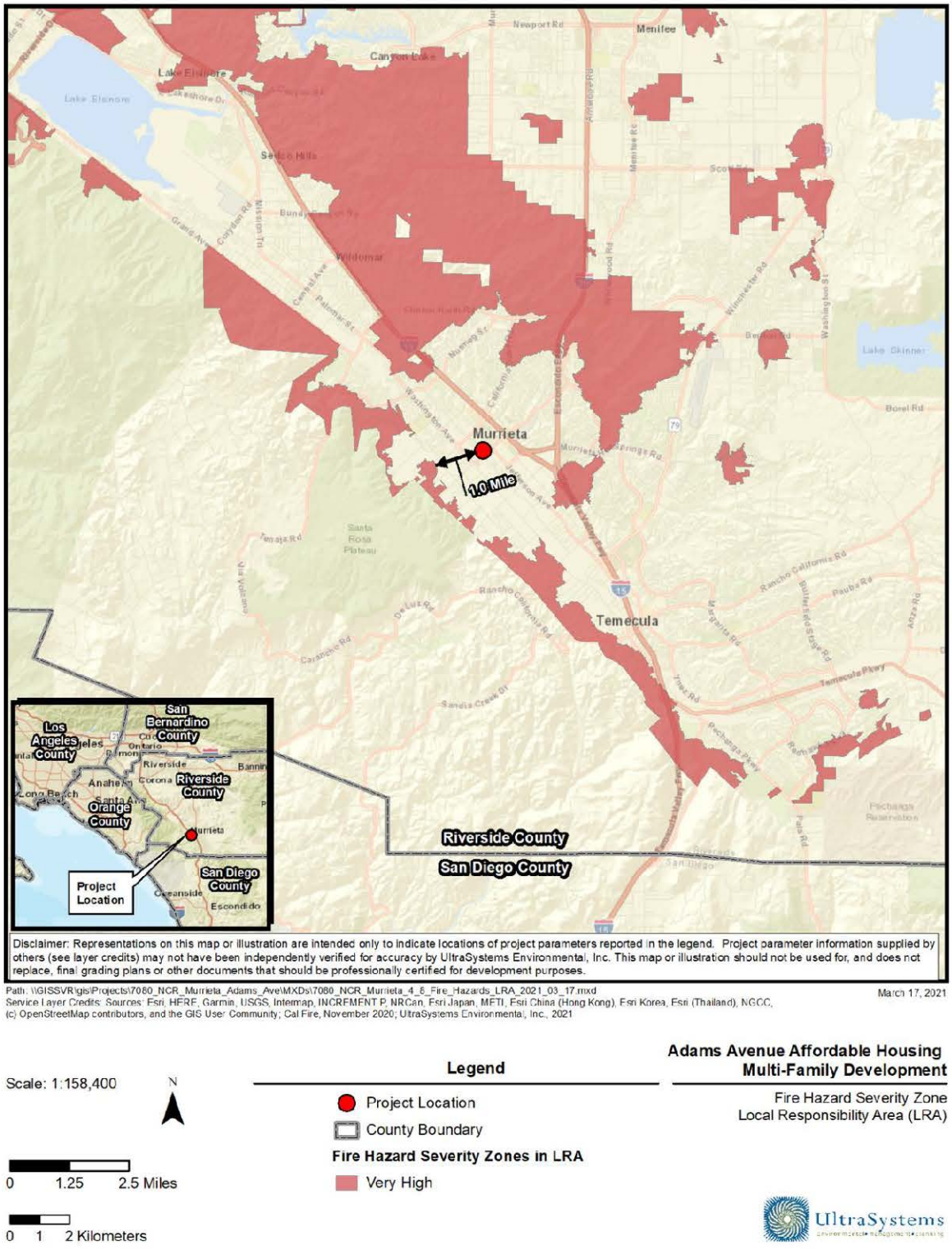
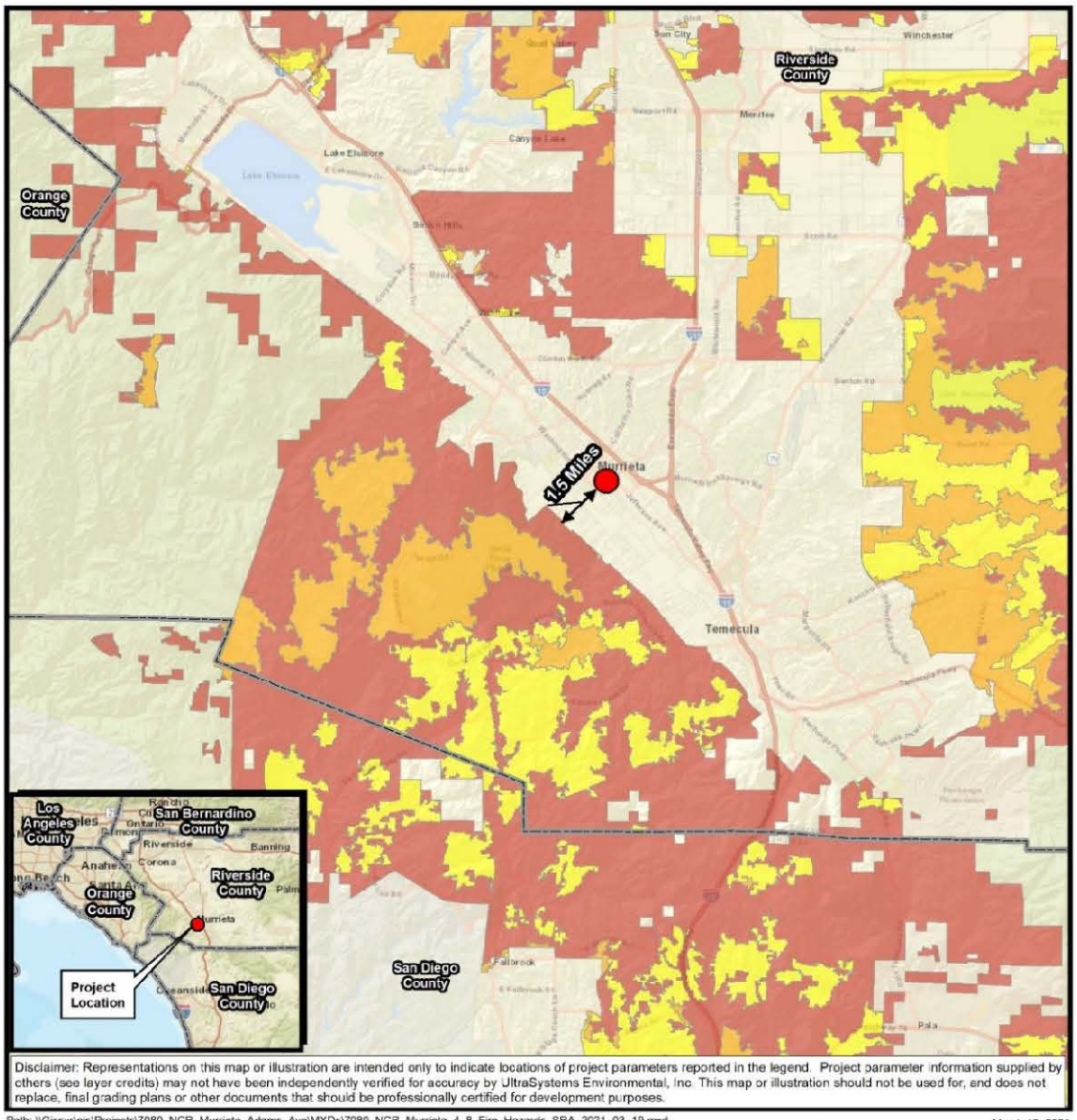


Figure 4.9-3
FIRE HAZARD SEVERITY ZONES – STATE RESPONSIBILITY AREA



4.10 Hydrology and Water Quality

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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:				
i) result in substantial erosion or siltation on or offsite;			**X**	
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;			**X**	
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			**X**	
iv) impede or redirect flood flows?				**X**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				**X**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?				**X**

Information from Project Specific Water Quality Management Plan, dated October 25, 2021 (see **Appendix H1**) and the Preliminary Hydrology Report (see **Appendix H2**), dated October 25, 2021 prepared for the Adams Avenue Affordable Housing Multi-Family Development Project, by RRM Design Group have been included within this section.

a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact

The California State Water Resources Control Board requires its nine Regional Water Quality Control Boards (RWQCBs) to develop water quality control plans (Basin Plans) designed to preserve and enhance water quality and protect the beneficial uses of all Regional waters. Specifically, Basin Plans designate beneficial uses for surface waters and groundwater, set narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State antidegradation policy, and describe implementation programs to protect all waters in the Regions (RWQCB 1994). In addition, Basin Plans incorporate by reference all applicable State and Regional Board plans and policies, and other pertinent water quality policies and regulations. The proposed project is under the jurisdiction of the San Diego RWQCB.

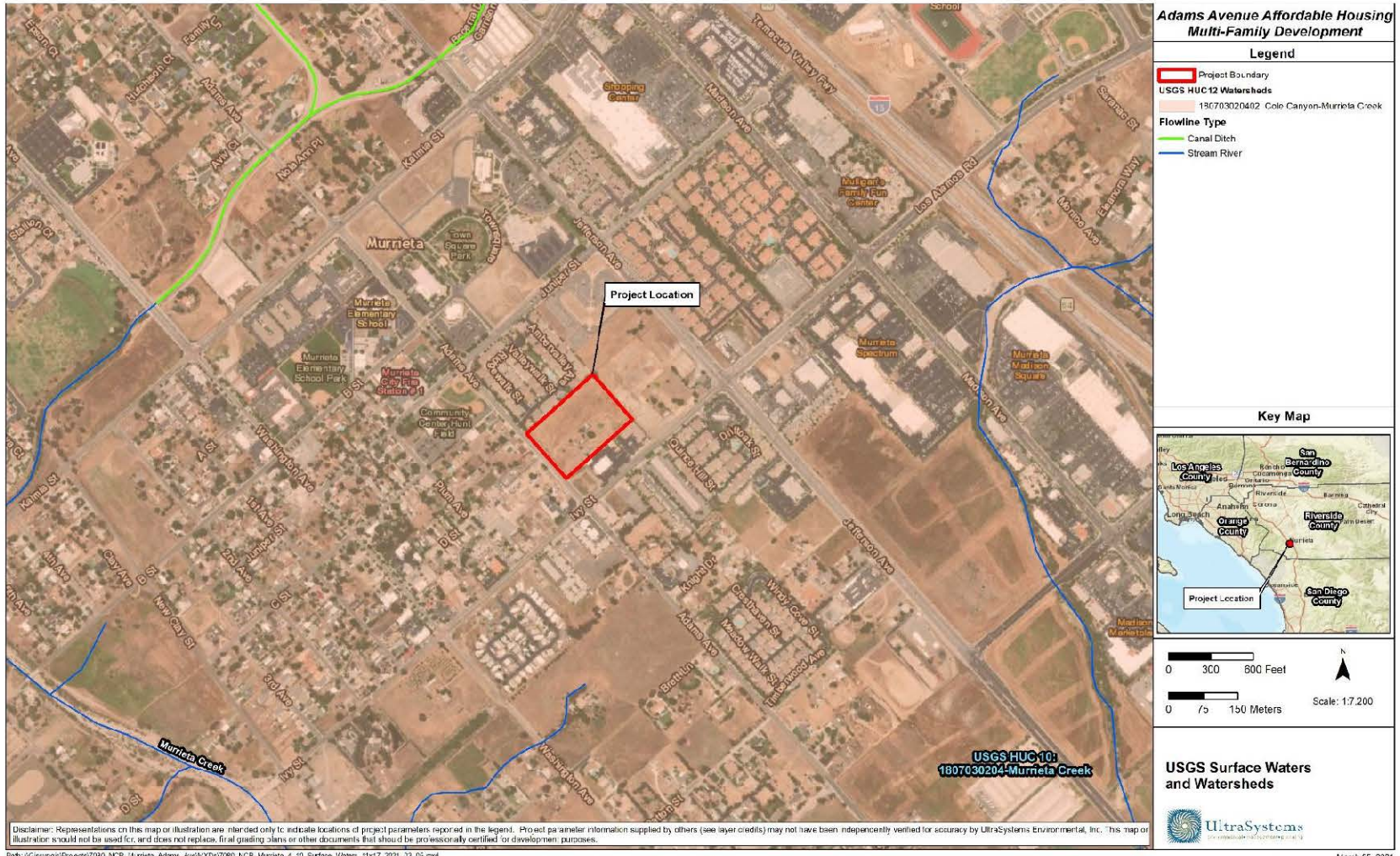
As shown in **Figure 10.4-1,** the project site is located within the USGS Cole Canyon-Murrieta Creek Hydrologic Unit (HU; HU Code 180703020402) within the larger Santa Margarita watershed (USGS HUC 18070302). The Cole Canyon-Murrieta Creek HU drains an area of approximately 53.3 square miles (USEPA, 2021). Under existing conditions, stormwater generated on the project site enters the municipal storm drain system through one storm drain inlet (storm drain 1) approximately 120 feet northwest of the existing driveway along the northeastern side of Adams Avenue, and through a second storm drain inlet (storm drain 2) approximately 230 feet southeast of the existing driveway, at the north side of the intersection of Adams Avenue and Ivy Street. This storm drain discharges into Murrieta Creek which, in turn, discharges into the Upper Santa Margarita River approximately seven miles downstream.

The project site is currently undeveloped except for a driveway, approximately 15 feet in width extending approximately 170 feet into the property, an old barn, and a water well. Under existing conditions, stormwater runoff generated on the project site is discharged as sheet flow toward the west and southwest, and into a storm drain inlet on the project site. This inlet is opposite of and feeds into storm drain 1. Storm water on the southeast side of the project site is discharged as sheet flow through the southeast corner of the project site and enters storm drain 2.

Development of the project has the potential to result in two types of water quality impacts: (1) short-term impacts due to construction-related discharges; and (2) long-term impacts from operation. Temporary soil disturbance would occur during project construction, due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project area. Erosion and sedimentation affect water quality of receiving waters through interference with photosynthesis, oxygen exchange, and respiration, growth, and reproduction of aquatic species. Runoff from construction sites may include sediments and contaminants such as oils, fuels, paints, and solvents. Additionally, other pollutants such as nutrients, trace metals, and hydrocarbons can attach to sediment and be carried by stormwater into storm drains which discharge into Murrieta Creek, the Santa Margarita River and, eventually, to the Pacific Ocean.

Spills and mishandling of construction materials and waste may also potentially leave the project site and negatively impact water quality. The use of construction equipment and machinery may

Figure 4.10-1
USGS SURFACE WATERS AND WATERSHEDS



potentially result in contamination from petroleum products, hydraulic fluids, and heavy metals. Contamination from building preparation materials such as paints and solvents, and landscaping materials such as fertilizers, pesticides, and herbicides may also potentially degrade water quality during project construction. Trash and demolition debris may also be carried into storm drains and discharged into receiving waters.

Construction Pollutants Control

The area of the project is approximately 6.22 acres; the California State Water Resources Control Board (SWRCB) implements water quality regulations under the federal CWA and California Porter-Cologne Water Quality Control Act and require compliance with the National Pollutant Discharge Elimination System (NPDES) for discharges of stormwater runoff associated with a construction activity.

Dischargers whose projects disturb one acre or more of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 2009-009-DWQ, as amended). Construction Activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would contain a site map which would show the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns. The SWPPP would also provide site-specific construction best management practices (BMPs) which would be implemented to minimize or avoid pollutants and sediment from entering receiving waters. The project would be required to inspect, maintain, and replace all BMPs, as needed, throughout the duration of construction.

In addition to the requirements of the Construction General Permit, the City of Murrieta developed a Jurisdictional Runoff Management Program (JRMP) for the Santa Margarita Region (City of Murrieta, 2017). To maintain compliance with Section E4 of the MS4 (described below), the JRMP requires the city to implement a Construction Management Program (Program). The Program also requires the preparation of a SWPPP/Erosion Control Plan which describes the implementation and maintenance of structural and non-structural construction site BMPs to minimize or prevent the introduction of stormwater and non-stormwater pollutants from entering the municipal storm drain system (City of Murrieta, 2017, pp. 50 – 59).

The project would be required to obtain coverage under the Construction General Permit through the SWRCB; the SWRCB and the City of Murrieta would require the project to prepare a SWPPP/Erosion Control Plan, and implement site-specific and season-appropriate BMPs that would minimize or prevent pollutants from leaving the project site and discharging into receiving waters via the municipal storm drain system. For these reasons, potential violations of water quality standards or waste discharge requirements during construction would be less than significant.

Operational Pollutant Controls

In 2013 San Diego RWQCB issued the National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for Discharges from the Municipal Separate Storm Sewer

Systems (MS4s) Draining the Watersheds Within the San Diego Region (Order No. R9-2013-0001, which was amended in 2015 by Orders No. R9-2015-0001 and R9-2015-0100 [NPDES No. CAS0109266]) to counties, cities, and public agencies (co-permittees) within the jurisdiction of the RWQCB. The City of Murrieta is a co-permittee and is therefore subject to waste discharge requirements set forth in the MS4.

The MS4 describes BMPs required during the operational phase of all projects, regardless of project type or size (RWQCB 2013, as amended; p. 92). The MS4 requires BMPs for source control (e.g., prevention of illicit discharges into the MS4; protection of outdoor material and trash storage areas from rainfall, run-on, runoff, and wind dispersal) and low-impact development (LID) BMPs for Priority Development Projects, a category which includes the proposed project (RWQCB 2013, as amended; City of Murrieta 2018, pp. 13 – 15).

To maintain compliance with the MS4 Permit and the JRMP, the project would be required to minimize the short and long-term impacts on receiving water quality from new developments and significant re-development by submitting a Water Quality Management Plan (WQMP), emphasizing implementation of Low-Impact Development (LID) principles and addressing hydrologic conditions of concern, prior to issuance of any grading or building. The intent of the MS4 is to maintain or improve water quality of surface water, prevent water quality degradation, and protect beneficial uses as defined in the water quality control plan (Basin Plan) of the San Diego Basin (RWQCB 2013, as amended).

LID is a leading stormwater management strategy that seeks to mitigate the impacts of runoff and stormwater pollution as close to their sources as possible. LID comprises a set of site design approaches and BMPs that are designed to address runoff and pollution at the source. These LID practices can effectively remove nutrients, bacteria, and metals while reducing the volume and intensity of stormwater flows.

A preliminary WQMP was been prepared for the proposed project which incorporates LID BMPs into project design. The proposed development would maintain existing drainage patterns and discharge locations. Runoff from the site would flow off the proposed roofs through downspouts and overland into proposed permeable pavement and bioretention areas for retention and treatment. Flows from larger storms would be collected by storm drain inlets throughout the site and outlet into proposed underground stormwater detention chamber systems. During final design, the chambers will be adequately sized to meet hydrologic control requirements, reducing post-development peak flow rates to below predevelopment rates for the 2-, 5- , and 10-year storm events per the Santa Margarita Region hydromodification requirements. Outflows from detention chambers will enter the City storm drain system (a 60-inch storm drain in Adams Avenue) through an existing 30-inch storm drain stub to the site from Adams Avenue. (RRM, 2021a, p. 23).

Specific pollutants of concern for this project may include metals, pathogens, pesticides, herbicides, oil and grease, toxic organic compounds, and trash and debris; apart from pesticides, oil and grease, and trash and debris, all the pollutants are 2014 – 2016 § 303(d) listed impairments for project receiving waters (SWRCB 2018). The approach to analyze the runoff from the project site follows the Santa Margarita Region Hydromodification requirements. The program HydroCAD was used to calculate flow rates from the site as well as size detention facilities to decrease the post-development peak flow to that of the predevelopment rates for the 2-, 5-, 10- and 100-year storm events. The proposed development will maintain existing drainage patterns and discharge locations. Runoff from the site will flow off the proposed roofs through downspouts and overland into proposed permeable pavement and bioretention areas for retention and treatment. Flows from larger storms will be

collected by storm drain inlets throughout the site and outlet into proposed underground stormwater detention chamber systems. Outflows from detention chambers will enter the City storm drain system (a 60" storm drain in Adams Avenue) through an existing curb inlet and 30" storm drain from Adams Avenue. (RRM 2021b, p. 3). Runoff from the project site would be captured by bioretention areas and pervious paving, or routed to a detention system to ensure that pollutant levels of post-construction stormwater discharges would not impact beneficial uses or impair water quality.

A preliminary WQMP has been prepared for the project site and is included as **Appendix H1**. The MS4 and the associated WQMP require the implementation of water quality features to ensure that runoff is treated prior to discharge into the storm drain or regional conveyance facilities to the receiving waters. Therefore, with adherence to existing state and regional water quality requirements, impacts to surface water and groundwater quality would be less than significant and no mitigation is required.

b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant Impact

The project site is in the Temecula-Murrieta Basin within the Temecula Valley Groundwater Basin (Basin; California Department of Water Resources [DWR] Basin ID 9-05). The Basin covers approximately 137 square miles in southwestern Riverside County and northern San Diego County. The Temecula Valley Basin is bordered by non-water-bearing crystalline rocks on the northeast, semi-water-bearing tertiary sedimentary rocks on the northwest and southwest, and the Pacific Ocean on the west. Sources of inflow include the Santa Margarita River and precipitation that averages seven to 15 inches per year (DWR 2004).

As detailed in **Section 4.19,** the Western Municipal Water District (WMWD) supplies water to a portion of the City of Murrieta. Water supplies for the Murrieta Service Area consist of imported water from northern California and the Colorado River purchased from the Metropolitan Water District of Southern California; local groundwater from the Temecula Valley Groundwater Basin; and recycled water (RMC, 2016, p. 6-1).

WMWD's water use target for 2020 is 352 gallons per capita per day (gpcd). Estimated project water demand ranges from 134 to 347 acre-feet per year (afy) as shown **Table 4.19-2**; WMWD forecasts that its retail supplies will be sufficient to meet demands in single-dry-year and multiple-dry-year conditions over the 2020-2040 period (RMC, 2016, p. 7-7).

Based on WMWD's analysis and as detailed in **Section 4.19**, the project would not substantially deplete groundwater supplies or result in a substantial net deficit in the aquifer volume or lowering of the local groundwater table. The project would have a less than significant impact in this regard and mitigation is not required.

c) Would the project 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:

i) Result in substantial erosion or siltation on or offsite;

Less Than Significant Impact

Construction

As described in **Section 4.10 a)**, temporary soil disturbance would occur during project construction, due to earth-moving activities such as excavation and trenching for foundations and utilities, soil compaction and moving, cut and fill activities, and grading. Disturbed soils are susceptible to high rates of erosion from wind and rain, resulting in sediment transport via stormwater runoff from the project area. Implementation of the required SWPPP and JRMP BMPs, including installation, maintenance, and replacement of BMPs, as discussed in **Section 4.10 a)** would minimize or avoid potential impacts resulting from on- or offsite erosion and siltation to a level that is less than significant.

Operation

As detailed in **Section 4.10 a)**, the LID BMPs proposed as part of project design would minimize or avoid on- or offsite erosion and siltation by a combination of maintaining drainage patterns, installation of landscaping, and installation of LID BMPs which would prevent erosion and prevent siltation-laden stormwater from leaving the site. Applicable regulations (e.g., the MS4 permit, and installation of LID BMPs, including site design, infiltration and pre-treatment BMPs, etc.), would limit pollutant discharges from development of the project. The project's adherence to existing requirements would reduce erosion and siltation during operation; therefore, impacts resulting from operation of the project would be less than significant.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Less than Significant Impact

The project Preliminary Hydrology Report (RRM, 2021b), included as **Appendix H2** to this document, provides calculations and exhibits to estimate the values for the existing and proposed condition stormwater flows.

The Preliminary Hydrology Report determined that the proposed drainage design for this project meets the applicable standards and requirements of the Santa Margarita Region. The drainage plan proposed in the Preliminary WQMP is consistent with the historical drainage patterns for the proposed project site. The LID BMPs proposed by the Preliminary WQMP would mitigate the post-construction increase in peak flow of runoff from the site for the 2-, 5-, 10 and 100 -year storm events (RRM, 2021b, p. 4).

The proposed development would increase the impervious area at the site from 1.7% to approximately 72%. This increase in impervious area results in an increased peak flow generated from the project site requiring the design of detention facilities. The proposed detention facilities consist of two underground stormwater chamber systems at the western side of the site. However, During final design, the post-development runoff hydrograph will be routed through stormwater detention facilities to reduce the post-development peak flows to below the pre-development rates (RRM, 2021b, p. 4) .As discussed in the project's preliminary WQMP and preliminary Hydrology Report (RRM, 2021a, 2021b), the project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

iv) Impede or redirect flood flows?

No Impact

The project site is located on the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Riverside County, California and Incorporated Areas (Map Number 06065C2715G, effective August 28, 2008); the site is located in Zone X, defined on this FIRM as *Areas determined to be outside the 0.2 percent chance* [500-year] *floodplain* (FEMA, 2008). The floodplain (i.e., flood hazard zone) nearest to the project site is the 500-year floodplain associated with Murrieta Creek; the eastern boundary of this floodplain is mapped approximately 0.17 mile west of the project site (FEMA, 2009; Fuscoe, 2020b). The project site is located outside the nearest 500-year floodplain and the proposed project would not impede or redirect flood flows. No impact would occur, and mitigation is not required.

d) In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

No Impact

Four dams or reservoirs are in the region of the proposed project: Lake Elsinore (City of Lake Elsinore), Railroad Canyon Lake (City of Canyon Lake), and two in unincorporated Riverside County, Diamond Valley Lake and Lake Skinner. The project would not be located within the dam breach inundation areas of the dams or reservoirs (DWR, 2021) and would not be at risk of flood hazards due to dam breaches. As discussed previously, the project site is located outside the 500-year floodplain and would not be at risk of inundation by flood hazards.

The tsunami inundation area nearest to the project site is in the mouth of the Santa Margarita River in the City of Oceanside and extends upstream approximately 0.5-mile northeast of Interstate 5 (CEMA, CGS, and USC, 2009). The project site is located approximately 25 miles northeast of this inundation area and therefore would not be at risk of inundation by tsunami.

A seiche is an oscillating wave, formed by earthquakes or winds, in an enclosed or partially enclosed waterbody. The nearest waterbodies to the project site in which a seiche could form are Lake Elsinore, Railroad Canyon Lake, Diamond Valley Lake, and Lake Skinner; however, as discussed above, the project site is not within the dam breach inundation areas mapped for these waterbodies (DWR, 2021), and the project would not be at risk of inundation by seiche.

The proposed project would not be at risk of inundation by flood hazards, tsunami, or seiche, and would therefore not be at risk of release of pollutants due to inundation. No impact would occur, and mitigation is not required.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact

One water well (State Well Number 07S03W17R003S) is located near the southwest edge of the project site, north of Storm drain 1. This well was drilled in 1962 to a depth of 300 feet (CASGEM 2021, Holly, 2021). Though no longer in use, the original pump remains in place; this well would be abandoned prior to ground-disturbing activities (Riverside County Ord. 682, as amended).

As discussed in **Section 4.10 a)**, the proposed project would comply with the Construction General Permit and the JRMP by developing and implementing a site-specific SWPPP and construction stormwater BMPs throughout the construction phase. The proposed project would also comply with the MS4 Permit by incorporating LID BMPs into project design, which would avoid or minimize the amount and type of pollutants leaving the project, entering receiving waters, and impacting water quality and beneficial uses defined for these waters by the Basin Plan (RWQCB, 1994). In addition, the LID BMPs would allow stormwater infiltration into the local aquifer, similar to existing conditions and minimize or avoid impacts to groundwater quality and beneficial uses of the Santa Margarita Groundwater Basin (RWQCB, 1994). The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan; no impact would occur, and mitigation is not required.

4.11 Land Use and Planning

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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**	

a) Would the project physically divide an established community?

No Impact

The project site is surrounded by multi-family homes to the north, commercial buildings to the south, undeveloped land to the east, and a mix of single-family homes and a mobile home park across Adams Avenue to the west (Google Earth Pro, 2021). The project would not divide existing public spaces in the vicinity of the site or extend beyond the project site's boundaries. Furthermore, no streets or sidewalks would be permanently closed as a result of the development. The project would utilize existing roadways and there would be no change in roadway patterns. No separation of uses or disruption of access between land use types would occur as a result of the project. Therefore, the project would not physically divide an established community and no impact would occur.

b) Would the project 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?

Less than Significant Impact

The project site has a General Plan land use designation of Multiple-Family Residential (MFR) (refer to **Figure 4.11-1** below). The project site is zoned Downtown Murrieta Specific Plan (DMSP), and has a designation of Multi-Family Residential under the DMSP (see **Figures 4.11-2** and **4.11-3** below). Under the existing General Plan and zoning designations, onsite residential development is permitted up to a minimum base density of 30.0 dwelling units per acre (du/ac) (City of Murrieta, 2020a; RBF Consulting, 2011, p. 3-8, Table 7-4 on p. 97). The project proposes to have a density of 32 du/ac.

Figure 4.11-1
GENERAL PLAN LAND USE DESIGNATION

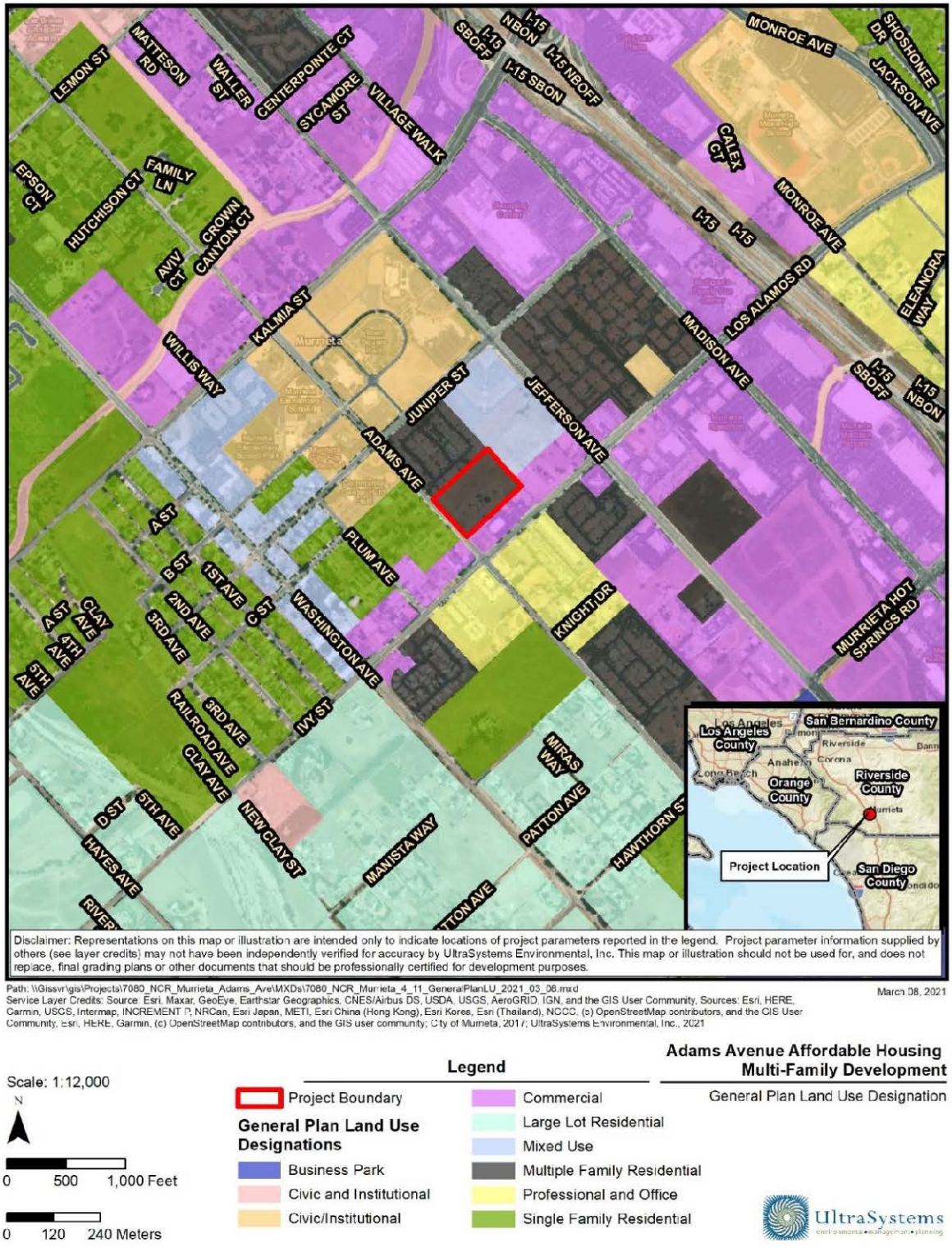
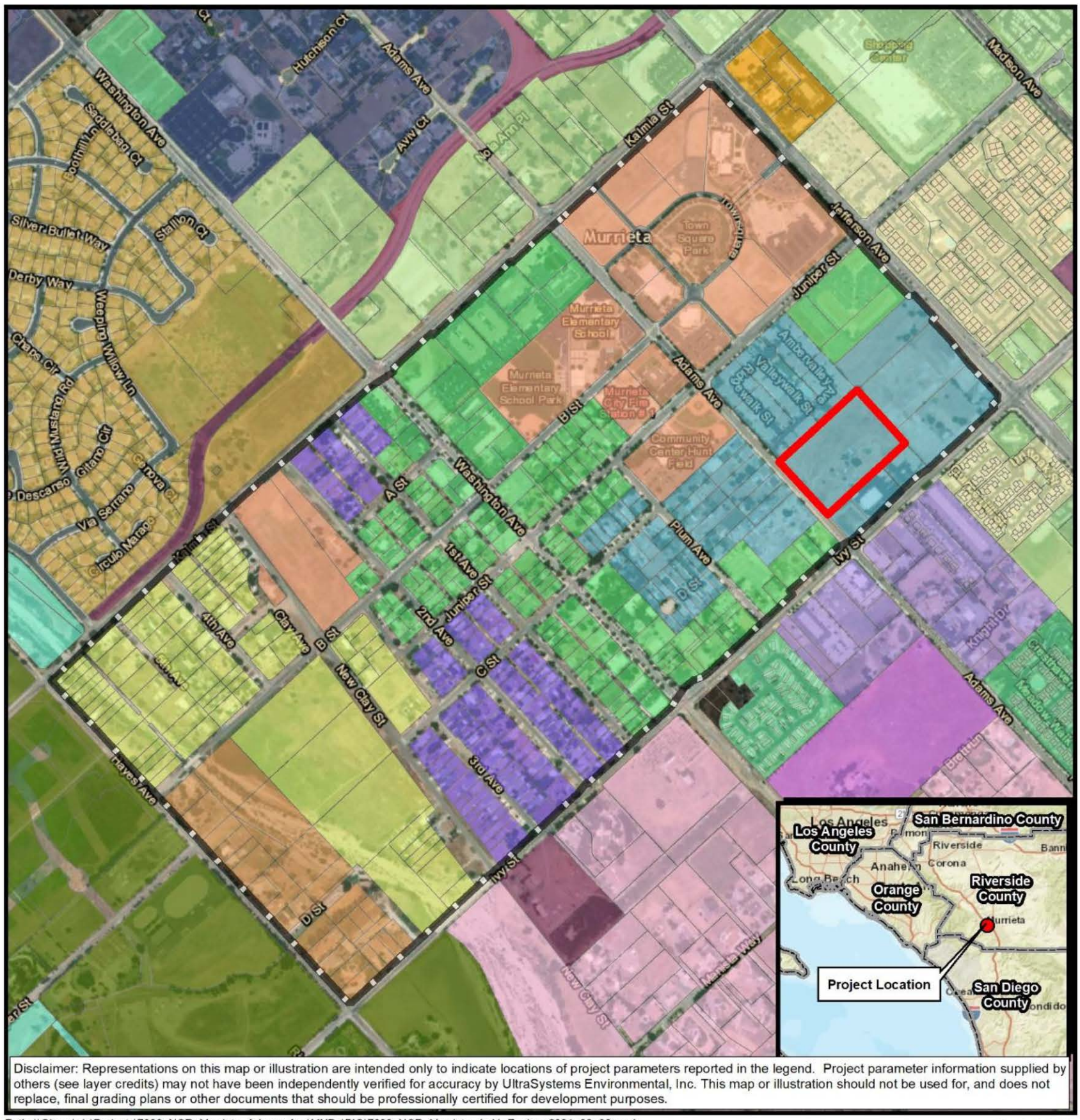


Figure 4.11-2
ZONING DESIGNATION



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\Gissvr\gis\Projects\7080_NCR_Murrieta_Adams_Ave\MXDs\BIO\7080_NCR_Murrieta_4_11_Zoning_2021_03_30.mxd
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community; City of Murrieta, 2021; UltraSystems Environmental, Inc., 2021

March 30, 2021

Scale: 1:9,600

N

0 400 800 Feet

0 90 180 Meters

Legend

- Project Boundary
- Downtown Murrieta Specific Plan

City of Murrieta Zoning

- Civic/Institutional (C/I)
- Community Commercial (CC)
- Community Commercial (MF-2)
- Estate Residential 1 (ER-1)
- Estate Residential 2 (ER-2)
- Multi-Family 1, Residential (MF-1)
- Multi-Family 2, Residential (MF-2)
- Neighborhood Commercial (NC)
- Office (O)
- Open Space (OS)
- Rural Residential (RR)
- Single-Family 1, Residential (SF-1)
- Single-Family 2, Residential (SF-2)

Downtown Murrieta Specific Plan Zoning

- Mixed Use
- Multi-Family
- Public/Civic/Institutional
- Rural Residential
- Single Family-1
- Single Family-2

Adams Avenue Affordable Housing Multi-Family Development

Zoning Designation

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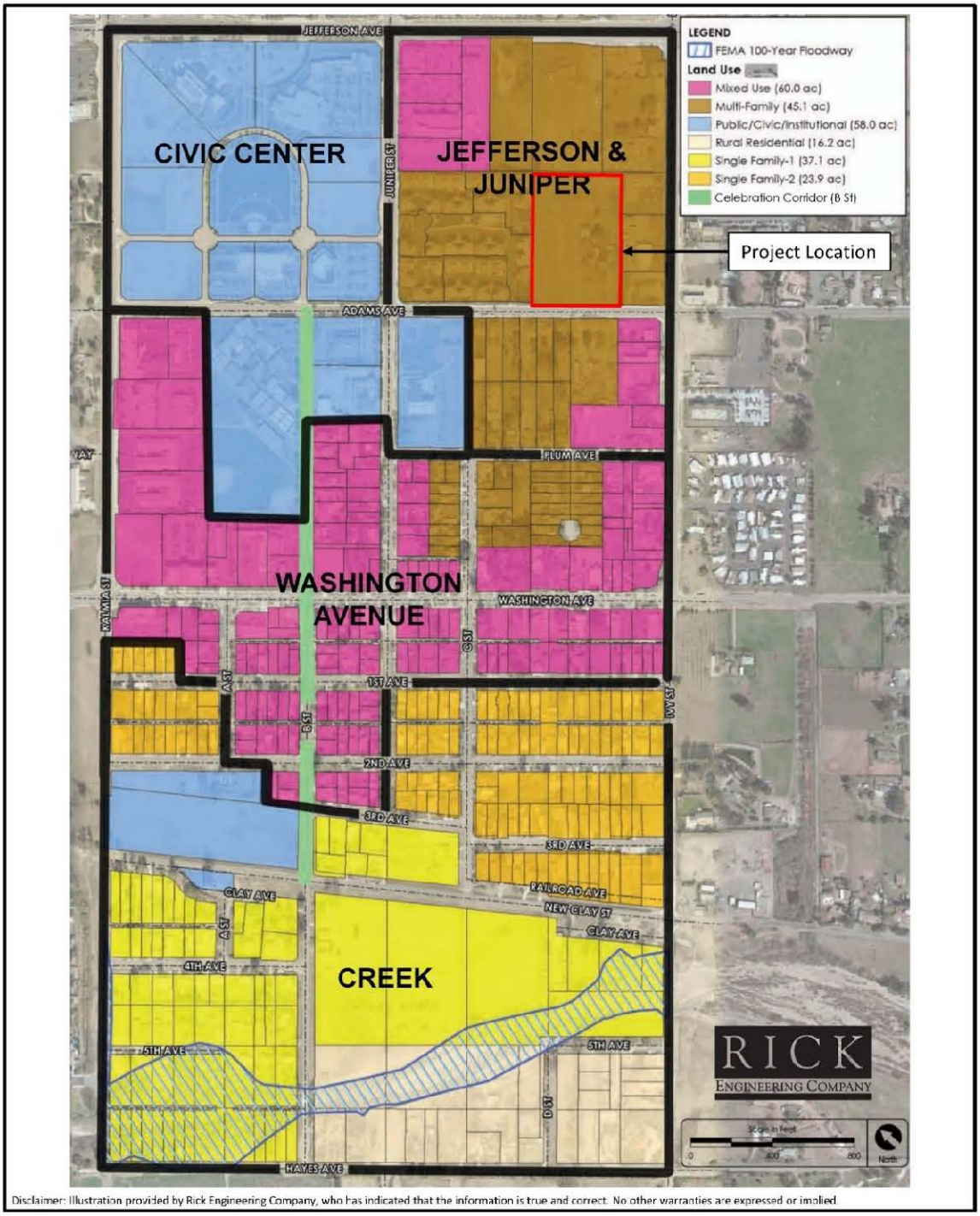
Figure 4.11-3
DOWNTOWN MURRIETA SPECIFIC PLAN ZONING DESIGNATION



Disclaimer: Illustration provided by Rick Engineering Company, who has indicated that the information is true and correct. No other warranties are expressed or implied.

Sources: Rick Engineering Company, Rick Community Planning, March 7, 2017.
(*Downtown Murrieta Specific Plan*, p. 23, Figure 4-1)

UltraSystems

Adams Avenue Affordable Housing
Multi-Family Development

Downtown Murrieta Specific Plan
Land Use and Planning Areas

Downtown Murrieta Specific Plan

The Downtown Murrieta Specific Plan Area is the historic core of the City. Bounded by Kalmia Street to the north, Ivy Street to the south, Hayes Avenue to the west and Jefferson Avenue to the east, the area encompasses approximately 252 acres (RBF Consulting, 2011, p. 3-18 to 3-19).

The area was originally part of Juan Murrieta's Rancho and was purchased by the Temecula Land and Water Company in 1884, when the land was subdivided into a variety of individual lots. Over the years, the land was developed with a range of residential and commercial uses. The predominant use in the area remained residential, with the majority of development activity occurring around Clay Street's Fountain House Hotel and the railroad station. Commercial development began to characterize Washington Avenue at the turn of the 20th century. Today, Washington Avenue and the entire Historic Murrieta are reminiscent of the City's past, with a mixture of historic commercial and residential buildings (RBF Consulting, 2011, p. 3-18).

The Downtown Murrieta Specific Plan includes six land use designations/zones: Rural Residential, Residential – Single Family 1, Residential – Single Family 2, Multi-family, Mixed-use, and Civic/Institutional. At buildout, the Downtown Murrieta Specific Plan would allow for 1,566 residential dwelling units and 1,229,000 square feet of non-residential uses (RBF Consulting, 2011, p. 3-7). Refer to **Table 4-11.1**, which provides details about the Downtown Murrieta Specific Plan buildout limitations.

Table 4-11-1
DOWNTOWN MURRIETA SPECIFIC PLAN BUILDOUT LIMITATIONS

Land Use	Acres	Dwelling Unit/ Acre Range	Dwelling Units	Square Feet
Rural Residential (RR)	16.2	Up to 0.5	8	N/A
Residential – Single-Family 1 (RS-1)	37.1	Up to 5	74	N/A
Residential – Single-Family 2 (RS-2)	23.9	Up to 10[1]	96	N/A
Residential – Multi-Family (RMF)	45.1	18 to 30	812	N/A
Civic/Institutional (CI)	58	N/A	N/A	279,000
Mixed Use	60	Up to 24	576	950,000[2]
Floodway	12.5	N/A	N/A	N/A
Total	**252.8**	N/A	**1,566**	**1,229,000**

[1] Density up to 15 dwelling units may be granted for Single-Family Attached housing projects.
[2] Assumes 300,000 SF of commercial and 650,000 SF of office.
Source: RBF Consulting, 2011, p. 3-8
N/A = Not Applicable

The project proposes a density of 32 du/ac. The Specific Plan states that APN 906-080-018 (the APN of the project site) is owned by the Murrieta Housing Authority and required to develop to a minimum of 30 dwelling units per acre (Rick Community Planning, 2017 p. 28). Therefore, the proposed project would be consistent with the City's density requirements for the project site.

The Downtown Murrieta Specific Plan allows for a maximum of 812 multi-family housing units to be developed within the specific plan area, and the proposed project would develop 200 multi-family housing units. As of April 2021, there are 111 multi-family townhomes located in the Amberwalk

neighborhood, located directly north of the project site. Additionally, the city approved a project in 2017, The Ranch, which proposes a 333-unit multi-family housing development (Stiehl, 2021). Following implementation of current and future approved multi-family developments in the specific plan area, and the proposed project, an additional 168 multi-family housing units[20] could be developed in the Downtown Murrieta Specific Plan area. Therefore, the proposed project would adhere to applicable General Plan land use, zoning, and specific plan regulations and the project would have a less than significant impact regarding conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

City of Murrieta General Plan Land Use Element

Citywide Balance of Land Uses

The City of Murrieta has experienced rapid growth with the majority of the growth being single family residential development. As a result of this growth, Murrieta is perceived as lacking an equitable distribution of residential, commercial, and public uses to provide convenient accessibility to all Murrieta residents (RBF Consulting, 2011, p. 3-20). The city seeks to provide an equitable and functional distribution of private and public enterprise including a range of housing types, access to retail and service uses, parks and civic facilities and local employment opportunities. To achieve this, the city seeks to provide for a more effective land use policy that expands and enhances community-wide access to jobs and services. With considerable potential for growth due to available vacant land within the community, it is anticipated that Murrieta will continue to provide growth opportunities well into the future (RBF Consulting, 2011, p. 3-20).

The proposed project would be consistent with the City's goal of balanced land uses by creating multi-family homes on an underutilized vacant lot that would provide more equitable distribution of residential land uses compared to the single-family homes that comprise a majority of the City's housing options (RBF Consulting, 2011, p. 3-20). Additionally, the proposed project is within walking distance to parks, schools, businesses and commercial centers, which enhances community-wide access to jobs and services.

The City of Murrieta General Plan Land Use Element contains a variety of goals and policies that have been established to guide the future development and redevelopment of the City of Murrieta, including those associated with the City's 10 Community Priorities (RBF Consulting, 2011, p. 3-29). The following Land Use Element goals and policies are applicable to the proposed project:

GOAL LU-1 A complementary balance of land uses throughout the community that meets the needs of existing residents and businesses as well as anticipated growth and achieves the community's vision.

POLICIES

LU-1.1 Identify appropriate locations for residential and non-residential development to accommodate growth through the year 2035 on the General Plan Land Use Policy Map (Exhibit 3-4).

[20] 812 (total multi-family units allowed in the Downtown Murrieta Specific Plan area) – 111 (Amberwalk neighborhood) – 333 (The Ranch) – 200 (the proposed project) = 168 remaining multi-family units which can be built in the Downtown Murrieta Specific Plan area.

LU-1.2 Ensure future development provides for a variety of commercial, industry, and housing that serve the spectrum of incomes within the region.

LU-1.3 Establish a range of residential density and non-residential intensities to encourage a wide range of development opportunities.

The project site is an appropriate location for the proposed project because it is zoned for residential. The proposed project would help the City of Murrieta achieve a balance of housing options, as the majority of existing residences in the city are single-family homes.

GOAL LU-3 Stable, well-maintained residential neighborhoods in Murrieta.

POLICIES

LU-3.4 Strive to provide a diverse mix of housing types, along with uniformly high standards of residential property maintenance to preserve residents' real estate values and their high quality of life.

LU-3.5 Prohibit uses that lead to deterioration of residential neighborhoods, or adversely impact the safety or the residential character of a residential neighborhood.

The project applicant would maintain the operation of the proposed project and in doing so would preserve the residents' quality of life. The proposed project would be developed on an underutilized lot and would thus improve the character of area. Additionally, the proposed project would be carefully designed to be consistent with the surrounding neighborhood's character and design.

GOAL LU-4 A housing stock that meets the diverse needs of Murrieta's existing and future residents.

POLICIES

LU-4.1 Provide for housing opportunities that address the needs of those who currently live or desire to live in Murrieta.

LU-4.3 Locate multiple-family housing adjacent to jobs, retail, schools, open space, public transportation, and transportation corridors.

The proposed project would create more affordable housing opportunities within the city and would be located within walking distance to surrounding schools, business parks, parks, commercial centers and bus routes. The closest bus stop is Bus Stop 5 [Juniper Street and Kalmia Street] of the Riverside Transit Agency (RTA) Route 23 (RTA, 2021).

GOAL LU-9 Land use patterns and urban design that support healthy and sustainable lifestyles and businesses.

POLICIES

LU-9.6 Provide pedestrian-oriented urban design through creative use of site development standards.

LU-9.7 Encourage development patterns to become more conducive to short, local, and walkable trips, which could increase opportunities for physical activity and decrease time spent driving.

LU-9.9 Ensure adequate buffers are provided between residential and non-residential uses.

The proposed project would have amenities such as an outdoor pool, children's playground, community center, community garden, half basketball court, outdoor fitness stations, conversation areas, pet-friendly green space, and Boys & Girls Club, that would promote pedestrian-oriented design and physical activity. The project site would be located within walking distance to surrounding schools, the Ivy Springs Business Park, parks, commercial centers and bus routes to encourage short, local and walkable trips within the project area.

Stores are located directly south of the project site opposite Adams Avenue. The proposed project would follow all required setback requirements of the MF-3 zoning designation within Table 16.08-4 (Residential (Multi-Family) Zones General Development Standards) of the City's Municipal Code (City of Murrieta, 2021), which would ensure that an adequate buffer is provided between the proposed residential project and non-residential commercial land uses to the south.

GOAL LU-10 A community that provides pedestrian-friendly environments for residential, commercial, business, and recreation uses.

POLICIES

LU-10.1 Prepare and use design guidelines to encourage high-quality, pedestrian oriented design that enhances the public realm.

The project proposes pedestrian paseos on-site that would connect to existing and future paseos in the project vicinity.

Based on the analysis above, the proposed project is consistent with the applicable city land use regulations, and the project would have a less than significant impact regarding conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.12 Mineral Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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**

a) Would the project 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?

and

b) Would the project 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?

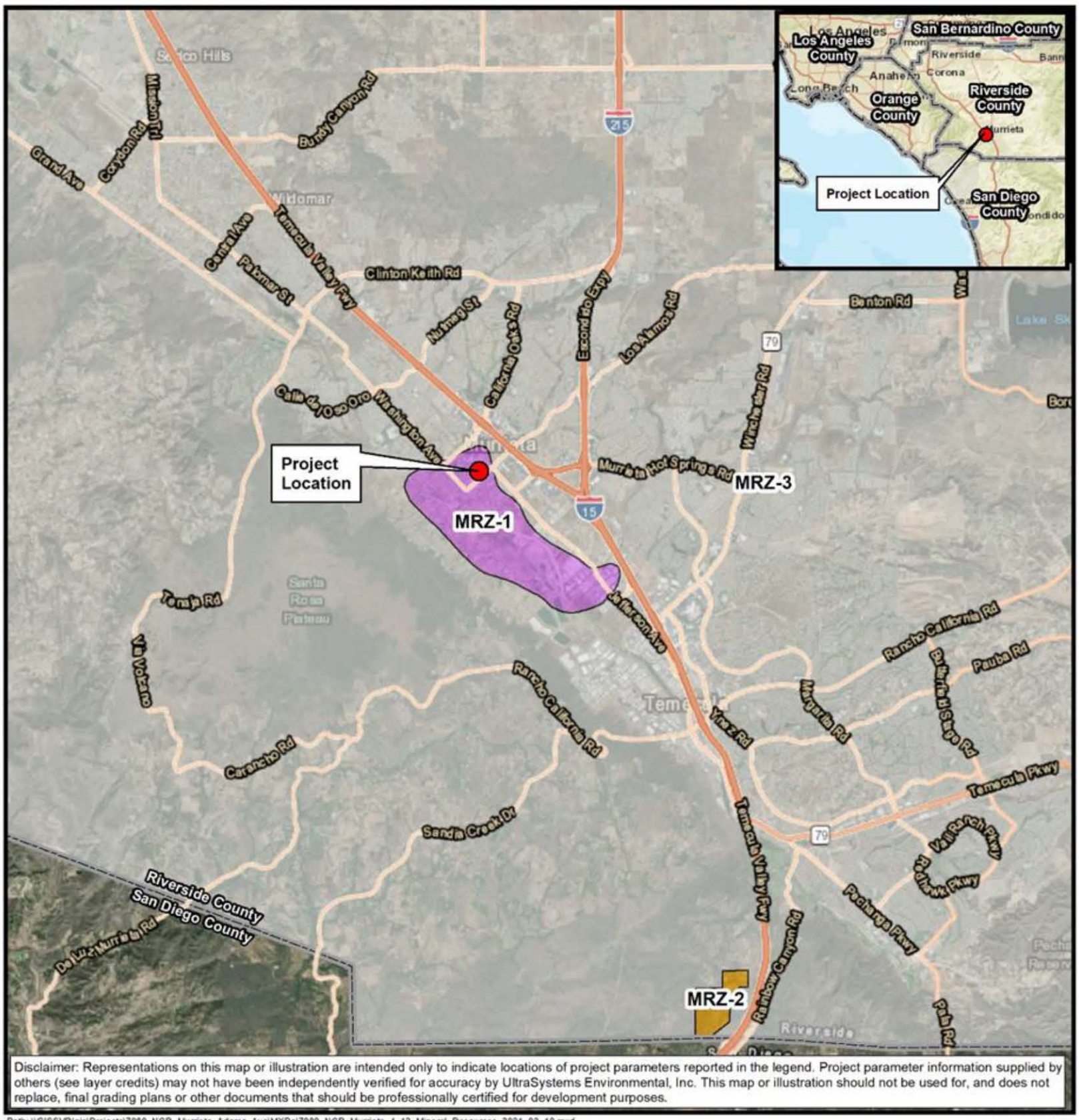
No Impact

Assessment of mineral resources is based on the State of California's Mineral Land Classification/Designation Program established after the adoption of the Surface Mining and Reclamation Act (SMARA) in 1975. The primary objectives of SMARA are the assurance of adequate supplies of mineral resources important to California's economy and the reclamation of mined lands. These objectives are implemented through land use planning and regulatory programs administered by local governments with the assistance of the California Geological Survey (CGS). The CGS develops information on the locations of important mineral deposits, that is, mineral land classification.

As detailed on the CGS Updated Mineral Land Classification Map for the Temescal Valley (DOC, 2014), the project site is classified within SMARA designated Mineral Resource Zone-1 (MRZ-1) defined as areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources (refer to **Figure 4.12-1**). No mines within the City of Murrieta are mapped on the DOC Division of Mine Reclamation *Mines Online* map (DOC, 2021a). According to the DOC Division of Oil, Gas, & Geothermal Resources Well Finder, the project site is not in an oilfield, and no oil or gas wells are present on or near the site (DOC, 2021b) (refer to **Figure 4.12-2**).

The City of Murrieta General Plan Conservation Element shows the Murrieta Pit, a sand and gravel resources site, near the intersection of Jefferson Avenue and Hawthorn Street, approximately 0.5 mile southeast of the project site (City of Murrieta, 2020d). In a record dated 1991 the Murrieta Pit, which is closed, is identified on the US Geological Survey *Mineral Resource Data System* as a past producer of sand and gravel (USGS, 2021). Project development would not cause a loss of availability of mineral resources valuable to the region. The project site is surrounded by urban land uses incompatible with mining. Therefore, no impact would occur.

Figure 4.12-1
DESIGNATED MINERAL RESOURCE ZONE



Disclaimer: Representations on this map or illustration are intended only to indicate locations of project parameters reported in the legend. Project parameter information supplied by others (see layer credits) may not have been independently verified for accuracy by UltraSystems Environmental, Inc. This map or illustration should not be used for, and does not replace, final grading plans or other documents that should be professionally certified for development purposes.

Path: \\GISSVR\gis\Projects\7080_NCR_Murrieta_Adams_Ave\MXDs\7080_NCR_Murrieta_4_12_Mineral_Resources_2021_03_10.mxd
Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community, Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Esri, HERE, Garmin, (c) OpenStreetMap contributors, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community; Russell V. Miller and Lawrence L. Busch, PG #3331 and PG #6440 (California Department of Conservation, California Geological Survey), 2014; UltraSystems Environmental, Inc., 2021

March 11, 2021

Adams Avenue Affordable Housing
Multi-Family Development
Designated Mineral Resource Zones

Scale: 1:126,720

N

0 1 2 Miles

0 1 2 Kilometers

Legend

- Project Location
- County Boundary

Mineral Resource Zone (MRZ)

- MRZ-1 : Areas where available geologic information indicates that little likelihood exists for the presence of significant mineral resources.
- MRZ-2 : Areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. This zone shall be applied to known mineral deposits or where well-developed lines of reasoning, based upon economic-geologic principles and adequate data, demonstrate that the likelihood for occurrence of significant mineral deposits is high.
- MRZ-3 : Areas containing mineral occurrences of undetermined mineral resource significance.

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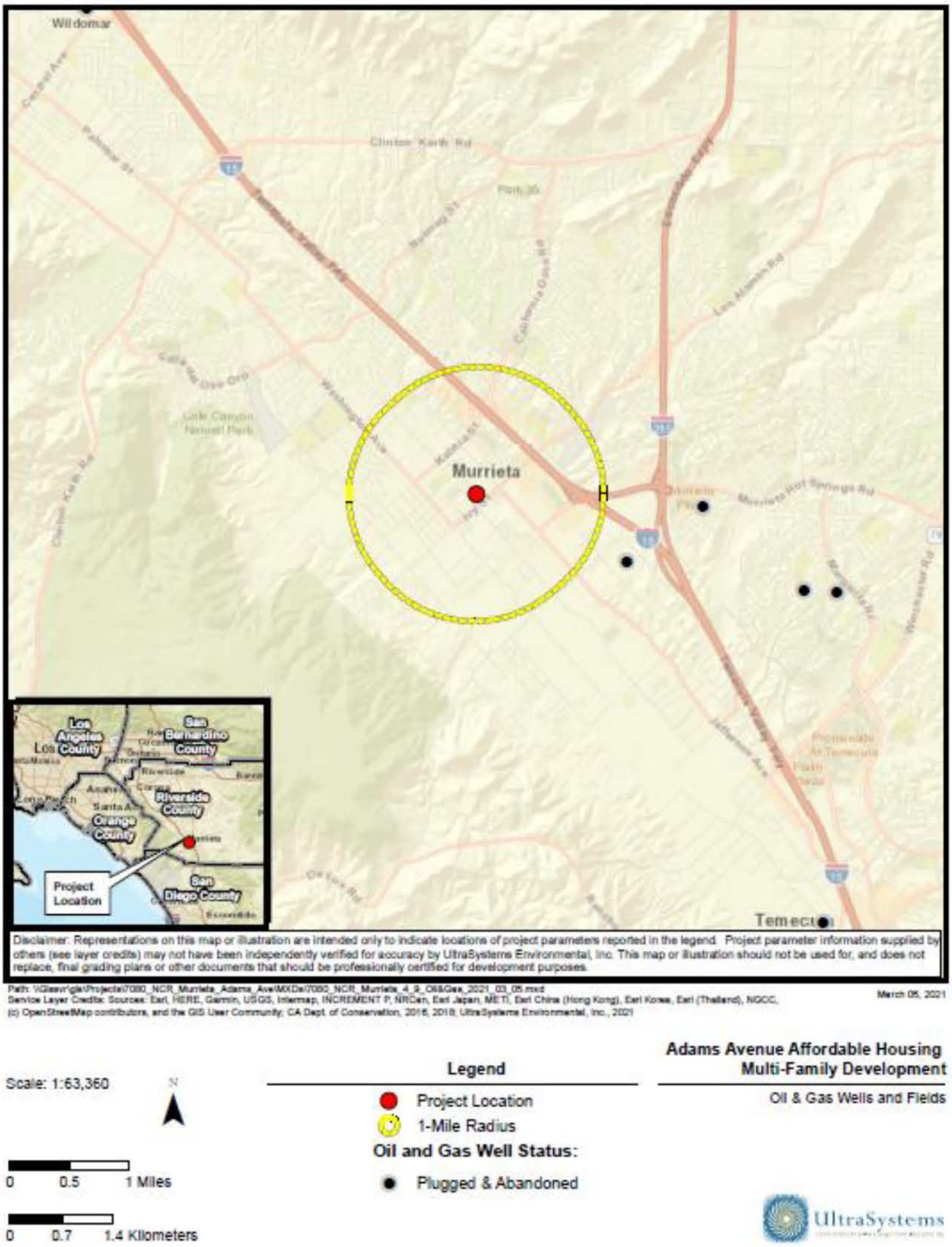
Figure 4.12-2
OIL, GAS AND GEOTHERMAL WELLS



4.13 Noise

Would the project result in:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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		
b) Generation of excessive groundborne vibration or groundborne 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

4.13.1 Characteristics of Sound

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in hertz or cycles per second), and duration (measured in seconds or minutes). The decibel (dB) scale is a logarithmic scale that describes the physical intensity of the pressure vibrations that make up any sound. The pitch of the sound is related to the frequency of the pressure vibration. Because the human ear is not equally sensitive to all frequencies, a special frequency-dependent rating scale is used to relate noise to human sensitivity. The A-weighted decibel scale (dBA) provides this compensation by discriminating against upper and lower frequencies in a manner approximating the sensitivity of the human ear. The scale is based on a reference pressure level of 20 micro pascals (zero dBA). The scale ranges from zero (for the average least perceptible sound) to about 130 (for the average human pain level).

4.13.2 Noise Measurement Scales

Several rating scales have been developed to analyze adverse effects of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise on people depends largely upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs. Those that are applicable to this analysis are as follows:

- L_{eq}, the equivalent noise level, is an average of sound level over a defined time period (such as 1 minute, 15 minutes, 1 hour or 24 hours). Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure.
- L_{90} is a noise level that is exceeded 90 percent of the time at a given location; it is often used as a measure of "background" noise.

- L_{max} is the root mean square (RMS) maximum noise level during the measurement interval. This measurement is calculated by taking the RMS of all peak noise levels within the sampling interval. L_{max} is distinct from the peak noise level, which only includes the single highest measurement within a measurement interval.
- CNEL, the Community Noise Equivalent Level, is a 24-hour average L_{eq} with a 4.77-dBA "penalty" added to noise during the hours of 7:00 p.m. to 10:00 p.m., and a 10-dBA penalty added to noise during the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime (Hendriks, 2013). The logarithmic effect of these additions is that a 60-dBA 24-hour L_{eq} would result in a calculation of 66.7 dBA CNEL.
- L_{dn}, the day-night average noise, is a 24-hour average L_{eq} with an additional 10-dBA "penalty" added to noise that occurs between 10:00 p.m. and 7:00 a.m. The L_{dn} metric yields values within 1 dBA of the CNEL metric. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent and are treated as such in this assessment.

4.13.3 Existing Noise

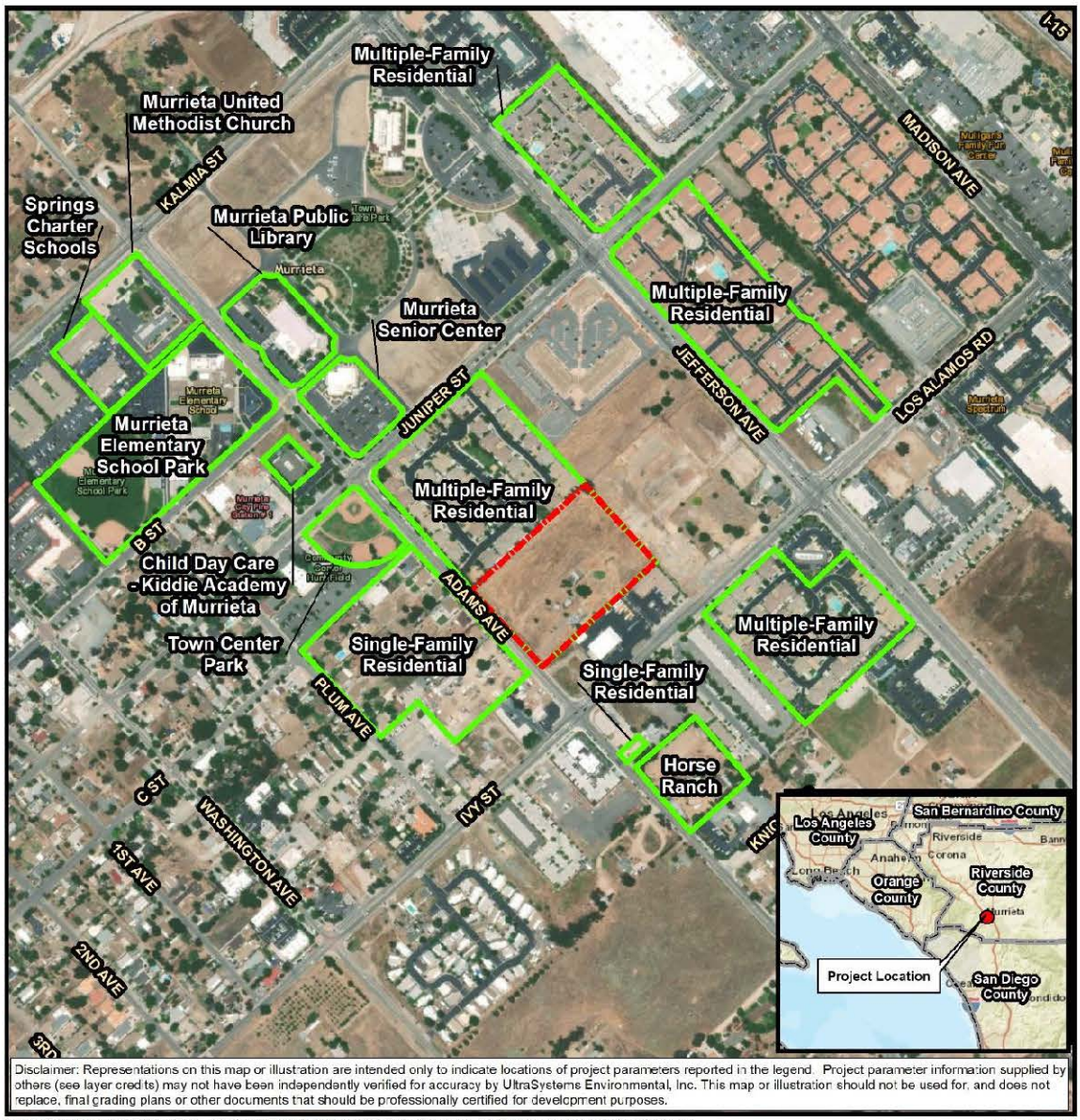
The City of Murrieta's General Plan lists sensitive receivers as locations where human populations (especially children, senior citizens, and sick persons) are present, and where there is a reasonable expectation of lower levels of human exposure to noise (RBF Consulting, 2011, p. 11-4). Sensitive receivers located within the City of Murrieta include residential uses (particularly those in the vicinity of I-15 and I-215 Freeways), schools, hospitals, churches, and parks (RBF Consulting, loc. cit.). Additionally, the City's Municipal Code has applicable noise standards in regard to construction noise, interior noise, and exterior noise (City of Murrieta Municipal Code, 2021). The closest sensitive receivers to the project site include the multi-family neighborhood directly to the northwest, and the single-family homes and mobile home park across Adams Avenue to the southwest. (Google Earth Pro, 2021). Sensitive receivers are shown in **Figure 4.13-1** summarized in **Table 4.13-1**.

Table 4.13-1
SENSITIVE RECEIVERS IN PROJECT AREA

Description	Location	Distance From Site Boundary (feet)	Nearest Ambient Sampling Point[a]
Multi-family Residence (North)	41766 Ambervalley Avenue	14	7
Mobile Home Park	24975 Adams Avenue	79	1
Single-family Residence (West)	24923 Adams Avenue	95	1
Multi-family Residence (East)	41555 King Palm Avenue	310	5
Town Center Park	41810 Juniper Street	339	2
Single-family Residence (South)	25050 Adams Avenue	475	6
Horse Ranch	25076 Adams Avenue	575	6
Multi-family Residence (Northeast)	24 Jefferson Avenue	705	4
Kiddie Academy of Murrieta	41755 Juniper Street	833	3
Murrieta Senior Center	5 Town Square	990	3
Murrieta Public Library	8 Town Square	1,175	3
Murrieta Elementary School	24725 Adams Avenue	1,205	3
Murrieta United Methodist Church	24652 Adams Avenue	1,667	3
Springs Charter School	41862 Kalmia Street	1,705	3

[a]See **Figure 4.13-2** for locations of ambient noise sampling points.

Figure 4.13-1
SENSITIVE RECEIVERS NEAR THE PROJECT SITE



Freeway traffic (passenger vehicles and trucks) and traffic on heavily traveled surface streets are the largest contributors to ambient noise levels. City roadways that generate the most traffic noise include the major north-south trending I-15 and I-215 Freeways due to their higher traffic volumes and vehicle speeds. Major east-west arterials that generate significant noise include Jefferson Avenue and Washington Avenue. Major north-south arterials generating traffic noise include Clinton Keith Road, Kalmia Street/California Oaks Road, and Murrieta Hot Springs Road (RBF Consulting, 2011, p. 11-11). The project site is not adjacent to any of the aforementioned freeways or streets; the closest large noise-generating roadway to the project site is Jefferson Avenue, approximately 615 feet northeast of the project site (Google Earth Pro, 2021). The City's General Plan Noise Element reports results of traffic noise modeling of 24-hour average noise levels (as dBA CNEL) at 100 feet from the centerlines of roadway segments throughout the city in 2035. The project site is northeast of Adams Avenue, northwest of Ivy Street, southeast of Juniper Street and southwest of Jefferson Avenue.

The General Plan's predicted 2035 noise levels are shown in **Table 4.13-2**. The predicted 2035 noise level on the project site from traffic along Ivy Street and Jefferson Avenue was estimated from the data in the table. The center of the site is about 460 feet from the Ivy Street centerline and about 1,020 feet from the Jefferson Avenue centerline. Noise levels at the center of the site from Ivy Street and Jefferson Avenue would be about 59.3 and 62.1 dBA CNEL, respectively; the combined exposure would be 63.9 dBA CNEL. Note that this analysis did not take into account sound attenuation from existing structures between Ivy Street and the project, or from future structures on the project site.

Table 4.13-2
MODELED 24-HOUR AVERAGE NOISE LEVELS IN PROJECT AREA IN 2035

Roadway Segment	2035 General Plan Conditions				
	ADT	dBA @100 Feet from Roadway Center	Distance from Roadway Centerline to: (Feet)		
			60 CNEL Noise Contour	65 CNEL Noise Contour	70 CNEL Noise Contour
Ivy Street					
Washington Avenue to Adams Avenue	8,900	63.9	277	88	28
Adams Avenue to Jefferson Avenue	14,100	65.9	438	139	44
Jefferson Avenue					
Kalmia Street to Ivy Street	61,500	72.2	1,912	605	191

ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level.
Source: RBF Consulting, 2011, pp. 11-19 and 11-20.

On March 4, 2021, UltraSystems obtained 15-minute ambient noise level samples at seven locations in the general area of the project. Sampling locations are shown in **Figure 4.13-2** (see **Appendix I**). Measurements were made between 7:25 a.m. and 10:12 a.m. As shown in **Table 4.13-3,** average short-term ambient noise levels (L_{eq}) ranged from 46.4 to 68.3 dBA L_{eq}. The 68.3-dBA noise level was along Jefferson Avenue, in front of a multi-family building. All monitored noise levels were within the range considered typical for the nearby land uses.

Figure 4.13-2
AMBIENT NOISE MEASUREMENT LOCATIONS

Table 4.13-3
AMBIENT NOISE MEASUREMENT RESULTS

Point	Data Set	Sampling Time	Address	Sound Level (dBA)			Notes
				L_{eq}	L_{max}	L_{90}	
1	S231	0725-0740	24923 Adams Avenue	60.8	76.1	43.9	In front of a single-family residence west of project site.
2	S232	0748-0803	41810 Juniper Street	61.0	74.0	48.3	In front of Town Center Park, northwest of the project site.
3	S233	0808-0823	41755 Juniper Street	58.6	73.4	44.2	In front of Kiddie Academy of Murrieta northwest of the project site.
4	S234	0838-0851	24 Jefferson Avenue	68.3	81.1	54.0	In front of a multi-family building east of the project site.
5	S235	0903-0918	41523 King Palm Avenue	66.1	78.0	50.0	In front of a multi-family building southeast of the project site.
6	S236	0929-0944	25050 Adams Avenue	58.5	75.3	43.4	In front of a single-family residence south of project site.
7	S237	0957-1012	24960 Adams Avenue	46.4	57.3	43.4	Northern portion of the project site, near a multi-family neighborhood.

Source: UltraSystems, 2021.

4.13.4 Regulatory Setting

State of California

The California Department of Health Services (DHS) Office of Noise Control has studied the correlation of noise levels with effects on various land uses. (The Office of Noise Control no longer exists.) The most current guidelines prepared by the state noise officer are contained in the "General Plan Guidelines" issued by the Governor's Office of Planning and Research in 2003 and reissued in 2017 (Governor's Office of Planning and Research, 2017). These guidelines establish four categories for judging the severity of noise intrusion on specified land uses:

- **Normally Acceptable**: Is generally acceptable, with no mitigation necessary.
- **Conditionally Acceptable**: May require some mitigation, as established through a noise study.
- **Normally Unacceptable**: Requires substantial mitigation.
- **Clearly Unacceptable**: Probably cannot be mitigated to a less-than-significant level.

The types of land uses addressed by the state standards, and the acceptable noise categories for each, are presented in **Table 4.13-4**. There is some overlap between categories, which indicates that some judgment is required in determining the applicability of the numbers in a given situation.

Title 24 of the California Code of Regulations requires performing acoustical studies before constructing dwelling units in areas that exceed 60 dBA L_{dn}. Given the General Plan modeling results shown in **Table 4.13-2** and the calculation described in **Section 4.13.3**, the siting would be conditionally acceptable. In addition, the California Noise Insulation Standards identify an interior noise standard of 45 dBA CNEL for new multi-family residential units. Local governments frequently extend this requirement to single-family housing.

Table 4.13-4
CALIFORNIA LAND USE COMPATIBILITY FOR COMMUNITY NOISE SOURCES

Land Use Category	Noise Exposure (dBA, CNEL)						
	55	60	65	70	75	80	
Residential – Low-Density Single-Family, Duplex, Mobile Homes							
Residential – Multiple Family							
Transient Lodging – Motel, Hotels							
Schools, Libraries, Churches, Hospitals, Nursing Homes							
Auditoriums, Concert Halls, Amphitheaters							
Sports Arena, Outdoor Spectator Sports							
Playgrounds, Neighborhood Parks							
Golf Courses, Riding Stables, Water Recreation, Cemeteries							
Office Buildings, Business Commercial and Professional							
Industrial, Manufacturing, Utilities, Agriculture							

	Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.
	Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply system or air conditioning will normally suffice.
	Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
	Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: Governor's Office of Planning and Research, 2017.

City of Murrieta General Plan Noise Element

The Noise Element of the City of Murrieta General Plan (RBF Consulting, 2011) identifies sources of noise in the city and provides objectives and policies that ensure that noise from various sources would not create an unacceptable noise environment. As shown in **Table 4.13-4**, for a multi-family housing development such as the proposed project, exterior noise levels of 65 dBA CNEL or less are desirable. The General Plan Noise Element states that noise impacts can be controlled in four different ways: (1) site planning; (2) architectural design; (3) construction; and (4) noise barriers (RBF Consulting, 2011, p. 11-24).

The General Plan Noise Element has the following applicable goals and associated policies for addressing noise issues in the community (RBF Consulting, 2011):

Goal N-1: Noise sensitive land uses are properly and effectively protected from excessive noise generators.

Policy N-1.1 Comply with the Land Use Compatibility for Community Noise Environments (refer to **Table 4.13-4** above).

Policy N-1.2 Protect schools, hospitals, libraries, churches, convalescent homes, and other noise sensitive uses from excessive noise levels by incorporating site planning and project design techniques to minimize noise impacts. The use of noise barriers shall be considered after all practical design-related noise measures have been integrated into the project. In cases where sound walls are necessary, they should help create an attractive setting with features such as setbacks, changes in alignment, detail and texture, murals, pedestrian access (if appropriate), and landscaping.

Policy N-1.3 Discourage new residential development where the ambient noise level exceeds the noise level standards set forth in the Noise and Land Use Compatibility Guidelines and the City Noise Ordinance.

Goal N-2: A comprehensive and effective land use planning and development review process that ensures noise impacts are adequately addressed.

Policy N-2.4: Encourage proper site planning and architecture to reduce noise impacts.

Policy N-2.5: Permit only those new development or redevelopment projects that have incorporated mitigation measures, so that standards contained in the Noise Element and Noise Ordinance are met.

Policy N-2.6: Incorporate noise reduction features for items such as, but not limited to, parking and loading areas, ingress/egress point, HVAC units, and refuse collection areas, during site planning to mitigate anticipated noise impacts on affected noise sensitive land uses.

Goal N-4: Reduced noise levels from construction activities.

Policy N-4.1: Regulate construction activities to ensure construction noise complies with the City's Noise Ordinance.

Policy N-4.2: Limit the hours of construction activity in residential areas to reduce intrusive noise in early morning and evening hours and on Sundays and holidays.

Policy N-4.3: Employ construction noise reduction methods to the maximum extent feasible. These measures may include, but [are] not limited to, shutting off idling equipment, installing temporary acoustic barriers around stationary construction noise sources, maximizing the distance between construction equipment staging areas and occupied sensitive receptor areas, and use of electric air compressors and similar power tools, rather than diesel equipment.

Policy N-4.6: Ensure acceptable noise levels are maintained near schools, hospitals, convalescent homes, churches, and other noise-sensitive areas.

To the extent that the foregoing applies to the proposed project, the project design and operational characteristics are compatible with the Noise Element's goal, objectives and policies.

City of Murrieta Municipal Code

The City of Murrieta's regulations with respect to noise are included in Municipal Code §§ 16.30.080 (Noise Zones Designated), 16.30.090 (Exterior Noise Standards), 16.30.100 (Interior Noise Standards for Multi-family Residential), 16.30.130 (Acts Deemed Violations of Chapter), and 16.30.140 (Modifications of Standards).

City of Murrieta Municipal Code §§ 16.30.080, 16.30.090 and 16.30.100

A. The City of Murrieta exterior and interior noise standards are shown below in **Table 4.13-5**.

Table 4.13-5
CITY OF MURRIETA INTERIOR AND EXTERIOR NOISE STANDARDS

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Allowed Exterior Noise Level (dB)
Exterior Noise Standard			
I	Noise-sensitive areas	Anytime	45

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Allowed Exterior Noise Level (dB)
II	Residential Properties Residential properties within 500 feet of a kennel(s)	10:00 p.m. to 7:00 a.m. (nighttime) 7:00 a.m. to 10:00 p.m. (daytime) 7:00 a.m. to 10:00 p.m.	45 50 70
III	Commercial Properties	10:00 p.m. to 7:00 a.m. (nighttime) 7:00 a.m. to 10:00 p.m. (daytime)	55 60
IV	Industrial properties	Anytime	70
Interior Noise Standard			
All	Multi-family Residential	10:00 p.m.—7:00 a.m. 7:00 a.m.—10:00 p.m.	40 45
Noise Zone I: Noise-sensitive properties Noise Zone II: Residential properties Noise Zone III: Commercial properties Noise Zone IV: Industrial properties			

Source: City of Murrieta Municipal Code § 16.30.080, 16.30.090 and 16.30.100.

Additional Exterior Noise Standards:

B. Noise Standards. No person shall operate or cause to be operated, any source of sound at any location within the City or allow the creation of any noise on property owned, leased, occupied or otherwise controlled by a person that causes the noise level, when measured on any other property to exceed the following exterior noise standards:

1. **Standard No. 1**: the exterior noise level which shall not be exceeded for a cumulative period of more than thirty (30) minutes in any hour. Standard No. 1 may be the applicable noise level from **Table 4.13-5**.

2. **Standard No. 2:** the exterior noise level which shall not be exceeded for a cumulative period of more than fifteen (15) minutes in any hour. Standard No. 2 shall be the applicable noise level from **Table 4.13-5**, plus five dB.

3. **Standard No. 3:** the exterior noise level which shall not be exceeded for a cumulative period of more than five minutes in any hour. Standard No. 3 shall be the applicable noise level from **Table 4.13-5,** plus ten dB.

4. **Standard No. 4:** the exterior noise level which shall not be exceeded for a cumulative period of more than one minute in any hour. Standard No. 4 shall be the applicable noise level from **Table 4.13-5,** plus fifteen (15) dB.

5. **Standard No. 5:** the exterior noise level which shall not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from **Table 4.13-5,** plus twenty (20) dB.

C. Noise at Zone Boundaries. If the measurement location is on a boundary property between two different zoning districts, the exterior noise level utilized in subsection B of this chapter to determine the exterior standard shall be the arithmetic mean of the exterior noise levels. as specified in **Table 4.13-5**, of the subject zones.

D. Measurement of Ambient Noise Histogram. The ambient noise histogram shall be measured at the same location along the property line utilized in subsection B above, with the alleged intruding noise source inoperative. If the alleged intruding noise source cannot be turned off, the ambient noise histogram shall be estimated by performing a measurement in the same general area of the alleged intruding noise source but at a sufficient distance so that the noise from the alleged intruding noise source is at least ten dB below the ambient noise histogram.

E. Abatement Notice In lieu of Citation. If the intrusive noise exceeds the exterior noise standards provided in subsections A and B above, at a specific receptor property and the code enforcement officer has reason to believe that this violation was unanticipated and due to abnormal conditions, the code enforcement officer shall issue an abatement notice in lieu of a citation. If the specific violation is abated, no citation shall be issued. If the specific violation is not abated, the code enforcement officer shall issue a citation.

Additional Interior Noise Level Standards:

A. Noise Standards for Residential Units. No person shall operate or cause to be operated within a residential unit, any source of sound, or allow the creation of any noise, that causes the noise level when measured inside a neighboring receiving residential unit to exceed the following standards:

1. **Standard No.1.** The applicable interior noise level for cumulative period of more than five minutes in any hour;

2. **Standard No.2**. The applicable interior noise level plus five dB for a cumulative period of more than one minute in any hour; or

3. **Standard No.3.** The applicable interior noise level plus ten dB for any period of time.

If the measured ambient noise level reflected by the L_{50} exceeds that permissible within the interior noise standards in subsection A above. the allowable interior noise level shall be increased in five dB increments to reflect the ambient noise level ($L_{[50]}$).

City of Murrieta Municipal Code § 16.30.110

For any source of sound that emits a pure tone or impulsive noise, the allowed noise levels provided in Sections 1 6.30.090 (Exterior Noise Standards) and 16.30.100 (Interior Noise Standards for Multi-family Residential) shall be reduced by five decibels.

City of Murrieta Municipal Code § 16.30.130

A. Construction Noise.

1. It is a violation to operate or cause the operation of tools or equipment used in construction, drilling, repair, alteration, or demolition work between weekday hours of eight p.m. and seven a.m., or at any time on Sundays or holidays so that the sound creates a noise disturbance across a residential or commercial property line, except for emergency work of public service utilities.

2. Construction activities shall be conducted in a manner that the maximum noise levels at the affected structures will not exceed those listed in **Table 4.13-6**:

Table 4.13-6
CITY OF MURRIETA RESIDENTIAL STRUCTURES CONSTRUCTION NOISE STANDARDS

1) **Mobile Equipment.** Maximum noise levels for nonscheduled, intermittent, short-term operation (less than ten days) of mobile equipment:			
	Single-family Residential	**Multi-family Residential**	**Commercial**
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA
2) **Stationary Equipment.** Maximum noise level for repetitively scheduled and relatively long-term operation periods (three days or more) of stationary equipment:			
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA
Source: City of Murrieta Municipal Code §§ 16.30.130.			

For business structures, the maximum noise level for nonscheduled, intermittent, short-term operation of mobile equipment, daily. including Sundays and legal holidays, at all hours, is 85 dBA.

3. All mobile or stationary internal combustion engine powered equipment or machinery shall be equipped with suitable exhaust and air-intake silencers in proper working order.

B. **Loading and Unloading Operations.** Loading, unloading, opening, closing or other handling of boxes. crates, containers, building materials, garbage cans or similar objects between the hours of ten p.m. and six am. in a manner to cause a noise disturbance is prohibited.

C. **Noise Disturbances in Noise-Sensitive Zones.** Creating or causing the creation of a noise disturbance within a noise-sensitive zone is prohibited, provided that conspicuous signs are displayed indicating the presence of the zone. Noise-sensitive zones shall be indicated by the display of conspicuous signs in at least three separate locations within five hundred (500) feet of the institution or facility (e.g., health care facility).

G. **Refuse Collection Vehicles.**

1. Operating or permitting the operation of the compacting mechanism of any motor vehicle that compacts refuse and that creates, during the compacting cycle, a sound level in excess of eighty-six (86) dBA when measured at fifty (50) feet from any point of the vehicle is prohibited.

2. Collecting refuse, or operating or permitting the operation of the compacting mechanism of any motor vehicle that compacts refuse between the hours of ten p.m. and six a.m. the following day in a residential area or noise-sensitive zone is prohibited.

H. **Sweepers and Associated Equipment.** Operating or permitting the operation of sweepers or associated sweeping equipment (i.e., blowers) between the hours often p.m. and six a.m. the following day in, or adjacent to, a residential area or noise-sensitive area is prohibited.

I. **Residential Air Conditioning or Refrigeration Equipment.** Operating or permitting the operation of air conditioning or refrigeration equipment in a manner that exceeds the following sound levels in **Table 4.13-7**, is prohibited:

Table 4.13-7
CITY OF MURRIETA RESIDENTIAL AIR CONDITIONING AND REFRIGERATION EQUIPMENT NOISE STANDARDS

Measurement Location	Maximum Noise Level (dBA)
Any point on neighboring property line, five feet above grade level, no closer than three feet from any wall.	55
Center of neighboring patio, five feet above grade level, no closer than three feet from any wall.	50
Outside the neighboring living area window nearest the equipment location, not more than three feet from the window opening, but at least three feet from any other surface.	50

Source: City of Murrieta Municipal Code § 16.30.130.

City of Murrieta Municipal Code § 16.30.140

Modifications to the requirements of this chapter may be granted by the director for a period of up to two years, subject to any terms, conditions, or requirements to minimize adverse effects on the surrounding neighborhood reasonable. Modifications may be granted only if one of the following findings can be made:

A. Additional time is necessary for the applicant to alter or modify the activity, operation, or noise source to comply with this chapter: or

B. The activity, operation, or noise source cannot feasibly be done in a manner that would comply with the provisions of this chapter. and no other reasonable alternative is available to the applicant.

4.13.5 Significance Thresholds

Two criteria were used for judging noise impacts. First, noise levels generated by the proposed project must comply with all applicable relevant federal, state, and local standards and regulations. Noise impacts on the surrounding community are limited by local noise ordinances, which are implemented through investigations in response to nuisance complaints. It is assumed that all existing regulations for the construction and operation of the proposed project will be enforced. In addition, the proposed project should not produce noise levels that are incompatible with adjacent noise-sensitive land uses.

The second measure of impact used in this analysis is a significant increase in noise levels above existing ambient noise levels as a result of the introduction of a new noise source. An increase in noise level due to a new noise source has a potential to adversely impact people. The proposed project would have a significant noise impact if it would:

- Expose persons to or generate noise levels in excess of standards prescribed by the City of Murrieta Municipal Code; or
- Include construction activities within the hours prohibited by the Municipal Code, without a permit; or
- Increase short-term noise exposures at sensitive receivers during construction by 5 dBA L_{eq} or more; or
- Contribute, with other local construction projects, to a significant cumulative noise impact; or
- Increase operational exposures at sensitive receivers (mainly because of an increase in traffic flow) by 5 dBA L_{eq} or more.

4.13.6 Impact Analysis

a) Would the project result in generation of 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?

Less than Significant Impact with Mitigation Incorporated

Noise impacts associated with housing projects include short-term and long-term impacts. Construction activities, especially heavy equipment operation, would create noise effects on and adjacent to the construction site. Long-term noise impacts include project-generated onsite and offsite operational noise sources. Onsite (stationary) noise sources from the apartments would include operation of mechanical equipment such as air conditioners, landscape and building maintenance. Offsite noise would be attributable to project-induced traffic, which would cause an incremental increase in noise levels within and near the project vicinity.

Construction

Noise impacts from construction activities are a function of the noise generated by the operation of construction equipment and onroad delivery and worker commuter vehicles, the location of

equipment, and the timing and duration of the noise-generating activities. For the purpose of this analysis, it was estimated that the proposed project would be built in two phases,[21] each of which would have the subphases listed in **Table 4.13-6**. Construction is anticipated to run 2.5 years, from early April 2022 to October 2024.

The types and numbers of pieces of equipment to be deployed during each construction phase were determined as part of the air quality and greenhouse gas emissions analyses for this project.[22] For each equipment type, **Table 4.13-6** shows an average noise emission level (in dB at 50 feet, unless otherwise specified) and a "usage factor," which is an estimated percentage of operating time that the equipment would be producing noise at the stated level.

Table 4.13-6
CONSTRUCTION EQUIPMENT CHARACTERISTICS

Main Phase	Subphase	Equipment Type	Horse-power	No. of Pieces	Usage Factor	dBA @ 50 Feet
I	1 - Grading	Rubber-Tired Dozers	247	1	0.4	79
		Scrapers	158	4	0.14	88
		Tractor/Loader/Backhoe	97	1	0.37	85
	2 – Offsite Improvements[a]	Tractor/Loader/Backhoe	97	2	0.37	85
	3- Building Construction[a]	Forklifts	89	2	0.3	67
		Skid Steer Loaders	65	2	0.4	80
		Tractor/Loader/Backhoe	97	1	0.37	85
	4 – Paving[a]	Paving Equipment	132	1	0.5	85
		Rollers	80	1	0.1	74
II	1 - Grading	Rubber-Tired Dozers	247	1	0.4	79
		Scrapers	158	2	0.14	88
		Tractor/Loader/Backhoe	97	1	0.37	85
	2- Building Construction[a]	Forklifts	89	2	0.3	67
		Skid Steer Loaders	65	2	0.4	80
		Tractor/Loader/Backhoe	97	1	0.37	85
	3 – Paving[a]	Paving Equipment	132	1	0.5	85
		Rollers	80	1	0.1	74

Sources:
Knauer et al., 2006 unless otherwise noted.
Roller noise emissions data from County of Ventura, 2010.
Usage factors for pavers and rollers from County of Ventura, 2010.
Forklift data and usage factor from Port of Long Beach, 2009.
Skid steer loader noise data from Nugent, 2015.
[a]In two different locations; equipment the same for each location

21 One subphase, indoor painting, was not included in the noise analysis because of its low probability of adverse noise impact.
22 See **Section 4.3** and **Section 4.8**.

Using calculation methods published by the Federal Transit Administration,[23] UltraSystems estimated the average hourly exposures at the nearest sensitive receiver for each construction subphase. The receivers evaluated included multiple-family residences along the northwest side of the project site and single-family houses along the southwest side of Adams Avenue, across from the project site (see **Figure 4.13-1**). The distances used for the calculation were measured from the receivers to the approximate center of activity of each construction phase, since that would be the average location of construction equipment most of the time. **Table 4.13-7** shows the relationships between the receivers, the noise sources, and the nearest ambient measurement points. Along the northwest boundary of the project site, a 15-foot-high brick wall partially shields the multiple-family residences from onsite noise.

Table 4.13-7
NOISE ANALYTICAL FRAMEWORK

Phase	Sensitive Receiver	Construction Phase(s)[a]	Nearest Ambient Sampling Point(s)[b]
I	Multiple-family residence	Grading	7
	Single-family residence	Offsite Improvements (Water)	1
	Single-family residence	Offsite Improvements (Gas)	2
	Multiple-family residence	Building Construction-1	7
	Single-family residence	Building Construction-2	1
	Multiple-family residence	Paving-1	7
	Single-family residence	Paving-2	1
II	Multiple-family residence	Grading	7
	Multiple-family residence	Building Construction	7
	Multiple-family residence	Paving	7

[a]See **Table 4.13-6**. The suffix "-1" or "-2" indicates that the construction activity in the stated phase occurs in two widely separated portions of the project site.
[b]See text.

Table 4.13-8 summarizes the estimated construction-related short-term noise exposures at the nearest sensitive receiver for each construction phase. In no cases were there intervening buildings between a noise source and a receiver. The calculated noise attenuation by the existing 15-foot-high wall would provide 20.5 to 20.9 dBA of attenuation for the multi-family receivers during Phase I construction and 22.0 dBA of attenuation during Phase II. Residential noise exposures due to construction activities would be about 50 to 85 dBA L_{eq}. These relatively high values are due mainly to the fact that the sensitive receivers are immediately adjacent to the project site, and some of the construction activities would be near the project boundary.

[23] Transit Noise and Vibration Impact Assessment Manual. Federal Transit Administration, Office of Planning and Environment, Washington, DC, FTA Report No. 0123. September 2018. Internet: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf.

Table 4.13-8
ESTIMATED ONE-HOUR CONSTRUCTION NOISE EXPOSURES AT NEAREST SENSITIVE RECEIVERS

Phase	Subphase	Receiver[a]	Distance (feet)	Ambient (dBA L_{eq})	Construction (dBA L_{eq})[b]	New Total (dBA L_{eq})	Increase (dBA L_{eq})
I	Grading	MF	225	46.4	50.2	51.7	**5.3**
	Offsite Improvements (Water)	SF	68	60.8	83.4	83.4	**22.6**
	Offsite Improvements (Gas)	SF	60	61.0	84.7	84.7	**23.7**
	Building Construction-1	MF	87	46.4	56.1	56.5	**10.1**
	Building Construction-2	SF	283	60.8	64.2	65.8	5.0
	Paving-1	MF	158	46.4	48.8	50.8	4.4
	Paving-2	SF	377	60.8	60.1	63.5	2.7
II	Grading	MF	240.5	46.4	46.1	49.3	2.9
	Building Construction	MF	237	46.4	44.1	48.4	2.0
	Paving	MF	240	46.4	47.6	50.1	3.7

[a]MF = multi-family residence, SF = single-family residence.
[b]Barrier attenuation taken into account where applicable.

In Phase I, during the grading, offsite improvements and building construction subphases, short-term exposures of nearby residents would exceed limits prescribed in the Municipal Code, and the increase in noise exposures at sensitive receivers would exceed 5 dBA. Construction noises would be less than significant after implementation of mitigation measures **N-1** and **N-2** below.

Mitigation Measures

MM N-1 Project applicants shall require by contract specifications that the following construction best management practices (BMPs) be implemented by contractors to reduce construction noise levels:

- Ensure that construction equipment is properly muffled according to industry standards and in good working condition.
- Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible.
- Schedule high noise-producing activities between the hours of 8:00 AM and 7:00 PM to minimize disruption on sensitive uses.

- Implement noise attenuation measures to the extent feasible, which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources.

- Use electric air compressors and similar power tools rather than diesel equipment, where feasible.

- Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes.

- Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.

MM N-2 The Project Applicant shall require by contract specifications that heavily loaded trucks used during construction be routed away from residential streets to the extent feasible. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.

Level of Significance After Mitigation

With implementation of Mitigation Measures **N-1** and **N-2** above, project construction would result in less than significant impacts to sensitive receivers.

Operational Noise

Onsite

Onsite noise sources from the proposed housing project would include operation of mechanical equipment such as air conditioners, lawnmowers, leaf blowers, and building maintenance equipment; and motor vehicles accessing, driving on, and exiting the parking lot. Noise levels associated with operation of the project are expected to be comparable to those of nearby residential areas. Therefore, noise from onsite sources would be less than significant.

Mobile Sources

As seen in **Table 4.13-2**, the forecasted average daily traffic on streets near the project in 2035 are forecast to be between 8,900 and 61,500 vehicles per day. The VMT analysis prepared for this project (DiPierro, 2021) estimates that the development will generate 947 trips per day. This would constitute an increase of between 1.5 and 10.6%. Given the logarithmic nature of the decibel, traffic volume needs to be doubled in order for the noise level to increase by 3 dBA (ICF Jones & Stokes, 2009), the minimum level perceived by the average human ear. A doubling is equivalent to a 100% increase. Because the maximum increase in traffic on any road segment would be far below 100%, the increase in roadway noise experienced at sensitive receivers would not be perceptible to the human ear. Therefore, roadway noise associated with project operation would not expose a land use

to noise levels that are considered incompatible with or in excess of adopted standards, and impacts would be less than significant.

b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant Impact

Vibration is sound radiated through the ground. Vibration can result from a source (e.g., subway operations, vehicles, machinery equipment, etc.) causing the adjacent ground to move, thereby creating vibration waves that propagate through the soil to the foundations of nearby buildings. This effect is referred to as groundborne vibration. The peak particle velocity (PPV) or the RMS velocity is usually used to describe vibration levels. PPV is defined as the maximum instantaneous peak of the vibration level, while RMS is defined as the square root of the average of the squared amplitude of the level. PPV is typically used for evaluating potential building damage, while RMS velocity in dB is typically more suitable for evaluating human response.

The background vibration velocity level in residential areas is usually around 50 vibration decibels (VdB). The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for most people. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is rarely perceptible. The range of interest is from approximately 50 VdB to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings.

Construction Vibration

Construction activities for the project have the potential to generate low levels of groundborne vibration. The operation of construction equipment generates vibrations that propagate though the ground and diminish in intensity with distance from the source. Vibration impacts can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage of buildings at the highest levels. The construction activities associated with the project could have an adverse impact on both sensitive structures (i.e., building damage) and populations (i.e., annoyance).

Pile drivers or other major vibration sources will not be used for construction of the Adams Avenue Affordable Housing Multi-Family Development project. The question is whether the equipment that would be deployed would have significant vibration impacts. The FTA (2018) has published standard vibration levels for construction equipment operations, at a distance of 25 feet. The construction related vibration levels for the nearest sensitive receivers for major construction phases are shown in **Table 4.13-9**. These calculations were based on the distances from the construction activity to the closest sensitive receivers.

Table 4.13-9
VIBRATION LEVELS OF TYPICAL CONSTRUCTION EQUIPMENT

Equipment	Grading (225 feet)		Offsite Improvements (60 feet)		Building Construction (87 feet)		Paving (158 feet)	
	RMS (in/sec)	VdB	RMS (in/sec)	VdB	RMS (in/sec)	VdB	RMS (in/sec)	VdB
Loaded trucks	0.0028	57.4	0.0204	74.6	0.0117	69.8	0.0048	62.0
Jackhammer	0.0013	50.4	0.0094	67.6	0.0054	62.8	0.0022	55.0
Small bulldozer	0.0001	29.4	0.0008	46.6	0.0005	41.8	0.0002	34.0
Large bulldozer	0.0033	58.4	0.0239	75.6	0.0137	70.8	0.0056	63.0

As shown in **Table 4.13-9**, the PPV of construction equipment at the nearest sensitive receiver (60 feet) is at most 0.0137 inch per second, which is less than the FTA damage threshold of 0.12 inch per second PPV for fragile historic buildings. The maximum VdB are 75.6 VdB, which are below the FTA threshold for human annoyance of 80 VdB. Unmitigated vibration impacts would therefore be less than significant.

Operational Vibration

The project involves the operation of residential uses and would not involve the use of stationary equipment that would result in high vibration levels, which are more typical for large manufacturing and industrial projects. Groundborne vibrations at the project site and immediate vicinity currently result from heavy-duty vehicular travel (e.g., refuse trucks and transit buses) on the nearby local roadways, and the project would not result in a substantive increase of these heavy-duty vehicles on the public roadways. Therefore, vibration impacts associated with operation of the project would be less than significant.

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?

No Impact

The closest active public airport is the French Valley Airport, located approximately 4.4 miles northeast of the project site (Google Earth Pro, 2021). The project site is located outside of the airport's influence area boundary and noise contours (Riverside County ALUC, 2010). Therefore, no impact related to the exposure of people residing or working in the proposed project area to excessive airport-related noise levels is anticipated.

4.14 Population and Housing

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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

a) Would the project induce substantial unplanned growth in an area either directly (for example, by proposing new homes and business) or indirectly (for example, through extension of roads or other infrastructure)?

Less than Significant Impact

Existing and forecasted demographic data for the City of Murrieta for 2020 and 2045 are shown below in **Table 4.14-1**. The population in the city is forecast to increase approximately 10 percent and the number of households 19 percent; and employment is forecast to increase 78 percent during that period (CDF, 2020; SCAG, 2020; USCB, 2021). While households currently outnumber jobs in Murrieta, that is expected to be reversed—and by a substantial margin—by 2045. The estimated total number of housing units in the City in 2020 was 37,363 consisting of 27,607 (74 percent of total) single-family detached, 1,344 (4 percent) single-family attached, 6,744 (18 percent) multifamily, and 1,668 (4 percent) mobile homes (CDF, 2020).[24]

The proposed project would induce direct population growth with construction of a total 200 residential units on site. The project constitutes infill development on a site that has developed land uses to the north, west and south.

Table 4.14-1
CITY OF MURRIETA DEMOGRAPHIC FORECAST

	2020	2045	Difference (2045 – 2020)	Percent Difference (2045 – 2020)
Population	115,561	127,700	12,139	10.5%
Households	35,518	42,300	6,782	19.1%
Employment	29,328[1]	52,200	22,872	78.0%

[1] The existing [2020] employment figure is from 2018 and thus predates the current economic downturn due to the COVID-19 pandemic. The Southern California Association of Governments estimated that employment in Murrieta in 2016 was 31,300, slightly higher than that estimated by the US Census Bureau in 2018.
Sources: CDF, 2020; SCAG, 2020; US Census Bureau, 2021

[24] A household is equivalent to an occupied housing unit

The Southern California Association of Governments (SCAG) has established a Regional Housing Needs Assessment (2021 RHNA) for the City of Murrieta for the period 2021 to 2029 enumerated in **Table 4.14-2** below. Note that while the 2021 RHNA has been finalized by SCAG, approval by the California Department of Housing and Community Development is pending.

Table 4.14-2
REGIONAL HOUSING NEEDS ASSESSMENT, CITY OF MURRIETA, 2021-2029

Income Category	Percent of Riverside County Median Income	Units
Very Low Income	<50	1,009
Low Income	50-80	583
Moderate Income	80-120	545
Above Moderate Income	>120	906
Total	Not applicable	**3,043**

Sources: SCAG 2021a; SCAG 2021b

The proposed project would construct a total of 200 residential units consisting of 95 one-bedroom units, 70 two-bedroom units and 35 three-bedroom units; two of the two-bedroom units are reserved for property managers. The project applicant estimates that the one-bedroom apartments would have a minimum of one resident and maximum of three residents. The two-bedroom apartments would have a minimum of two residents and maximum of five residents. The three-bedroom apartments would have a minimum of three residents and maximum of seven residents. Project occupancy at project buildout is estimated to range between a minimum of 340 to a maximum of 880, as shown below in **Table 4.14-3**.

Table 4.14-3
OCCUPANCY (MINIMUM AND MAXIMUM) AT PROJECT BUIIDOUT

Unit Size, bedrooms	Units	Occupancy			
		Minimum		Maximum	
		Per unit[1]	Total	Per unit[1]	Total
1	95	1	95	3	285
2	70	2	140	5	350
3	35	3	105	7	245
Total	**200**	Not applicable	**340**	Not applicable	**880**

Source: Mejia, 2021

The maximum project occupancy at project completion, 880 residents, is approximately 7.2 percent of the forecast population increase of 12,139 persons in the City of Murrieta between 2020 and 2045. The 200 proposed residential units are approximately 2.9 percent of the forecast increase in households in the city between 2020 and 2045. Therefore, the growth in population and households from the proposed project would be a less than significant impact because it has been accounted for in growth projections for the city.

Implementation of the project is consistent with the overall intent of the City of Murrieta to provide adequate housing opportunities to meet its fair share of projected housing needs. Development of the 200 proposed units would aid the city in constructing the number of units required by the 2021 RHNA. Additionally, the estimated increase in population resulting from the project has been anticipated by the city and the region. Therefore, impacts from substantial population growth would be less than significant.

The increased population and housing resulting from the project would not necessarily cause direct adverse physical environmental effects; however, indirect physical environmental effects such as project-related traffic or air quality impacts could occur. These indirect physical environmental effects associated with the project are analyzed in **Section 4.3**, (Air Quality) and **Section 4.17**, (Transportation) of this IS/MND. The project may require extension of some existing utilities from the project site into the right-of-way of adjacent streets (for the connection of utilities such as water or sewer lines). However, the project constitutes infill development and does not propose infrastructure improvements (such as new roads or other infrastructure) not already established in and near the project area. Therefore, no indirect impacts associated with the extension of roads and other infrastructure would occur. The project would have a less than significant impact in this regard.

b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact

No housing exists onsite and no one currently resides on the project site. Therefore, the project would not displace any housing or people and the project would not necessitate the construction of replacement housing. No impact would occur.

4.15 Public Services

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the need for new or physically altered governmental facilities, 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 public services:				
a) Fire protection?			**X**	
b) Police protection?			**X**	
c) Schools?			**X**	
d) Parks?			**X**	
e) Other public facilities?			**X**	

a) Fire protection?

Less than Significant Impact

Murrieta Fire and Rescue (MFR) provides fire protection and emergency medical services to the City of Murrieta. MFR operates five fire stations and is planning to build a sixth station serving the eastern part of the City's sphere of influence. The location and completion date of Station 6 are not yet known (MFR, 2021a; Jensen, 2021a). Fire Station 1 at 41825 Juniper Street, about 775 feet west of the project site, would be the first-in fire station to respond to the site (MFR, 2021a). Station 1 is equipped with one Type 1 fire engine (designed for structural firefighting) and other apparatus including an urban search and rescue trailer and a water tender. Daily staffing at Station 1 is three personnel. MFR is planning to relocate Station 1 south of its current location. The future location of Station 1 has not been determined; MFR expects that Station 1 will most likely be the first-in station to the project site after the relocation (Jensen, 2021a). MFR plans to move Station 5, which is currently in a temporary location at 38391 Vineyard Parkway, to a new location southeast of its current location. The planned relocation of Station 1 will assist MFR in minimizing response times to all parts of the City (Jensen, 2021b).

The City's 2020-2025 Capital Improvement Plan includes the following planned projects relevant to fire protection:

- Fire Station # 5: new permanent facility
- Training Facility and Primary City Emergency Operations Center site
- Fire station # 6 (City of Murrieta 2020c).

MFR has a total response time goal within the City of 6:04 minutes for medical emergencies and an effective response force (all resources dispatched to arrive at scene) for fire incidents of 10:24 minutes as measured by the National Fire Protection Association (NFPA) 1710 Standards and the

Community Risk Assessment - Standards of Cover (City of Murrieta, 2011). MFR has automatic and mutual aid agreements with the California Department of Forestry and Fire Prevention (CAL FIRE). CAL FIRE serves unincorporated areas of Riverside County and 21 cities in Riverside County as the Riverside County Fire Department under contract with the County and those cities.

The City charges development impact fees amounting to $9,724 per multifamily residential unit (City of Murrieta 2021). MFR's operations are funded mostly through property taxes and sales taxes (City of Murrieta 2019). Project development is expected to generate a small increase in calls for fire protection and emergency medical service. The project would pay development impact fees required by the City of Murrieta.

Project operation would increase property tax and sales tax revenues to the City, some of which are expected to be allocated to MFR. The project would pay development impact fees required by the City of Murrieta. The addition of 200 residential units would not require the City to build a new or expanded fire station. Therefore, impacts related to construction of new or expanded fire station would be less than significant.

b) Police protection?

Less than Significant Impact

The Murrieta Police Department (MPD) provides police protection to the city. The MPD station is at 2 Town Square, about 1,050 feet north of the project site. MPD consists of an Operations Division comprised of a Community Policing Team, K-9 Team, Off-Road Motorcycle Enforcement team, Special Weapons & Tactics team, and Traffic Bureau; and a Support Division including the Communications Center, Detective Bureau, Property and Evidence, Records Bureau, and School Resource Officers (MPD, 2021). The MPD assigns 60 officers to the patrol and traffic divisions (Parker, 2021).

MPD target response times are 6 minutes for Priority 1 calls, 15 minutes for Priority 2, and 35 minutes for Priority 3 (City of Murrieta, 2011). Average response times for Priority 1 calls are seven minutes, call pick-up to officer at scene. The City is planning to build a new Primary city Emergency Operations Center at Fire Station #4 (City of Murrieta, 2020c).

New multi-family housing developments undergoing development review in Murrieta must participate in the Crime Free Multi-Housing Program. Through this program, the Department provides recommendations for improving the safety of the developments using Crime Prevention Through Environmental Design strategies (City of Murrieta, 2011).

MPD operations are funded mostly through property taxes and sales taxes (City of Murrieta, 2019). The City of Murrieta charges multifamily residential projects a development impact fee of $9,724 per unit (City of Murrieta, 2021).

The MPD does not anticipate that project development would require construction or expansion of a new or expanded police facility, or adversely affect MPD operations (Parker, 2021). The project would pay development impact fees required by the City of Murrieta. Project impacts on police services would be less than significant, and no mitigation is required.

c) Schools?

Less than Significant Impact

The project site is in the Murrieta Valley Unified School District (MVUSD), which spans 168 square miles including most of the City of Murrieta, and unincorporated Riverside County area west of Murrieta. MVUSD operates 11 elementary schools (K-5), four middle schools (6-8), three comprehensive high schools, one alternative education school, and one adult/community education program (MVUSD, 2021a). Districtwide enrollment in the 2019-2020 school year was 23,470 (CDE, 2021). The project site is located within the boundaries of the three schools in **Table 4.15-1**.

Table 4.15-1
SCHOOLS SERVING THE PROJECT SITE

School	Grade Levels	Address	Enrollment 2019-2020 school year	Classrooms	Capacity (Students)	Remaining Capacity
Murrieta Elementary School	K-5	24725 Adams Street	916	44	1,100	184
Thompson Middle School	6-8	24040 Hayes Avenue	1,642	54	1,458	-184
Murrieta Valley High School	9-12	42200 Nighthawk Way	2,302	113	3,051	749

[1] **Sources**: MVUSD, 2021; CDE, 2021; Noorigian, 2021

Expansions of Murrieta Elementary School and Thompson Middle School by six net classrooms each are planned, contingent on receipt of State funding. The total capacities of the added classrooms would be 150 at Murrieta Elementary School and 162 at Thompson Middle School. At completion of the planned expansion Thompson Middle School would have capacity of 1,620 students, 22 fewer than its 2019-2020 enrollment.

The project is estimated to generate 44 students, as shown below in **Table 4.15-2**. After accounting for project student generation, estimated remaining capacity is 164 students at Murrieta Elementary School, -194 students at Thompson Middle School, and 735 students at Murrieta Valley High School (refer to **Table 4.15-3** below).

Table 4.15-2
ESTIMATED PROJECT STUDENT GENERATION

School Level	Student Generation Factor per Household[1]	Total Student Generation
Elementary (K-5)	0.1684	20
Middle (6-8)	0.0851	10
High (9-12)	0.1210	14
Total	Not applicable	**44**

Project student generation is estimated based on the proposed 119 multifamily housing units, as the proposed senior housing units are not expected to generate students.

[1] **Source**: Noorigian, 2021

Table 4.15-3
PROJECT IMPACTS ON SCHOOLS' CAPACITIES

School	Enrollment, 2019-2020 school year	Capacity (Students)	Remaining Capacity	Enrollment plus project student generation (see Table 4.15-2)	Remaining Capacity after Project Student Generation
Murrieta Elementary School	916	1,100	184	936	164
Thompson Middle School	1,642	1,458	-184	1,652	-194
Murrieta Valley High School	2,302	3,051	749	2,316	735

[1] **Sources**: MVUSD, 2021; CDE, 2021; Noorigian, 2021

Senate Bill (SB) 50, which passed in 1998, provides a comprehensive school facilities financing and reform program, and enabled a statewide bond issue to be placed on the ballot. The provisions of SB 50 allow the state to offer funding to school districts to acquire school sites, construct new school facilities, and modernize existing school facilities. SB 50 also establishes a process for determining the amount of fees developers may be charged to mitigate the impact of development on school facilities resulting from increased enrollment. Under this legislation, a school district could charge fees above the statutory cap only under specified conditions, and then only up to the amount of funds that the district would be eligible to receive from the state. According to Section 65996 of the California Government Code, development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation."

MVUSD charges developer fees for multifamily residential units of $4.08 per square foot of assessable space, as authorized by California Education Code Section 65996. Project impacts on school facilities would be less than significant after payment of developer fees for schools. No mitigation is required.

d) Parks?

The following information is based partly on a written service letter response from Brian Ambrose, Senior Project Manager, City of Murrieta Community Services Department, dated March 8, 2021. The City of Murrieta Department of Parks and Recreation (MDPR) provides recreation programs and maintains city parks. MDPR operates and maintains 53 parks totaling approximately 508 acres; approximately 790 acres of additional open space and trails in the city. The City of Murrieta General Plan sets forth several categories of parks, including neighborhood parks, with a service radius of 0.5 mile; and community parks, with a service radius of two miles. The city's parkland standard is 5 acres of parkland per 1,000 residents (City of Murrieta, 2011b). The city's population in 2020 was estimated at 115,561 (CDF, 2021). Thus, the city has 4.40 acres of parkland per 1,000 residents, which is slightly below the city's standard of 5 acres.

Additional information on existing parks within the above-identified service radii of the proposed project site is provided in Section 4.16, *Recreation*.

The city charges development impact fees in the amount of $9,724 per multifamily residential units (City of Murrieta, 2021).

Project development would add a maximum of 880 residents to the city, which would increase the City's population from the 2020 estimate of 115,561 to 116,441. The ratio of parkland to population

after project development would be 4.36 acres of parkland per 1,000 residents, very slightly less than the current ratio.

The project proposes recreational facilities for residents including an outdoor pool, children's playground/tot lot, a community garden, a half basketball court, outdoor fitness stations and conversation area, and a pet-friendly green space and an outdoor kitchen/BBQ. The project would also include a community room and Boys & Girls Club. Project recreational facilities would reduce project-generated demands on existing city park facilities. In addition, the proposed project would pay development impact fees required by the city, some of which would be allocated to park facilities and the community center. Project impacts on park facilities would be less than significant after payment of applicable development impact fees, and no mitigation is required.

e) Other Public Facilities?

Less Than Significant Impact

Library

Murrieta Public Library (MPL) is at is at 8 Town Square, approximately 1,100 feet northwest of the project site; it is temporarily closed due to COVID-19. MPL has a collection of approximately 100,000 items. The main library building is 23,375 square feet with a separate 1,581square-foot mechanical building. The city plans to add facilities including a conference/youth services room and additional study rooms. The city has not determined the proposed square footage or whether the new facilities would be at the existing library site or offsite; they would be somewhere in or near Murrieta Town Square (Ambrose, 2021). MPL operations are funded mostly by property taxes and sales taxes. The city charges development impact fees; the fee per multifamily residential unit is $9,724 (City of Murrieta, 2021).

Project development would increase use of and demands for collection items at the MPL. The project would pay any development impact fees required by the city for the library; project impacts on library facilities and services are expected to be less than significant (Ambrose, 2021).

Hospitals

The nearest hospital to the project site is Rancho Springs Medical Center, a 120-bed acute-care hospital, at 25500 Medical Center Drive in the City of Murrieta, about 1.3 miles to the east. Project development is estimated to add between 340 and 880 residents to the City. Two other hospitals are in or near Murrieta: Inland Valley Medical Center at 36485 Inland Valley Drive in the City of Wildomar; and Loma Linda University Medical Center at 28062 Baxter Road in the City of Murrieta (OSHPD, 2021). Adequate hospital facilities are present in the project region for project residents, and project development would not require construction of new or expanded hospitals. Impacts would be less than significant.

4.16 Recreation

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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 substantial 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**	

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less than Significant Impact

The following information is based partly on a written service letter response from Brian Ambrose, Senior Project Manager, City of Murrieta Community Services Department, dated March 8, 2021. The City of Murrieta Department of Parks and Recreation (MDPR) provides recreation programs, and maintains, city parks. MDPR operates and maintains 53 parks totaling approximately 508 acres; approximately 790 acres of additional open space and trails in the city. The City of Murrieta General Plan sets forth several categories of parks, including neighborhood parks, with a service radius of 0.5 mile; and community parks, with a service radius of two miles. The city's parkland standard is 5 acres of parkland per 1,000 residents (City of Murrieta, 2011b). The city's population in 2020 was estimated at 115,561 (CDF, 2021). Thus, the city has 4.40 acres of parkland per 1,000 residents, which is slightly below the city's standard of 5 acres.

Four parks are within 0.5 mile of the project site:

- **Community Center/Hunt Field**, at 41810 Juniper Street, 330 feet west of project site. This park spans 4.7 acres; amenities include ball fields, basketball court, bike path, walking trail, community center rec room, mature trees, open grass areas, parking lot, picnic tables or park benches, restrooms, and portable toilets.

- **Town Square Park**, at 13 Town Square, 690 feet to the west of project site. Town Square Park is 4.2 acres; amenities include amphitheater, bike path, walking trail, Murrieta Veterans Memorial, open grass area, parking lot, restrooms, portable toilets and water fountains.

- **Murrieta Elementary School Park**, at 24652 Adams Avenue, 1,350 feet west of the project site. This park encompasses 4.5 acres; amenities include ball fields, basketball court, open grass areas,

parking lot, picnic tables or park benches, restrooms, portable toilets, shelters, tot lot, and playground equipment.

- **B Street Station,** is located southwest corner of Adams Avenue and B Street, 800 feet northwest of project site. This park is approximately 0.5 acre. Amenities include pickleball courts, ping pong tables, a shelter, picnic tables, a barbeque, activity tables, strength training, and parking (MDPR, 2021).

Hunt Field is classified as a community park, and the other three parks listed above are classified as neighborhood parks.

One additional MDPR facility is within 0.5 mile of the project site: Murrieta Senior Center at 5 Town Square; the facility is temporarily closed due to COVID-19.

Six community parks are within two miles of the project site, including Hunt Field and the following five parks:

- **California Oaks Sports Park,** at 40600 California Oaks Road, this park spans 20.2 acres; amenities include a barbeque, baseball fields, basketball courts, mature trees, open grass areas, parking lot, picnic tables, park benches, restrooms, port-o-lots, shelters, soccer field, softball field, spray turtles, swimming pool, tennis courts, tot lot, playground equipment, volleyball courts, and a water fountain.

- **Alta Murrieta Sports Park,** at 39775 Alta Murrieta Drive, is 14 acres. Amenities at this park include a barbecue, baseball field, concession stand, football field, open grass areas, parking lot, picnic tables, park benches, restrooms, port-o-lets, tot lot, playground equipment, and a volleyball court.

- **Glen Arbor Park,** at 23830 Jackson Avenue, spans 20.8 acres. Amenities include a barbecue, mature trees, picnic tables, park benches, and open grass areas (MDPR, 2021).

- **Murrieta Equestrian Park,** at 42670 Juniper Street, is 24 acres. Facilities at this park include horse arenas and restrooms.

- **Sykes Ranch Park,** at 24145 Hayes Avenue, is 5 acres. Amenities include a barbecue, bike path, walking trail, mature trees, open grass areas, parking lot, picnic tables, park benches, tot lot, water fountains, and the historic Sykes Ranch House.

The city charges development impact fees for park land facilities and for the community center. In fiscal year 2018-19, the latest development fee schedule available online, the fees for multifamily residential units were $3,049 for park land facilities and $533 for the community center (City of Murrieta, 2018).

Project development would add a maximum of 880 residents to the city, which would increase the City's population from the 2020 estimate of 115,561 to 116,441. The ratio of parkland to population after project development would be 4.36 acres of parkland per 1,000 residents, very slightly less than the current ratio.

The project proposes recreational facilities for residents including an outdoor pool, children's playground/tot lot, a community garden, a half basketball court, outdoor fitness stations and

conversation area, and a pet-friendly green space and an outdoor kitchen/BBQ. The project would also include a community room and Boys & Girls Club. Project recreational facilities would reduce project-generated demands on existing city park facilities. In addition, the proposed project would pay applicable development impact fees to the city for parkland facilities and the community center. Project impacts on park facilities would be less than significant after payment of applicable development impact fees, and no mitigation is required.

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?

Less Than Significant Impact

As described above, the project includes recreational facilities for residents including a paseo along the northern and eastern site boundaries that would be designed to connect with a future offsite paseo at the southeast corner of the project site. Construction and operation of a future offsite paseo are not part of the proposed project. Furthermore, the project would not require the construction or expansion of recreational facilities outside the limits of the project site. Therefore, project impacts would be less than significant.

4.17 Transportation

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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) Would the project 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**	

The following analysis is based upon the Limited Vehicle Miles Traveled (VMT) Assessment conducted by STC Traffic Inc. dated April 2, 2021 for the proposed project (DiPierro, 2021) (refer to **Appendix J**)

a) Would the project conflict with a program plan, ordinance or policy addressing circulation system, including transit, roadway, bicycle and pedestrian facilities?

Less than Significant Impact

Adams Avenue is a two lane north-south roadway designated a Collector Roadway in the City of Murrieta General Plan. Ivy Street is a two-lane east-west roadway also designated a Collector Roadway in the General Plan. Juniper Street is a two-lane east-west roadway not classified in the General Plan (City of Murrieta, 2011c). The intersections of Adams Avenue with Ivy Street and Juniper Street are both controlled by four-way stop signs. The west leg of the intersection of Adams Avenue and Juniper Street is a driveway of an electric vehicle charging facility. Sidewalks are present near the project site on both sides of Adams Avenue and of Juniper Street; sidewalks are absent from Ivy Street. The two nearest existing bicycle facilities to the project site mapped in the City's General Plan are striped (Class II) bicycle lanes on Juniper Street and Jefferson Avenue; the latter is approximately 600 feet east of the project site. A proposed Class II bicycle lane is mapped in the General Plan on Ivy Street near the project site (City of Murrieta, 2011c). The Riverside Transit Agency (RTA) provides public transit bus service in Murrieta. The nearest transit route to the project site is RTA Route 23, which extends northwest-southeast from the City of Wildomar to the City of Temecula; operates on Juniper Street and Jefferson Avenue near the project site; and operates at hourly frequency seven days per week (RTA, 2021).

Applicable Plans, Ordinances, and Policies

Statewide Transportation Improvement Program (STIP)

The Statewide Transportation Improvement Program (STIP) is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the State Highway Account and other funding sources. The proposed project development is not a transportation project and would not conflict with the STIP.

Riverside County Congestion Management Program

The Riverside County Congestion Management Program (CMP) is included as Chapter IX of the Riverside County Long Range Transportation Study issued by the Riverside County Transportation Commission (RCTC) in 2019. The Congestion Management Program Roadway System includes all state highways in Riverside County; routes defined as Principal Arterials by Caltrans; and facilities linking cities/communities (interregional facilities), and major activity centers (shopping malls, major industrial/business parks, stadiums, etc. (RCTC, 2019). The project would not conflict with the Riverside County Congestion Management Plan.

Riverside County Measure A

Measure A, approved by Riverside County voters in November 1988, and re-approved in 2009, authorizes a sales tax to fund a variety of transportation projects in the County. The measure created transportation improvement projects in regard to freeways, streets and roads, transit, and environmental programs (RCTC, 2017). The proposed project would not impede any Measure A projects and would not conflict with Measure A.

City of Murrieta General Plan—Circulation Element

The city's circulation element has several goals and policies that are applicable to the proposed project. Refer to **Table 4.17-1** below which lists the applicable policies and how the proposed project would comply.

Table 4.17-1
PROJECT COMPLIANCE WITH CITY OF MURRIETA GENERAL PLAN POLICIES REGARDING MOBILITY AND TRANSPORTATION

General Plan Element	Project Compliance
Circulation Element: Goal CIR-1 **A circulation system that serves the internal circulation needs of the City, while also addressing the inter-community or through travel needs.**	
Policy CIR-1.2: Maintain a Level of Service "D" or better at all intersections during peak hours. Maintain a Level of Service "E" or better at freeway interchanges during peak hours.	Section 2.0 of the City's TIA Preparation Guidelines states projects which can demonstrate trip generation of less than 100 vehicle trips in the peak hour generally will not require a TIA that includes LOS (Level of Service) analysis. Table 2 in the TIA and VMT Analysis Scoping Agreement Memorandum shows that the project will generate less than 100 peak hour trips in

General Plan Element	Project Compliance
	both the AM and PM peak hours (DiPIerro, 2021b, p. 2). Therefore, the proposed project would not conflict with this policy.
Circulation Element: Goal CIR-7 Residential areas and activity centers are accessible to all pedestrians, including persons with disabilities or having special accessibility needs.	
Policy CIR-7.3: Encourage safe pedestrian walkways and ensure compliance with the Americans with Disabilities Act (ADA) requirements within all developments.	The proposed project would be designed for seniors, some of whom may have disabilities. The proposed project would comply with all applicable city Americans with Disabilities Act (ADA) requirements. Therefore, the proposed project would not conflict with this policy.
Circulation Element: Goal CIR-8: Development, expansion, and maintenance of a network of bicycle, pedestrian, and multi-use trails that allows residents to travel between parks, schools, neighborhoods, and other major destinations without driving.	
Policy CIR-8.10: Work with adjacent property owners to create an interconnected trail that extends along the public right-of-way, which will benefit business by increasing exposure and access, and benefit the community through encouraging fitness, improved access, and a connected community.	The project proposes a joint fire lane/paseo along the northern and eastern boundaries of the project site. The proposed paseo has been designed to connect to a future offsite paseo near the southeast corner of the project site. The proposed paseos on site have been designed to integrate with the Murrieta Paseo network. Therefore, the proposed project would not conflict with this policy.

Source: (City of Murrieta, 2011c, p. 5-6 to 5-14)

As detailed above, the proposed project would not conflict with any applicable policies from the city's General Plan addressing circulation system, including transit, roadway, bicycle and pedestrian facilities. Therefore, the project would have a less than significant impact in this regard.

City of Murrieta Municipal Code

Chapter 16.40 of the Murrieta Municipal Code has a set of transportation management requirements for development projects in the city. The requirements apply to facilities employing 100 or more persons and thus do not apply to the proposed project. Therefore, the proposed project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system. Impacts would be less than significant.

Project Trip Generation

Project operation is estimated to generate 947 trips per day, as shown below in **Table 4.17-2**.

Vehicle Miles Traveled (VMT)

The City's TIA Preparation Guidelines states that "Projects that are not screened out as listed above shall perform a limited analysis of the VMT [Vehicle Miles Traveled] expected to be generated by the project and compare that to the VMT expected to be generated by the land use assumed in the General Plan".

Table 4.17-2
TRIP GENERATION ESTIMATE

Land Use	ITE Land Use Code[1]	Units	Trip Generation Rates per residential unit							Estimated Trip Generation						
			Daily Rate	AM Peak Hour			PM Peak Hour			Daily	AM Peak Hour			PM Peak Hour		
				Rate	%In	%Out	Rate	%In	%Out		In	Out	Total	In	Out	Total
Multifamily Housing, mid-rise	221	119	5.44	0.36	26%	74%	0.44	61%	39%	647	43	11	32	52	32	20
Senior Adult Housing - Attached	252	81 Units	3.7	0.20	35%	65%	0.26	55%	45%	300	16	6	10	21	12	9
Total Project Trips										**947**	59	17	42	73	44	29

[1] ITE = Institute of Transportation Engineers
Source: DiPierro, 2021

Screening Assessment

The City of Murrieta *Traffic Impact Analysis Preparation Guidelines* (City of Murrieta, 2020) set forth screening criteria for identifying projects that are expected to reduce VMT or not substantially increase VMT, as follows:

- Projects generating less than 110 daily vehicle trips.
- Local-serving retail that primarily serves the City and/or adjacent cities
- Office and other employment-related land uses that reduce commutes outside the local area
- Local-serving day care centers, pre-K and K-12 schools
- Local parks and civic uses
- Local-serving gas stations, banks and hotels (e.g. non-destination hotels)
- Local-serving community colleges that are consistent with SCAG RTP/SCS assumptions
- Student housing projects

The proposed project does not meet any of the screening criteria; thus, a limited VMT analysis was performed, as described below.

Limited VMT Analysis

This analysis is based on the understanding that the land use designation in the Downtown Murrieta Specific Plan (DMSP)—Multi-Family Residential—is consistent with the General Plan. Project site buildout conforming with the DMSP is estimated to generate 1,012 trips per day, as shown below in **Table 4.17-3**.

Table 4.17-3
GENERAL PLAN LAND USE TRIP RATES AND TRIP GENERATION

Land Use	Units	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Multifamily Housing (midrise)	1	5.44	0.36	26%	74%	0.44	61%	39%
	186	1,012	67	17	50	82	50	32

Source: STC Traffic, Inc. 2021.

Project trip generation would be less than trip generation by the land use assumed in the General Plan. Based on an assumption that average trip length would be the same for both the proposed land use and the General Plan land use, it is reasonable to conclude that the project VMT is less than the land use assumed in the General Plan. Therefore, the project VMT impact will be less than significant. No mitigation is needed.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)

Less than Significant Impact

CEQA Guidelines section 15064.3(b) pertains to the use of Vehicle Miles Traveled (VMT) as a method of determining the significance of transportation impacts. The VMT analysis presented above in **Section 4.17.a** satisfies requirements under CEQA Guidelines section 15064.3(b). As described above, project trip generation would be less than trip generation by the land use assumed in the General Plan, therefore, it is reasonable to conclude that the project VMT would be less than the land use assumed in the General Plan. Therefore, the project VMT impact will be less than significant. No mitigation is needed.

c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant Impact

The proposed project would not alter the surrounding roadways. Vehicular access to the project would be provided by two driveways from Adams Avenue. The intersections of the two proposed driveways with Adams Avenue would be perpendicular and would not cause hazards due to a geometric design feature. The project's circulation system, including driveways and parking areas, would be designed to meet the development standards of the city and would not result in uses or design features that would create traffic hazards. Therefore, impacts regarding increases in hazards due to geometric design features or incompatible uses would be less than significant.

d) Would the project result in inadequate emergency access?

Less than Significant Impacts

Construction

Project construction could involve temporary closure of a segment of a lane in Adams Avenue or an entire segment of the roadway. Any plans for construction activity in the roadway right-of-way would require an encroachment permit from the City of Murrieta. The City Public Works/Engineering Department would review any encroachment permit applications to ensure that such construction did not impede emergency response to the project site or nearby properties; and did not create traffic hazards. Compliance with any conditions set forth in an encroachment permit is a condition of the permit. Impacts would be less than significant after City review and after project conformance with conditions set forth in any encroachment permit.

Operation

The project would comply with applicable city regulations, such as the requirement to comply with the city's fire code to provide adequate emergency access, as well as the California Building Standards Code. Prior to the issuance of building permits, the City of Murrieta would review project site plans, including location of all buildings, fences, access driveways and other features that may affect emergency access. The site design includes access and fire lanes that would accommodate emergency ingress and egress by fire trucks, police units, and ambulance/paramedic vehicles. All onsite access

and sight-distance requirements would be in accordance with all applicable design requirements. The city's review process and compliance with applicable regulations and standards would ensure that adequate emergency access would be provided. Therefore, the project would not result in inadequate emergency access and there would be less than significant impacts.

4.18 Tribal Cultural Resources

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code § 5020.1(k)?				**X**
b) Cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?		**X**		

Information from UltraSystems' Phase I Cultural Resources Inventory, dated April 15, 2021 for the proposed project (refer to **Appendix D1**) is included in the analysis below.

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources or in a local register of historical resources as defined in Public Resources Code § 5020.1(k)?

No Impact

A traditional cultural site within a half-mile buffer of the project boundary is documented in the Native American Heritage Commission's (NAHC) Sacred Lands File (SLF) search. No resources as defined by Public Resources Code § 21074 have been identified (refer to Attachment C in **Appendix D1** to this IS/MND). Additionally, the project site has not been recommended for historic designation for prehistoric and tribal cultural resources (TCRs). No specific tribal resources have been identified by local tribes responding to inquiries for the Cultural Resources Inventory.

No prehistoric archaeological resources were observed during the archaeological field survey conducted March 3, 2021 by Stephen O'Neil, M.A., RPA as part of the cultural resources investigation (**Section 4.3**, **Appendix D1**). The results of the pedestrian assessment indicate that it is unlikely that prehistoric resources will be adversely affected by construction of the project; the barn is slated for removal and preservation by the City of Murrieta prior to project construction. However, cultural resource study findings at the Eastern Information Center (the local California Historic Resources Information System facility) have yet to be received. There is the potential that information from site records and cultural survey reports yet to be provided may result in a revision of these findings. (Refer to **Appendix D1**).

No tribal cultural resources onsite are 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 § 5020.1(k). Therefore, the project would have no impact in this regard.

b) Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?

Less than Significant Impact with Mitigation Incorporated

Assembly Bill 52 (AB 52) requires meaningful consultation with California Native American Tribes on potential impacts on TCRs, as defined in Public Resources Code § 21074. TCRs are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either eligible or listed in the California Register of Historical Resources or local register of historical resources (CNRA, 2007).

As part of the AB 52 process, Native American tribes must submit a written request to the lead agency to be notified of projects within their traditionally and culturally affiliated area. The lead agency must provide written, formal notification to those tribes within 14 days of deciding to undertake a project. The tribe must respond to the lead agency within 30 days of receiving this notification if they want to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the tribe's request. Consultation concludes when either (1) the parties agree to mitigation measures to avoid a significant effect on a tribal cultural resource, or (2) a party, acting in good faith and after reasonable effort, concludes mutual agreement cannot be reached.

The City of Murrieta (the lead agency) prepared to initiate AB 52 outreach to local tribes for the Adams Avenue Affordable Housing project following formal submittal of the project to the City's Planning Department. The City Planning Department would then prepare and send letters to the several tribes on their list for AB 52 contact, informing them of the project.

The AB 52 contact letters were sent by Aaron Rintamäki, Associated Planner, on August 5, 2021 by certified mail to the following tribes:
Soboba Band of Luiseño Indians,
Rincon Band of Luiseño Indians,
Temecula Band of Luiseño Mission Indians (Pechanga Band of Luiseño Indians),
Morongo Band of Mission Indians, and the
Agua Caliente Band of Cahuilla Indians.

The letters stated that the recipient had 30 days from the receipt of the letter to request AB 52 consultation regarding the project. Mr. Juan Ochoa, Assistant Tribal Historic Preservation Officer with the Pechanga Cultural Resources Department responded by email on September 1, 2021 to Aaron Rintamäki that the Pechanga Band of Luiseño Indians was requesting AB 52 consultation. The Rincon Band of Luiseño Indians notified the City that they declined to participate in AB 52 consultation, and the remaining three tribes did not respond.

Mr. Rintamäki responded to Mr. Ochoa on October 4, 2021 with a formal consultation invitation letter, at which time Mr. Ochoa, following which a meeting was arranged for October 28, 2021 which included Mr. Rintamäki with the City and Ebru Ozdil (Pechanga's contact person for the project), Mr. Ochoa, Molly Earp, Paul Macarro, and Michelle Fehley with the Pechanga tribes. Mr. Rintamäki noted

in an email on November 8 to Ms. Ozdil of a relevant exhibit that the client had prepared, provided draft mitigation measures for the tribe to review and requested a follow-up meeting; the next day Ozdil noted needed revisions to the mitigation measures. The draft mitigation measures were discussed by email and by telephone call November 10th between Mr. Rintamäki and Ms. Ozdil, and a further meeting was held November 18, 2021 between the City and the Pechanga Band. On December 3, 2021 Ms. Earp (Cultural Planning Specialist with the Pechanga Cultural Resources Department) provided Mr. Rintamäki and Taylor Varner (with National Community Renaissance, the project proponent) with revised TCR mitigation measures.

A traditional site in the region of the project was documented in the Native American Heritage Commission's SLF search. However, there has been no response to date to inquiries to the Pechanga Band of Mission Indians, the tribe recommended by the NAHC to contact, regarding this site. No resources as defined by Public Resources Code § 21074 have been identified (refer to Attachment C: "Native American Heritage Commission Records Search and Native American Contacts" in **Appendix D1** to this IS/MND). Additionally, the project site has not been recommended for historic designation for prehistoric and TCRs. No specific tribal resources have been identified within the project's area of potential effect.

No prehistoric or archaeological resources were observed during the field survey. The EIC records search indicated that no cultural resources have been found within the project site and that there have been no prior surveys including the project parcel (see **Section 4.5 Cultural Resources** above). There were four linear surveys conducted along Adams Avenue with no cultural resource findings. The records search did indicate three prehistoric sites and features and three isolate artifacts within a half-mile zone of the project boundary, all to the west and southwest of the project (see **Appendix D1**).

Land at the project site has remained relatively undisturbed due to use for farming into the late 20th century, and the immediate area has been rural farms and broadly spaced residential since the 1970s. No human remains have been previously identified or recorded onsite. Therefore, while the potential for subsurface prehistoric cultural deposits is considered to be moderate due to the relatively undisturbed nature of the land. However, this project is situated in a region known to have been heavily used for habitation and natural resource gathering by the local Luiseño tribe (see Section 2.2.2 in **Appendix D1**), suggesting the moderate potential for the presence of cultural material.

The project proposes grading. Grading activities associated with development of the project would involve new subsurface disturbance and could result in the unanticipated finds of traditional cultural resources, artifacts or features, and so the tribe and the lead agency have agreed on the following TCR Mitigation Measures. has requested **TCR-1** and **TCR-3** calling for the presence of a Native American monitor on site during ground disturbing construction activities. Monitoring procedures, reporting and disposition of any recovered artifacts are defined in **TCR-2**, **TCR-4**, **TCR-6** and **TCR-7**. Also, subsurface disturbance could result in the unanticipated discovery of unknown human remains, including those interred outside of formal cemeteries. In the unlikely event of an unexpected discovery, implementation of mitigation measures, **TCR-5** and **TCR-8** dealing with human remains are recommended to ensure that impacts related to the accidental discovery of human remains would be less than significant.

Mitigation Measures

TCR-1: ***Archaeological Monitoring:*** At least 30-days prior to grading permit issuance and before any grading, excavation, and/or ground-disturbing activities on the site take

place, the project permittee/owner shall retain a Riverside County-certified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Prior to grading, the project permittee/owner shall provide to the City verification that a certified archaeological monitor has been retained. Any newly discovered cultural resource deposits shall be subject to a cultural resources evaluation.

The Project Archaeologist and the Tribal monitor(s) shall manage and oversee monitoring for all initial ground disturbing activities and excavation of each portion of the project site including clearing, grubbing, tree removals, mass or rough grading, trenching, stockpiling of materials, rock crushing, structure demolition and etc. The Project Archaeologist and the Tribal monitor(s), shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources in coordination with any required special interest or tribal monitors.

The developer/permit holder shall submit a fully executed copy of the contract to the Community Development Department to ensure compliance with this condition of approval. Upon verification, the Community Development Department shall clear this condition.

The Project archeologist and the Consulting Tribes(s) shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis

1. A final report documenting the monitoring activity and disposition of any recovered cultural resources shall be submitted to the City of Murrieta, Eastern Information Center and the consulting tribe(s) within 60 days of completion of monitoring.

TCR-2: ***Cultural Resource Monitoring Plan (CRMP)*****:** The Project Archaeologist, in consultation with consulting tribes, the permittee/owner, and the City, shall develop an Archaeological Monitoring Plan to address the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the plan shall include:

a. Project grading and development scheduling;
b. The development of a monitoring schedule in coordination with the permittee/owner during grading, excavation and ground-disturbing activities on the site: including the scheduling, safety requirements, duties,

scope of work, and Monitors' authority to stop and redirect grading activities in coordination with all project archaeologists; and,

c. The protocols and stipulations that the permittee/owner, City, Tribes, and Project Archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.

TCR-3: ***Native American Monitoring****:* Native American Tribal monitors shall also participate in monitoring of ground-disturbing activity. At least 30 days prior to issuance of grading permits, agreements between the permittee/owner and a Consulting Tribe(s) shall be developed regarding prehistoric cultural resources and shall identify any monitoring requirements and treatment of Tribal Cultural Resources so as to meet the requirements of CEQA. The monitoring agreement shall address the treatment of known Tribal Cultural Resources; the designation, responsibilities, and participation of professional Native American Tribal monitors during grading, excavation, and ground-disturbing activities; project grading and development scheduling.

TCR-4: ***Disposition of Cultural Resources****:* In the event that Native American cultural resources are inadvertently discovered during the course of grading for this project, one or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be submitted to the City of Murrieta Planning Department:

1) Preservation-in-place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resource.
2) On-site reburial of the discovered items as detailed in the CRMP required pursuant to Mitigation Measure CUL-2. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV report shall be filed with the City under a confidential cover and not subject to Public Records Requests.
3) Curation. The permittee/owner shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources, and adhere to the following:

    a. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 Code of Federal Regulations 800 Part 79 and therefore would be curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation.

TCR-5: ***Human remains:*** If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the "most likely descendants(s)" for purposes of receiving notification of discovery. The most likely descendant(s) shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.

TCR- 6: ***Inadvertent Archeological Find:*** If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to project approval, the following procedures shall be followed.

i. All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the developer, the archaeologist, the tribal representative(s) and the Community Development Director to discuss the significance of the find.

ii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the tribal representative(s) and the archaeologist, a decision shall be made, with the concurrence of the Community Development Director, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources.

iii. Grading of further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal monitors if needed.

iv. Treatment and avoidance of the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with the appropriate tribes. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or re-burial on the Project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition.

v. If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be prepared by the project archeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan.

vi. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the landowner and the Tribe(s) cannot agree on the significance or the mitigation for the archaeological or cultural resources, these issues will be presented to the City Community Development Director for decision. The City Community Development Director shall make the determination based on the provisions of the California

Environmental Quality Act with respect to archaeological resources, recommendations of the project archeologist and shall take into account the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City Community Development Director shall be appealable to the City Planning Commission and/or City Council."

TCR-7: ***Archeology Report – Phase IV*:** At the completion of grading, excavation, and ground disturbing activities on-site, a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the Project Archaeologist and Native American Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City of Murrieta, Eastern Information Center and Consulting tribes.

TCR-8: ***Non-Disclosure of Reburials Location***: It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254 (r)., parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254 (r).

Level of Significance After Mitigation

With implementation of **MM TCR-1-4**, and **6-7,** potential project impacts on TCRs would be less than significant. With implementation of Mitigation Measures **MM TCR-5** and **MM TCR-8** above, the proposed project would result in less than significant impacts to human remains and associated funerary objects.

4.19 Utilities and Service Systems

Would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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 or may serve the project that it has adequate capacity to serve the project's projected demand in addition to 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**	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			**X**	

a) Would the project 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?

Less than Significant Impact

As discussed in **Section 3.0** the proposed project would require offsite improvements including sewer, domestic water, fire water, irrigation, and dry utilities connections to existing utility infrastructure in Adams Avenue.

The project proposes the following offsite utility improvements:

- two proposed driveway aprons;
- replaced sidewalk, curb, and gutter;

- water, sewer, and storm drain utility connections; and
- upsizing of the public water main.

The project proposed to upsize the water line along Adams Avenue by removing the existing 6-inch water pipeline and replacing it with a 16-inch water pipe in the same trench, for approximately 700 linear feet.

Construction would need to occur in Adams Avenue and Ivy Street to connect the utility lines for the proposed project to the existing main lines. All offsite utility construction would be conducted during Phase I of the project.

Wastewater Treatment and Conveyance – Project development would include construction of two new private sewer mains onsite connecting to an existing sewer main in Adams Avenue next to the west site boundary. One private sewer main would extend in a proposed driveway east approximately halfway across the site between buildings A and B; and laterals would be built from that sewer main to building connections for buildings A and B. The second private main would extend eastward in a fire lane along the south site boundary most of the length of the site, then turn northward west of Building C and extend most of the width of the site; laterals would be built from the second main to building connections for Building C (see Conceptual Sewer Plan in **Appendix A).**

Western Municipal Water District (WMWD) owns and maintains sewer mains in roadways next to the project site to which proposed sewer laterals from the project would connect. WMWD issued a will-serve letter to the project applicant on April 26, 2021 committing to providing sewer service to the project on the conditions that the applicant obtain all necessary permits and approvals for the proposed project; pay all required costs and fees; and prepare a preliminary layout of proposed water and sewer facilities and points of connection for WMWD's review (WMWD, 2021; the letter is included in **Appendix K** to this IS/MND.

The Eastern Municipal Water District (EMWD) provides wastewater treatment to parts of the City of Murrieta, including the project site, at its Temecula Valley Regional Water Reclamation Facility (TVRWRF). The capacity of the TVRWRF is 23 million gallons per day (mgd). Average wastewater flows through the facility in 2015 were approximately 13.5 mgd (Jorgensen, 2021; EMWD 2019).

Wastewater generation is estimated as 100 percent of indoor water use. Western Municipal Water District, which provides water to portions of the City of Murrieta including the project site, used a default indoor water use rate of 55 gallons per person per day, or gallons per capita day (gpcd) in determining its 2020 water use target.[25] The project at completion is estimated to house between 340 and 880 people; the high estimate of 880 is used here for a conservative analysis. Thus, project operation is estimated to generate 48,400 gallons per day (gpd) of wastewater. The residual capacity at the TVRWRF is 9.5 mgd. Sufficient wastewater treatment capacity is available in the region for project wastewater generation, and project development would not require construction of a new or expanded wastewater treatment facility. Impacts would be less than significant.

Domestic Water – As detailed in Threshold 4.19 b) below, the project site is in Western Municipal Water District's Murrieta Service Area. Water supplies for the Murrieta Service Area consist of imported water from northern California and the Colorado River purchased from the Metropolitan Water District of Southern California; local groundwater from the Temecula Valley Groundwater Basin; and recycled water (RMC, 2016, p. 6-1). Project construction would include installation of

[25] The 2020 water use target was calculated in accordance with the Water Conservation Act of 2009, SBX 7-7.

water laterals from existing mains in Adams Avenue into the project site. Western Municipal Water District (WMWD) owns and maintains water mains in roadways next to the project site to which proposed water laterals from the project would connect. WMWD issued a will-serve letter to the project applicant on April 26, 2021 committing to providing water service to the project subject to conditions described above under *Wastewater Treatment and Conveyance* (WMWD, 2021; the letter is included in **Appendix K** to this IS/MND). As analyzed in Threshold 4.19 b), the project would result in a nominal increase in water demand compared to existing conditions and therefore, the project would have a less than significant impact regarding domestic water supplies.

Fire Water - The project proposes installation of one new fire water main on site from an existing water main in Adams Avenue eastward to Building C; proposed building fire water connections would be installed for each of the three residential buildings. As analyzed in Threshold 4.19 b), the project would result in a nominal increase in water demand compared to existing conditions and therefore, the project would have a less than significant impact regarding fire water supplies.

Water Treatment – Water purchased from MWD is treated at MWD's Mills Treatment Plant in Riverside and Skinner Treatment Plant east of Murrieta. The two facilities have combined capacity of 570 million gallons per day or approximately 638,000 afy (MWD 2021a; MWD 2021b). WMWD retail supplies also include water treated at two desalting facilities near the northern part of WMWD's service area; desalinated water supplies amount to 3,534 afy (refer to **Table 4.19-1** below) (RMC, 2016, p. 7-7).

Stormwater – Storm drain inlets are located in Adams Avenue along the west site boundary. One inlet is on the northwest project site boundary, and the second is immediately north of Ivy Street south of the project site. A reinforced concrete pipe storm drain in Adams Avenue is 51 inches diameter on the northern part of the site frontage in Adams Avenue, and 54 inches on the southern part (RCFCWCD, 1986). The project would include installation of downspouts and area drains that would collect runoff and convey it to existing storm drains. Impacts regarding stormwater would be less than significant. Refer to **Section 4.10** of this document for a discussion of the proposed project impacts regarding hydrology and water quality.

Electric Power: Electric power for the City of Murrieta is provided by Southern California Edison (SCE) (City of Murrieta, 2021). The proposed project is in a developed area, and infrastructure for providing electric power to the area is well established. SCE typically utilizes existing utility corridors to reduce environmental impacts and has energy-efficiency programs to reduce energy usage and maintain reliable service throughout the year (Southern California Edison, 2018, p. 45). Total electricity consumption in SCE's service area is forecast to be 108,982 GWh in 2020 and 122,931 GWh in 2030 (CEC, 2020, Form 1.2); one GWH is equivalent to one million kilowatt-hours.

The project proposes installation of three transformers: a new transformer to be located outside the southeast corner of Building A, a new transformer to be located east of Building B and a new transformer to be located south of Building C. The project would be constructed in accordance with applicable Title 24 regulations and would not necessitate the construction or relocation of electric power facilities. Therefore, a less than significant impact would occur.

Natural Gas: The proposed development would be all-electric and no impacts on natural gas supplies or natural gas distribution infrastructure would occur.

Telecommunications Facilities: Cable services, including internet, phone, and television, are provided in the City of Murrieta by Charter Communications (FCC, 2021). The proposed project

would not interfere with operation of Charter's facilities, and therefore a less than significant impact would occur.

b) Would the project have sufficient water supplies available to serve the and reasonably foreseeable future development during normal, dry and multiple dry years?

Less than Significant Impact

Water Supplies and Demands

The Western Municipal Water District (WMWD) supplies water to a portion of the City of Murrieta, including the project site. WMWD is both a water wholesaler and water retailer; it serves three retail service areas, including the Murrieta Service Area, totaling 104 square miles and with total population of approximately 94,107 in 2015. The Murrieta Service Area is approximately 6.5 square miles and is entirely within the City of Murrieta (RMC, 2016, p. 3-16).

Water supplies for the Murrieta Service Area consist of imported water from northern California and the Colorado River purchased from the Metropolitan Water District of Southern California; local groundwater from the Temecula Valley Groundwater Basin; and recycled water (RMC, 2016, p. 6-1).[26] WMWD's forecast retail water supplies in normal-water years are listed below in **Table 4.19-1**.

Table 4.19-1
WMWD RETAIL WATER SUPPLIES AND DEMANDS, AFY

Supply Source	2020	2025	2030	2035	2040
Supplies					
Imported: MWD	44,384	54,830	58,038	70,096	68,166
Groundwater: Local Purchases and Murrieta Basin	14,200	10,000	10,000	10,000	10,000
Desalinated Water	3,534	3,534	3,534	3,534	3,534
Recycled Water	1,600	1,900	2,100	2,400	2,700
Other	6,000	6,000	6,000	6,000	6,000
Total	**69,718**	**76,264**	**79,672**	**92,030**	**90,400**
Demands					
	30,814	33,714	36,415	39,170	41,704
Difference					
	38,904	42,550	43,257	52,860	48,696

Source: RMC, 2016, p. 7-7
AFY= Acre-Feet per Year

WMWD forecasts that its retail supplies will be sufficient to meet demands in single-dry-year and multiple-dry-year conditions over the 2020-2040 period also (RMC, 2016, p. 7-7).

WMWD's water use target for 2020 is 352 gallons per capita per day (gpcd). Estimated project water demand ranges from 134 to 347 acre-feet per year (afy), as shown below in **Table 4.19-2**. The high estimate of project water demands is approximately 0.45 percent of forecast WMWD 2025 retail

[26] WMWD's overall (wholesale) service area is 527 square miles (WMWD, 2016).

water supplies and one percent of forecast WMWD retail demands (see **Table 4.19-1** above). Therefore, less than significant impacts are anticipated.

Table 4.19-2
ESTIMATED PROJECT WATER DEMAND

Unit Water Demand Factor Gallons Per Day (GDP)/per person[1]	Residents	Estimated Water Demand in gallons per day2	Estimated Water Demand (gallons per year) [2]	Estimated Water Demand (acre-feet per year)
352	340 to 880	119,680 to 309,760	43,683,200 to 113,062,400	134 to 347

[1] 352 gallons per capita per day (i.e. per person) (RMC, 2016, p. 5-6)
[2] The estimated population range for the project is between 340 and 880 persons. Therefore, to calculate the estimated annual water demand of the project, we multiply the 352 gallons per day per person by the estimated population range to give us the estimated range of daily water use (352 x 340) to (352 x 880), which results to a range of 119,680 to 309,760 gallons per day. Lastly, we multiply the estimated range of daily water use by 365 days to give us an estimated range of annual water use for the proposed project which would result to 43,683,200 to 113,062,400gallons per year.
Source: UltraSystems, 2021.

Water Treatment

Water purchased from MWD is treated at MWD's Mills Treatment Plant in Riverside and Skinner Treatment Plant east of Murrieta. The two facilities have combined capacity of 570 million gallons per day or approximately 638,000 afy (MWD 2021a; MWD 2021b). WMWD retail supplies also include water treated at two desalting facilities near the northern part of WMWD's service area; desalinated water supplies amount to 3,534 afy (refer to **Table 4.19-1** above) (RMC, 2016, p. 7-7). Therefore, based on the information above, sufficient water treatment capacity is available in the region for project water demands, and thus project impacts regarding water demand would be less than significant.

c) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Less than Significant Impact

As described under Threshold 4.19a above, there would be sufficient capacity available at EMWD's TVRWRF to meet the wastewater treatment demands of the project. The existing wastewater treatment facility could accommodate the additional wastewater estimated to be generated by the proposed project. Therefore, the project would have a less than significant impact in this regard and no mitigation is necessary.

d) Would the project 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?

Less than Significant Impact

The city contracts with Waste Management, Inc. for collection and disposal of the city's solid waste. In 2019 approximately 98 percent of the solid waste landfilled from Murrieta was disposed of at the two landfills in **Table 4.19-3**.

Table 4.19-3
LANDFILLS SERVING MURRIETA

Facility and Nearest City/Community	Remaining Capacity, cubic yards	Daily Permitted Disposal Capacity, tons	Actual Daily Disposal, tons[1]	Residual Daily Disposal Capacity, tons	Estimated Closing Date
Badlands Sanitary Landfill, Moreno Valley	15,748,799	4,800	2,955	1,845	2022
El Sobrante Landfill, Corona	143,977,170	16,054	11,398	4,656	2051
Total	**159,725,969**	**20,854**	**14,353**	**6,501**	Not applicable

[1] Daily disposal calculated based on annual disposal tonnage assuming 300 operating days per year: that is, six days per week less certain holidays.
Sources: CalRecycle. 2021a. Jurisdiction Disposal by Facility; CalRecycle. 2021b, 2021c. Solid Waste Information System (SWIS): SWIS Facility/Site Search; CalRecycle. 2020d. 2019 Landfill Summary Tonnage Report.

Construction

Project construction would generate solid waste requiring disposal at local landfills. Materials generated during construction of the project would include paper, cardboard, metal, plastics, glass, concrete, lumber scraps and other materials. Section 4.408 of the 2019 California Green Building Standards Code (CALGreen; California Code of Regulations, Title 24, Part 11) requires that at least 65 percent of the nonhazardous construction and demolition waste from residential construction operations be recycled and/or salvaged for reuse. Project construction would include recycling and/or salvaging at least 65 percent of construction and demolition waste in accordance with the 2019 CALGreen. Even after closure of the Badlands Landfill in 2022, sufficient disposal capacity would remain at the El Sobrante Landfill for solid waste generated by project construction. Impacts would be less than significant.

Operation

Multifamily residential units in Riverside County generated an average of 4.05 pounds of solid waste per day in 2014, the latest year for which data are available.[27] Thus, the proposed 200 residential units are estimated to generate 810 pounds of solid waste per day or 148 tons per year, as shown below in **Table 4.19-4**. Even after closure of the Badlands Landfill in 2022, the El Sobrante Landfill has remaining disposal capacity of 4,656 tons per day or 1,699,000 tons per year. Estimated project

[27] The estimate is based on 109,897 tons total solid waste generation from multifamily residential units and 148,617 occupied multifamily units in Riverside County, which yields 0.739 tons per year or 4.05 pounds per day. Source: CalRecycle, 2021e.

operational solid waste disposal of 148 tons per year is approximately 0.009 percent of remaining disposal capacity at El Sobrante Landfill. Sufficient landfill capacity is available in the region for estimated project solid waste generation, and project impacts on solid waste disposal capacity would be less than significant.

Table 4.19-4
ESTIMATED PROJECT-GENERATED SOLID WASTE

Land Use	Generation Rate*	Approximate Waste (pounds/year)	Approximate Waste (tons/year)
Multifamily Residential	4.05 pounds per dwelling unit per day	295,815	148

*(CalRecycle, 2021).

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact

In 1989, the California Legislature enacted the California Integrated Waste Management Act (AB 939), in an effort to address solid waste problems and capacities in a comprehensive manner. The law required each city and county to divert 50 percent of its waste from landfills by the year 2000. The city developed a SRRE in 1997 that aims at recycling, composting, special waste disposal, and education and public information programs. The city has established a number of programs in partnership with Waste Management, Inc. that promote recycling, composting, and waste reduction, all of which have contributed to the city's increasing diversion rate and decreasing disposal rate in recent years. The programs include bulky item and E-waste collection services, commercial recycling program, commercial organics recycling program, residential curbside recycling program, and outreach and education (City of Murrieta General Plan, 2019, p. 5.21-2).

Assembly Bill 341 (AB 341; Chapter 476, Statutes of 2011) increases the statewide waste diversion goal to 75 percent by 2020, and mandates recycling for commercial and multi-family residential land uses. The project would include storage areas for recyclable materials in accordance with AB 341.

Assembly Bill 1826 (AB 1826; California Public Resources Code Sections 42649.8 et seq.) requires recycling of organic matter by businesses, and multifamily residences of five of more units, generating such wastes in amounts over certain thresholds. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. Multifamily residences are not required to have a food waste diversion program. The project would include recycling of organic wastes as required for multifamily residences under AB 1826. The proposed project would comply with applicable local, state and federal solid waste disposal standards; therefore, impacts would be less than significant.

4.20 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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 instability, or drainage changes?				**X**

a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact

As shown in **Figure 4.9-2** in Section **4.9** of this IS/MND, the project site is not located in a Very High Fire Hazard Severity Zone (VHFHSZ) within a Local Responsibility Area (LRA), that is, where cities or counties are responsible for the costs of wildfire prevention and suppression. The nearest VHFHSZ in LRA to the project site is about one mile to the west in the City of Murrieta. Review of the CAL FIRE Fire Resource and Assessment Program (FRAP) maps for state responsibility areas (SRAs) indicates that the project site is not located in an SRA. The nearest SRA to the project site is in unincorporated Riverside County approximately 1.5 miles to the southwest (see **Figure 4.9-3**; CAL FIRE, 2021). Therefore, the proposed project would have no impact in this regard.

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

No Impact

The project site is not located in or near areas or lands classified as VHFHSZs. No slopes are located on the project site which could exacerbate wildfire risks. Thus, the project would not expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. Therefore, the proposed project would have a no impact in this regard.

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

No Impact

The project site is not located in an SRA (CAL FIRE, 2019), nor is the project site in or near a VHFHSZ. The project would not require the installation or maintenance of infrastructure that may exacerbate fire risk. Therefore, the proposed project would have no impact in this regard.

d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact

The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. The proposed project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The project site is flat, is not in an area with high slopes or unstable ground conditions, and is not within a landslide hazard zone. Therefore, the project would have no impact in this regard.

4.21 Mandatory Findings of Significance

Would the project have:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		**X**		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			**X**	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		**X**		

a) Would 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact with Mitigation Incorporated

The project site is in an urbanized area, which provides low habitat value for special-status plant and wildlife species. One special-status species, Cooper's hawk, was observed onsite. Three other special-status species are considered to have moderate potential to occur onsite but were not observed onsite: burrowing owl and San Diego black-tailed jackrabbit. Four special-status plant species were determined to have low potential to occur onsite; none of those species were detected onsite. Impacts on the following biological resources were determined to be significant without mitigation: nesting birds; burrowing owl; and to trees protected under the City of Murrieta Municipal Code.

Implementation of mitigation measures **BIO-1** and **BIO-2** would reduce impacts to burrowing owl to less than significant. Implementation of mitigation measures **BIO-3**, **BIO-4**, **BIO-5**, and **BIO-7** would reduce impacts on nesting birds to less than significant. Implementation of mitigation measures **BIO-7**, **BIO-8**, **BIO-9**, and **BIO-10** would reduce impacts on protected trees to less than significant.

A barn onsite dates to before 1938 based on review of historic aerial photographs and topographic maps (see **Section 4.5**); the barn would be dismantled and removed from the site before site preparation for the proposed project would begin. The dismantling and removal of the barn from the project site is a separate work effort by the city and is not a part of the proposed project. Therefore, development of the proposed project would not diminish the historical significance of the barn.

Impacts on archaeological resources that may be buried in site soils were determined to be significant without mitigation. Such impacts would be less than significant after implementation of mitigation measure **CUL-1**. Impacts on human remains that may be buried in site soils were determined to be significant without mitigation. Implementation of mitigation measure **CUL-2** would reduce that impact to less than significant.

b) Would the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less than Significant Impact

In the short term, there would be a potential for cumulative effects on traffic, air quality, and noise if other development projects were implemented concurrently with the project. The following projects are listed on the City of Murrieta Current Planning Division Projects List dated June 30, 2021 within 0.5 mile of the project site:

- Murrieta Gateway Business Park: 28+ acre business park: 9 buildings totaling 360,753 square feet, on Hawthorn Road between Jefferson Avenue and Adams Avenue
- Demolition of a house at 24770 Washington Avenue
- Full-service restaurant, 6,000 square feet, at 24683 Washington Avenue (City of Murrieta, 2021).

Two of the three projects are on Washington Avenue and are not expected to generate substantial traffic on Adams Avenue. One of the three projects is demolition of a house and would cause only temporary demolition impacts. Murrieta Gateway Business Park would be at least 2,200 feet southeast of the proposed project site; thus, impacts from Murrieta Gateway Business Park such as noise, vibration, and localized air quality impacts are not expected to combine with impacts of the proposed project to cause significant cumulative impacts. Project impacts would not be cumulatively considerable.

c) Would the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant Impact with Mitigation Incorporated

Construction lighting impacts on surrounding residences were determined to be significant without mitigation. Implementation of mitigation measure **AES-1** would reduce this impact to less than significant.

Project site clearance, grading, and construction would have potentially significant impacts on burrowing owl, Cooper's hawk, and on trees protected by the City of Murrieta Municipal Code. Implementation of mitigation measures **BIO-1** through **BIO-10** would reduce these impacts to less than significant.

Archaeological resources may be buried in site soils and could be damaged by project ground-disturbing activities. This impact would be significant without mitigation. Implementation of mitigation measure **CUL-1** would reduce this impact to less than significant. Impacts on human remains that may be buried in site soils were determined to be significant without mitigation. Implementation of mitigation measure **CUL-2** would reduce that impact to less than significant.

The project geotechnical evaluation report determined that site soils are unsuitable for supporting the proposed buildings and recommended removal of existing soils to at least three feet below the bottoms of proposed foundations. Removed soils may be used as fill soil after proper moisture conditioning and re-compaction to at least 90 percent of maximum dry density (EEI, 2021, p. 11). Project impacts arising from unstable soils would be significant without mitigation. Mitigation measure **GEO-1** requires implementation of applicable recommendations provided in Section 7.0 of the Geotechnical Evaluation Report. Impacts related to unstable soils would be less than significant after implementation of mitigation measure **GEO-1**.

Fossils could be buried in site soils. Project ground-disturbing activities could damage fossils. Implementation of mitigation measure **GEO-2** would reduce this impact to less than significant.

Project construction would generate noise at nearby residences exceeding City of Murrieta Municipal Code limits. Implementation of mitigation measures **N-1** and **N-2** would reduce this impact to less than significant.

Tribal cultural resources could be buried in site soils. Project site grading and project construction could damage such resources. Implementation of mitigation measures **TCR-1** through **TCR-8** would reduce these impacts to less than significant.

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7.0 MITIGATION MONITORING AND REPORTING PROGRAM

The Mitigation Monitoring and Reporting Program (MMRP) has been prepared in conformance with § 21081.6 of the Public Resources Code and § 15097 of the CEQA Guidelines, which requires all state and local agencies to establish monitoring or reporting programs whenever approval of a project relies upon a MND or an EIR. The MMRP ensures implementation of the measures being imposed to mitigate or avoid the significant adverse environmental impacts identified through the use of monitoring and reporting. Monitoring is generally an ongoing or periodic process of project oversight; reporting generally consists of a written compliance review that is presented to the decision-making body or authorized staff person.

It is the intent of the MMRP to: (1) provide a framework for document implementation of the required mitigation; (2) identify monitoring/reporting responsibility; (3) provide a record of the monitoring/reporting; and (4) ensure compliance with those MM that are within the responsibility of the City and/or Applicant to implement.

The following table lists impacts, mitigation measures adopted by the City of Murrieta in connection with approval of the proposed project, level of significance after mitigation, responsible and monitoring parties, and the project phase in which the measures are to be implemented.

Only those environmental topics for which mitigation is required are listed in this Mitigation Monitoring and Reporting Program.

Table 7.0-1
MITIGATION MONITORING AND REPORTING PROGRAM

TOPICAL AREA IMPACT	MITIGATION MEASURE	RESPONSIBLE PARTY	MONITORING ACTION	1. ENFORCEMENT AGENCY 2. MONITORING AGENCY 3. MONITORING PHASE
4.1 Aesthetics				
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**MM AES-1:** During project construction the project applicant shall place construction staging areas as far away as possible from adjacent residences so as to minimize, to the maximum extent possible, any potential lighting impacts to nearby residences. The lighting used during project construction shall consist of the minimum amount of light necessary for safety and security on the project site.	Project Applicant	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction
4.4 Biological Resources				
a) Would the project 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?	**MM BIO-1** **Pre-Construction Burrowing Owl Surveys**: Although BUOW was not detected on site during the focused surveys, the BSA contains suitable habitat to potentially support BUOW in the future. Therefore, a 30-day pre-construction BUOW survey is required by the MSHCP. A qualified biologist would conduct a pre-construction BUOW survey in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (MSHCP Survey Guidelines; Riverside County TLMA, 2006) within 30 days prior to ground disturbance. Following the completion of the pre-construction BUOW survey, the biologist would prepare a letter report in accordance with the MSHCP Survey Guidelines summarizing the results of the survey. The report would be submitted to the City of Murrieta prior to initiating any ground disturbance activities. If no BUOWs or signs of BUOW are observed during the survey and concurrence is received from EPD and CDFW, project activities may begin and no further mitigation would be required.	Project Applicant and Qualified Biologist	Field Verification	1. City of Murrieta 2. City of Murrieta 3. Before Construction

		If BUOW or signs of BUOW are observed during the survey, the site would be considered occupied. The biologist would implement mitigation measure BIO-2 and contact the City of Murrieta, EPD, and CDFW to assist in the development of avoidance, minimization, and mitigation measures, prior to commencing project activities. The list of potential measures to avoid and minimize impacts to BUOWs described in the above section would be implemented.			
	MM BIO-2	**BUOW Protection Measures**: If BUOWs or signs of BUOW are observed during the survey, then the site would be considered occupied and the biologist shall contact the City of Murrieta, EPD, and CDFW to assist in the development of avoidance, minimization, and mitigation measures discussed below, prior to commencing project activities (Riverside County TLMA, 2006). **Planning BUOW Protection Measures** Grading, construction, and other project activities on all grassland habitat will be delayed until the qualified biologist has implemented burrow exclusion and closure. No ground-disturbing activities within 50 meters (165 feet) of an active BUOW burrow will be permitted until burrow exclusion and closure have been implemented. No destruction of foraging habitat will be permitted until burrow exclusion and closure have been implemented. **Preconstruction BUOW Protection Measures** Prior to the initiation of grading and construction activities, the biologist shall implement passive relocation of an active BUOW burrow by installing a one-way door and then permanently excluding the BUOW from returning once it is confirmed that no BUOW individuals remain in the burrow. A biological monitor will visit the site daily to verify that the burrow is empty by monitoring and scoping the burrow. Considering that there is not adequate BUOW habitat of at least 6.6 acres to which an excluded BUOW pair can relocate, the project applicant shall pay a Local Development Mitigation Fee to the County of Riverside to offset the impacts to the BUOW pair	Project Applicant and Qualified Biologist	Field Verification	1. City of Murrieta 2. City of Murrieta 3. Before and During Construction

	and the loss of 5.75 acres of suitable BUOW habitat within the project site. All surveys and reporting required by the MSHCP will be complied with including a 30-day pre-construction BUOW survey. **Construction BUOW Protection Measures** A biological monitor will be onsite to monitor any BUOW or signs of BUOW. If any BUOW are observed then the biologist will consult with the County EPD and CDFW to determine the appropriate measures.			
	MM BIO-3 **Pre-Construction Breeding Bird Survey**: To be in compliance with the MBTA and Fish and Game Code, and to avoid impacts or take of migratory non-game breeding birds, their nests, young, and eggs, the following measures will be implemented. The measures below will help to reduce direct and indirect impacts caused by construction on migratory non-game breeding birds to less than significant levels. • Project activities that will remove or disturb potential nest sites, such as open ground, trees, shrubs, grasses, or burrows, during the breeding season would be a potential significant impact if migratory non-game breeding birds are present. Project activities that will remove or disturb potential nest sites will be scheduled outside the breeding bird season to avoid potential direct impacts on migratory non-game breeding birds protected by the MBTA and Fish and Game Code. The breeding bird nesting season is typically from February 15 through September 15, but can vary slightly from year to year, usually depending on weather conditions. Removing all physical features that could potentially serve as nest sites will also help to prevent birds from nesting within the project site during the breeding season and during construction activities. • If project activities cannot be avoided during February 15 through September 15, a qualified biologist will conduct a pre-construction breeding bird survey for breeding birds and active nests or potential nesting sites within the limits of project disturbance. The survey will be conducted at least seven days prior to the onset of scheduled activities, such as mobilization and staging. It will end no more than three days prior to vegetation, substrate, and structure removal and/or disturbance.	Project Applicant and Qualified Biologist	Field Verification	1. City of Murrieta 2. City of Murrieta 3. Before and During Construction

	• If no breeding birds or active nests are observed during the pre-construction survey or they are observed and will not be impacted, project activities may begin and no further mitigation will be required. • If a breeding bird territory or an active bird nest is located during the pre-construction survey and will potentially be impacted, the site will be mapped on engineering drawings and a no activity buffer zone will be marked (fencing, stakes, flagging, orange snow fencing, etc.) a minimum of 100 feet in all directions or 500 feet in all directions for listed bird species and all raptors. The biologist will determine the appropriate buffer size based on the type of activities planned near the nest and the type of bird that created the nest. Some bird species are more tolerant than others of noise and activities occurring near their nest. This no-activity buffer zone will not be disturbed until a qualified biologist has determined that the nest is inactive, the young have fledged, the young are no longer being fed by the parents, the young have left the area, or the young will no longer be impacted by project activities. Periodic monitoring by a biologist will be performed to determine when nesting is complete. Once the nesting cycle has finished, project activities may begin within the buffer zone. • If listed bird species, such as the LBV, are observed within the project site during the pre-construction survey, the biologist will immediately map the area and notify the appropriate resource agency to determine suitable protection measures and/or mitigation measures and to determine if additional surveys or focused protocol surveys are necessary. Project activities may begin within the area only when concurrence is received from the appropriate resource agency. • Birds or their active nests will not be disturbed, captured, handled or moved. Active nests cannot be removed or disturbed; however, nests can be removed or disturbed if determined inactive by a qualified biologist.			
	MM BIO-4 **Worker Environmental Awareness Program (WEAP)**: Prior to project construction activities, a qualified biologist will prepare and conduct a Worker Environmental Awareness Program (WEAP) that will describe the biological constraints of the project. All personnel who will work within the project site will attend the WEAP prior to performing any work. The WEAP will include, but not be limited to the following: results of pre-construction surveys; description of sensitive biological resources potentially present within the project site; legal protections afforded the sensitive biological resources; BMPs for protecting sensitive biological resources (i.e., restrictions,	Project Applicant and Qualified Biologist	Field Verification	1. City of Murrieta 2. City of Murrieta 3. Before and During Construction

		avoidance, protection, and minimization measures); individual responsibilities associated with the project; and, a training on grading to reduce impacts to biological resources. A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to the project site boundaries within which the project activities must be accomplished. The program will also include the reporting requirements if workers encounter a sensitive wildlife species (i.e., notifying the biological monitor or the construction foreman, who will then notify the biological monitor). Training materials will be language-appropriate for all construction personnel. Upon completion of the WEAP, workers will sign a form stating that they attended the program, understand all protection measures, and will abide all the rules of the WEAP. A record of all trained personnel will be kept with the construction foreman at the project field construction office and will be made available to any resource agency personnel. If new construction personnel are added to the project later, the construction foreman will ensure that new personnel receive training before they start working. The biologist will provide written hard copies of the WEAP and photos of the sensitive biological resources to the construction foreman.			
	MM BIO-5 **Biological Monitor**: As per the MSHCP requirements stated in Volume 1, Appendix C of the MSHCP, A qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint (Riverside County, 2003). A biological monitor shall monitor activities that result in tree or vegetation removal to minimize the likelihood of inadvertent impacts on nesting birds and special-status wildlife species, with special attention given to any protected species observed during the pre-construction breeding bird surveys. Monitoring shall	Project Applicant and Qualified Biologist	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction

		also be conducted periodically during construction activities to ensure no new nests are built during any vegetation removal or building demolition activities between February 1 and August 31. The biological monitor shall ensure that all BMPs, avoidance, protection and mitigation measures described in the relevant project permits and reports are in place and are adhered to. The biological monitor will also monitor all installation of replacement trees and implementation of tree protection measures. The monitor will verify that installation of replacement trees is compliant with mitigation measure BIO-9, *Tree Replacement Protection Measures* (see Section 4.4 (e)). The monitor will also verify that protection measures established for the onsite preservation tree comply with mitigation measure BIO-10, *Preservation Tree Protection Measures*., (see Section 4.4 (e)). The biological monitor shall have the authority to temporarily halt all construction activities and all non-emergency actions if sensitive species and/or nesting birds are identified and would be directly affected. The monitor shall notify the appropriate resource agency and consult if needed. If necessary, the biological monitor shall relocate the individual outside of the work area where it will not be harmed. Work can continue at the location if the applicant and the consulted resource agency determine that the activity will not result in adverse effects on the species. The appropriate agencies shall be notified if a dead or injured protected species is located within the project site. Written notification shall be made within 15 days of the date and time of the finding or incident (if known) and must include; location of the carcass, a photograph, cause of death (if known), and other pertinent information			
	MM BIO-6 **Construction Best Management Practices** Project work crews will be directed to use BMPs where applicable. These measures will be identified prior to construction and incorporated into the construction operations. Implementation of this conservation measure will help to avoid, eliminate or reduce impacts on sensitive biological resources, such as special-status terrestrial wildlife species, to less than	Project Applicant and Construction Contractor	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction

	significant levels. Standard BMPs as outlined in the MSHCP (MSHCP, Volume 1, Appendix C) and that apply to construction of this project, and that are not incorporated to other mitigation measures proposed for this project are as follows: • Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements. • Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, FWS, and CDFW, RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas. • The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.			
	MM BIO-7 **Project Limits and Designated Areas** To avoid impacts on sensitive biological resources, the project proponent will implement the following measures prior to project construction and commencement of any ground-disturbing activities or vegetation removal. • Specifications for the project boundary, limits of construction, project-related parking, storage areas, laydown sites, and equipment storage areas will be mapped and clearly marked in the field with temporary fencing, signs, stakes, flags, rope, cord, or other appropriate markers. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas. All markers will be maintained until the completion of activities in that area. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. • To minimize the amount of disturbance, the construction/laydown areas, parking areas, staging areas, storage areas, spoil areas, and equipment	Project Applicant, Qualified Biologist, and Construction Contractor	Field Verification	1. City of Murrieta 2. City of Murrieta 3. Before and During Construction

	access areas will be restricted to designated areas. To the extent possible, designated areas will comprise, existing disturbed areas (parking lots, access roads, graded areas, etc.). • Project related work limits will be defined and work crews will be restricted to designated work areas. Disturbance beyond the actual construction zone is prohibited without site specific surveys. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible. If sensitive biological resources are detected in the area to be impacted, then appropriate measures will be implemented to avoid impacts (i.e., flag and avoid, erect orange snow fencing, biological monitor present during work, etc.). However, if avoidance is not possible and the sensitive biological resources will be directly impacted by project activities, the biologist will mark and/or stake the site(s) and map the individuals on an aerial map and with a GPS unit. The biologist will then contact the appropriate resource agencies to develop additional avoidance, minimization and/or mitigation measures prior to commencing project activities. • The project proponent will ensure that construction activities will include measures to prevent accidental falls into excavated areas. The construction crew will inspect excavated areas daily to detect the presence of trapped wildlife. All deep or steep-walled excavated areas will be covered with tarp and either be furnished with escape ramps or be surrounded with exclusionary fencing in order to prevent wildlife from entering them. Wildlife found in excavation areas should be trapped and relocated out of harm's way to a suitable habitat outside of the project area, if possible.			
	MM BIO-8 General Vegetation and Wildlife Avoidance and Protection Measures The BSA contains trees that qualify for protection under City of Murrieta's Tree Preservation Ordinance Section 16.42.050. The BSA contains habitats which can support many wildlife species. The City of Murrieta will also implement the following general avoidance and protection measures to protect vegetation and wildlife, to the extent practical: • Cleared or trimmed vegetation and woody debris will be disposed of in a legal manner at an approved disposal site. Cleared or trimmed non-native,	Project Applicant, Qualified Biologist, and Construction Contractor	Field Verification	1. City of Murrieta 2. City of Murrieta 3. Before and During Construction

	invasive vegetation will be disposed of in a legal manner at an approved disposal site as soon as possible to prevent regrowth and the spread of weeds. • The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species. • Non-native species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible. • Vehicles and equipment will be free of caked mud or debris prior to entering the project site to avoid the introduction of new invasive weedy plant species. • To minimize construction-related mortalities of nocturnally active species such as mammals and snakes, it is recommended that all work be conducted during daylight hours. Nighttime work (and use of artificial lighting) will not be permitted unless specifically authorized. If required, night lighting will be directed away from the preserved open space areas to protect species from direct night lighting. All unnecessary lights will be turned off at night to avoid attracting wildlife such as insects, migratory birds, and bats. • If any wildlife is encountered during the course of project activities, said wildlife will be allowed to freely leave the area unharmed. • Wildlife will not be disturbed, captured, harassed, or handled. Animal nests, burrows and dens will not be disturbed without prior survey and authorization from a qualified biologist. • Active nests of special-status or otherwise protected bird species cannot be removed or disturbed. Nests can be removed or disturbed if determined inactive by a qualified biologist. • To avoid impacts on wildlife and attracting predators of protected species, the project proponent will comply with all litter and pollution laws and will institute a litter control program throughout project construction. All contractors, subcontractors, and employees will also obey these laws. These covered trash receptacles will be placed at each designated work site and the contents will be properly disposed at least once a week. Trash removal will reduce the attractiveness of the area to opportunistic predators such as common ravens, coyotes, northern raccoons, and Virginia opossums. • Contractors, subcontractors, employees, and site visitors will be prohibited from feeding wildlife and collecting plants and wildlife. • Disturbance near ponded water will be limited during the rainy season. It could serve as potential habitat for amphibians and sensitive invertebrates.			

e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**MM BIO-9: Protected Tree Replacement Measures** There are 16 trees proposed for removal on the project site that are designated as protected trees as per the Murrieta Municipal Code Chapter 14, Article III, Section 42 *Tree Preservation* (City of Murrieta, 2019). These onsite protected trees comprise the following three categories of protected trees under the City's ordinance (the tree species and number of trees per category is listed parenthetically): mature native oak trees (coast live oak [8]), mature native trees (blue elderberry [3]), and mature trees (various ornamental species [5]). According to Murrieta Ordinance No. 553-19 § 10, 2019, Section 16.42.095 *Protected Tree Replacement Standards,* replacement trees of equivalent size need to be planted onsite or offsite to mitigate the impact of the removal of a protected tree. This ordinance also stipulates that trees planted to replace mature trees should be drought tolerant and fire-resistant. In addition, the ordinance requires that native oak trees and native trees be replaced with the same species as those removed or an alternative species that is acceptable to the City Director. The species palette, tree container size of stock, and the tree species of the replacement trees will be consistent with the requirement of the Murrieta tree ordinance and all replacement trees will be planted onsite. Tree replacement for all three categories of protected trees will be a one-to-one (1:1) replacement ratio. Tree replacement species for the protected removal trees will occur as follows: coast live oak trees and blue elderberry removal trees will be replaced by an equal or greater number of coast live oak trees that will be planted along Adams Avenue or in large planters in the Paseo area of the proposed development (see Attachment B of Appendix C1); and, the five protected removal trees classified as mature trees (Peruvian pepper, Italian cypress [2], and African sumac [2]) will be replaced by an equal or greater number of trees. All of the coast live oak trees will come from saplings that have been grown in containers of a minimum of 24 inches. All of the replacement trees for the five mature trees will have the following characteristics: fire-resistant, drought tolerant, and not classified as an invasive species on the California Invasive Plant Inventory (CalIPC, 2006).	Project Applicant and Landscaping Contractor	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During and After Construction

	All trees will be planted after ground-disturbing activities and most of the construction activities have finished in the planting area. Trees will be irrigated and maintained following BMPs for tree planting and care. A biological monitor will observe the tree planting activities and document the tree health and survivorship during the planting period. If any trees die or develop signs of adverse health such as insect infestation, then the biologist will create a report to send for the City of Murrieta's Planning Department to review. All dead or dying replacement trees will be replaced with a similar species and monitored by the biologist until they are established and healthy. In the event of unhealthy or dying replacement trees, the biologist will produce a final report documenting that all contingency replacement plantings have established and are in good health.			
	MM BIO-10 Protected Tree Preservation Measures In accordance with Murrieta Ordinance No. 553-19 § 9, 2019, Section 16.42.090 *Preservation of Protected Trees*, the following tree preservation measures will be implemented to minimize or avoid impacts of construction and project development to the preservation tree: ▪ *Provision of sufficient growing areas as required by individual species;* ▪ *No disruption or removal of structural or feeder roots;* ▪ *Fencing of trees at or beyond their drip lines during grading and construction activities;* ▪ *No filling, cutting, development, or compaction of soils within the drip line;* ▪ *Preservation of oak leaf litter below the drip line; and* ▪ *Other measures required by the particular species of tree(s) to be preserved as recommended by the consulting arborist, horticulturist, or landscape architect.* In addition to implementing the Murrieta tree ordinance measures listed above, the following recommendation for establishing a protection zone around a preserved oak tree provided in The Riverside County Oak Tree Management Guidelines will be incorporated into this conservation measure and will supersede the requirements for a protection zone stated in the Murrieta tree ordinance (Riverside County Planning Department, 1999):	Project Applicant, Qualified Biologist, and Construction Contractor	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During and After Construction

		Protection Zone – a circle whose center is within the base of an oak tree, the radius of which is equal to an oak tree's height or 10 feet, whichever is greater. Where the outermost edge of an oak tree's drip line extends beyond this radius, that portion of the drip line shall also be included as part of that tree's protected zone. Based on the protection measures outlined above, fencing will be installed around the preservation oak tree at a radius that is equal to the preservation tree's height or to the tree's drip line, whichever is greater. The height of the preservation oak tree is 32 feet and thus fencing will be erected around the perimeter of the tree with a minimum of a 32-foot radius around the trunk. The fencing will be erected prior to the initiation of ground-disturbing activities and will remain in place until the later phases of the construction and project development to allow for some minimal installation of paved surfaces around the perimeter of the tree's drip line. Throughout project construction, a biological monitor will be onsite to determine that all project operations are compliant with the requirements of this conservation measure. If the biologist observes any action which is out of compliance with this measure or which imperils the preservation tree's health in some way, that biologist will contact the City of Murrieta Planning Department to evaluate what actions can be taken to prevent further instances of non-compliance. In the event that the preservation tree is adversely impacted such as major root damage or other injury that may or may not cause the tree to exhibit signs of stress, an ISA-certified arborist will be enlisted to assess the tree's health. If the arborist determines the tree is irreparably wounded and poses a safety hazard if it were to remain in place, then the tree will be removed from the project site. In this event, the biologist will consult with the City of Murrieta Planning Department to evaluate the best way to mitigate the loss of the preservation tree.			
4.5 Cultural Resources					
Threshold 4.5 b) Cause a substantial adverse change in the significance of an	**MM CUL-1:** If archaeological resources are discovered during construction activities, the contractor will halt construction activities in the immediate area and notify the City of Murrieta. The project applicant shall retain an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for		Qualified Archaeologist and Project Contractor	Field Verification	1. City of Murrieta Planning Department

archaeological resource pursuant to § 15064.5.	Archaeology who will be notified and afforded the necessary time to recover, analyze, and curate the find(s). The qualified archaeologist will recommend the extent of archaeological monitoring necessary to ensure the protection of any other resources that may be in the area. Any identified cultural resources shall be recorded on the appropriate DPR 523 (A L) form and filed with the Eastern Information Center. Construction activities may continue on other parts of the project site while evaluation and treatment of prehistoric archaeological resources takes place.			2. City of Murrieta Planning Department 3. During construction activities
Threshold 4.5 c): Disturb any human remains, including those interred outside of formal cemeteries.	**MM CUL-2**: If human remains are encountered during excavations associated with this project, all work will stop within a 30-foot radius of the discovery and the Riverside County Coroner will be notified (§ 5097.98 of the Public Resources Code). The Coroner will determine whether the remains are recent human origin or older Native American ancestry. If the coroner, with the aid of the supervising archaeologist, determines that the remains are prehistoric, they will contact the NAHC. The NAHC will be responsible for designating the Most Likely Descendant (MLD). The MLD (either an individual or sometimes a committee) will be responsible for the ultimate disposition of the remains, as required by § 7050.5 of the California Health and Safety Code. The MLD will make recommendations within 24 hours of their notification by the NAHC. These recommendations may include scientific removal and nondestructive analysis of human remains and items associated with Native American burials (§ 7050.5 of the Health and Safety Code).	Project Construction Contractor	Field Verification	1. City of Murrieta Planning Department 2. City of Murrieta Planning Department 3. During project construction activities
4.7 Geology and Soils				
Threshold 4.7 c): Would the project be located on a geologic 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?	**MM GEO-1** To minimize potential impacts resulting from unstable soils, prior to the issuance of a certificate of occupancy, the project applicant shall implement applicable recommendations provided in Section 7.0 of the Geotechnical Evaluation Report dated March 12, 2021 for the proposed project prepared by EEI Engineering Solutions.	Project Applicant, Project Architect, and Project Construction Contractor	Implement Recommendations	1. City of Murrieta Planning Department 2. City of Murrieta Planning Department 3. During project design and project construction activities

Threshold 4.7 f): Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**MM GEO-2**: Prior to the issuance of the grading permit, the applicant shall provide a letter to the City of Murrieta Planning Department, or designee, from a qualified paleontologist stating that the paleontologist has been retained to provide services for the project. The paleontologist shall develop, as needed, a Paleontological Resources Impact Mitigation Plan (PRIMP) to mitigate the potential impacts to unknown buried paleontological resources that may exist onsite for the review and approval by the City. The PRIMP shall require that the paleontologist perform paleontological monitoring of any ground disturbing activities within undisturbed native sediments during mass grading, site preparation, and underground utility installation. The project paleontologist may reevaluate the necessity for paleontological monitoring after 50 percent or greater of the excavations have been completed. In the event paleontological resources are encountered, ground-disturbing activity within 50 feet of the area of the discovery shall cease. The paleontologist shall examine the materials encountered, assess the nature and extent of the find, and recommend a course of action to further investigate and protect or recover and salvage those resources that have been encountered. Criteria for discard of specific fossil specimens will be made explicit. If the qualified paleontologist determines that impacts to a sample containing significant paleontological resources cannot be avoided by project planning, then recovery may be applied. Actions may include recovering a sample of the fossiliferous material prior to construction, monitoring work and halting construction if a significant fossil needs to be recovered, and/or cleaning, identifying, and cataloging specimens for curation and research purposes. Recovery, salvage and treatment shall be done at the Applicant's expense. All recovered and salvaged resources shall be prepared to the point of identification and permanent preservation by the paleontologist. Resources shall be identified and curated into an established accredited professional repository. The paleontologist shall have a repository agreement in hand prior to initiating recovery of the resource.	Project Applicant, Qualified Paleontologist, and Construction Contractor	Monitoring, Assessment, Recovery, and Curation	1. City of Murrieta Planning Department 2. City of Murrieta Planning Department 3. During project construction activities
4.12 Noise				
Threshold 4.12 a): Exposure of persons to or generation of noise	**MM N-1:** Project applicants shall require by contract specifications that the following construction best management practices (BMPs)	Project Applicant and Project	Contract Specifications	1. City of Murrieta Planning Department

level in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.		be implemented by contractors to reduce construction noise levels: ▪ Ensure that construction equipment is properly muffled according to industry standards and in good working condition. ▪ Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible. ▪ Schedule high noise-producing activities between the hours of 8:00 AM and 7:00 PM to minimize disruption on sensitive uses. ▪ Implement noise attenuation measures to the extent feasible, which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources. ▪ Use electric air compressors and similar power tools rather than diesel equipment, where feasible. ▪ Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes. ▪ Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.	Construction Contractor		2. City of Murrieta Planning Department 3. During construction
Threshold 4.12 a): Exposure of persons to or generation of noise level in excess of	**MM N-2**:	Project applicants shall require by contract specifications that heavily loaded trucks used during construction would be routed away from residential streets to the extent feasible. Contract	Project Applicant	Contract Specifications	1. City of Murrieta Planning Department

standards established in the local general plan or noise ordinance, or applicable standards of other agencies.		specifications shall be included in the proposed project construction documents, which shall be reviewed by the City prior to issuance of a grading permit.			2. City of Murrieta Planning Department 3. During construction
4.18 Tribal Cultural Resources					
Threshold 4.18 b): Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**TCR-1:**	***Archaeological Monitoring:*** At least 30-days prior to grading permit issuance and before any grading, excavation, and/or ground-disturbing activities on the site take place, the project permittee/owner shall retain a Riverside County-certified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources. Prior to grading, the project permittee/owner shall provide to the City verification that a certified archaeological monitor has been retained. Any newly discovered cultural resource deposits shall be subject to a cultural resources evaluation. The Project Archaeologist and the Tribal monitor(s) shall manage and oversee monitoring for all initial ground disturbing activities and excavation of each portion of the project site including clearing, grubbing, tree removals, mass or rough grading, trenching, stockpiling of materials, rock crushing, structure demolition and etc. The Project Archaeologist and the Tribal monitor(s), shall have the authority to temporarily divert, redirect or halt the ground disturbance activities to allow identification, evaluation, and potential recovery of cultural resources in coordination with any required special interest or tribal monitors. The developer/permit holder shall submit a fully executed copy of the contract to the Community Development Department to ensure compliance with this condition of approval. Upon verification, the Community Development Department shall clear this condition. The Project archeologist and the Consulting Tribes(s) shall attend the pre-grading meeting with the City, the construction manager and any contractors and will conduct a mandatory Cultural Resources Worker Sensitivity Training to those in attendance. The Training will include a brief review of the cultural sensitivity of the Project and the surrounding area; what	Project permittee/ owner	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction

		resources could potentially be identified during earthmoving activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and any other appropriate protocols. All new construction personnel that will conduct earthwork or grading activities that begin work on the Project following the initial Training must take the Cultural Sensitivity Training prior to beginning work and the Project archaeologist and Consulting Tribe(s) shall make themselves available to provide the training on an as-needed basis 1. A final report documenting the monitoring activity and disposition of any recovered cultural resources shall be submitted to the City of Murrieta, Eastern Information Center and the consulting tribe(s) within 60 days of completion of monitoring.			
Threshold 4.18 b): Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**TCR-2:**	***Cultural Resource Monitoring Plan (CRMP)*:** The Project Archaeologist, in consultation with consulting tribes, the permittee/owner, and the City, shall develop an Archaeological Monitoring Plan to address the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the plan shall include: a. Project grading and development scheduling; b. The development of a monitoring schedule in coordination with the permittee/owner during grading, excavation and ground-disturbing activities on the site: including the scheduling, safety requirements, duties, scope of work, and Monitors' authority to stop and redirect grading activities in coordination with all project archaeologists; and, c. The protocols and stipulations that the permittee/owner, City, Tribes, and Project Archaeologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits that shall be subject to a cultural resources evaluation.	Project Archeologist	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction

Threshold 4.18 b): Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**TCR-3:**	***Native American Monitoring**:* Native American Tribal monitors shall also participate in monitoring of ground-disturbing activity. At least 30 days prior to issuance of grading permits, agreements between the permittee/owner and a Consulting Tribe(s) shall be developed regarding prehistoric cultural resources and shall identify any monitoring requirements and treatment of Tribal Cultural Resources so as to meet the requirements of CEQA. The monitoring agreement shall address the treatment of known Tribal Cultural Resources; the designation, responsibilities, and participation of professional Native American Tribal monitors during grading, excavation, and ground-disturbing activities; project grading and development scheduling.	Native American Tribal Monitors	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction
Threshold 4.18 b): Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**TCR-4:**	***Disposition of Cultural Resources**:* In the event that Native American cultural resources are inadvertently discovered during the course of grading for this project, one or more of the following treatments, in order of preference, shall be employed with the tribes. Evidence of such shall be submitted to the City of Murrieta Planning Department: 1) Preservation-in-place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resource. 2) On-site reburial of the discovered items as detailed in the CRMP required pursuant to Mitigation Measure CUL-2. This shall include measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of all Consulting Native American Tribal Governments. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV report shall be filed with the City under a confidential cover and not subject to Public Records Requests. 4) Curation. The permittee/owner shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts and non-human remains as part of the required mitigation for impacts to cultural resources, and adhere to the following:	Permittee/ Owner	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction

		a. A curation agreement with an appropriate qualified repository within Riverside County that meets federal standards per 36 Code of Federal Regulations 800 Part 79 and therefore would be curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within Riverside County, to be accompanied by payment of the fees necessary for permanent curation.			
Threshold 4.18 b): Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**TCR-5:**	***Human remains:*** If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b), remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the Native American Heritage Commission must be contacted within 24 hours. The Native American Heritage Commission must then immediately identify the "most likely descendants(s)" for purposes of receiving notification of discovery. The most likely descendant(s) shall then make recommendations and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98.	Riverside County Coroner	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction
Threshold 4.18 b): Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**TCR- 6:**	***Inadvertent Archeological Find:*** If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to project approval, the following procedures shall be followed. i. All ground disturbance activities within 100 feet of the discovered cultural resources shall be halted until a meeting is convened between the developer, the archaeologist, the tribal representative(s) and the Community Development Director to discuss the significance of the find. ii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the tribal representative(s) and the archaeologist, a decision shall be made, with the	Permittee/ Owner	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction

		concurrence of the Community Development Director, as to the appropriate mitigation (documentation, recovery, avoidance, etc.) for the cultural resources. iii. Grading of further ground disturbance shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal monitors if needed. iv. Treatment and avoidance of the newly discovered resources shall be consistent with the Cultural Resources Management Plan and Monitoring Agreements entered into with the appropriate tribes. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or re-burial on the Project property so they are not subject to further disturbance in perpetuity as identified in Non-Disclosure of Reburial Condition. v. If the find is determined to be significant and avoidance of the site has not been achieved, a Phase III data recovery plan shall be prepared by the project archeologist, in consultation with the Tribe, and shall be submitted to the City for their review and approval prior to implementation of the said plan. vi. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the landowner and the Tribe(s) cannot agree on the significance or the mitigation for the archaeological or cultural resources, these issues will be presented to the City Community Development Director for decision. The City Community Development Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to archaeological resources, recommendations of the project archeologist and shall take into account the cultural and religious principles and practices of the Tribe. Notwithstanding any other rights available under the law, the decision of the City Community Development Director shall be appealable to the City Planning Commission and/or City Council."			

Threshold 4.18 b): Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**TCR-7:**	***Archeology Report – Phase IV*:** At the completion of grading, excavation, and ground disturbing activities on-site, a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the Project Archaeologist and Native American Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City of Murrieta, Eastern Information Center and Consulting tribes.	Permittee/ Owner	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction
Threshold 4.18 b): Would the project cause a substantial adverse change in the significance of a tribal cultural resource that is determined to be a significant resource to a California Native American tribe pursuant to the criteria set forth in subdivision (c) of Public Resource Code § 5024.1(c)?	**TCR-8:**	***Non-Disclosure of Reburials Location***: It is understood by all parties that unless otherwise required by law, the site of any reburial of Native American human remains or associated grave goods shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, pursuant to the specific exemption set forth in California Government Code 6254 (r)., parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code 6254 (r).	The Coroner, parties, and Lead Agencies	Field Verification	1. City of Murrieta 2. City of Murrieta 3. During Construction