The Village Student Housing Project

Draft
Environmental Impact Report

Lead Agency:
City of Arcata Community Development Department

State Clearinghouse # **2016102038**

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AB32	Global Warming Solutions Act of 2006
ADT	average daily traffic
APE	area of potential effect
BAAQMD	Bay Area Air Quality Management District
BGS	below ground surface
BMPs	Best Management Practices
BOD	biochemical oxygen demand
BTEX	benzene, toluene, ethylbenzene, and xylene
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Cal/EPA	California Environmental Protection Agency
CalFire	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CDPH	California Department of Public Health
CDPR	California Department of Parks and Recreation
CEC	California Energy Commission
CERCLA	Comprehensive Environmental Response, Compensation and Liability
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGC	California Fish and Game Code
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHP	California Highway Patrol
CHSC	California Health and Safety Code
CH4	methane
CIWMB	California Integrated Waste Management Board
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPPA	California Native Plant Protection Act
CNPS	California Native Plant Society
CO	carbon monoxide
CO2	carbon dioxide
CO2e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank

ACRONYMS AND ABBREVIATIONS

CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	A-weighted sound level
DHS	California Department of Health Services
DOC	California Department of Conservation
DOT	U.S. Department of Transportation
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	California Department of Water Resources
EDR	Environmental Data Resources
EIR	Environmental Impact Report
EOC	County Emergency Operations Center
EOP	Humboldt County Emergency Operations Plan
EPA	Environmental Protection Agency
ESA	Federal Endangered Species Act
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping and Monitoring Program
FPD	Fire Protection District
ft/sec	feet per second
GHG	Greenhouse Gas
gpd	gallons per day
gpm	gallons per minute
HCAOG	Humboldt County Association of Governments
HCDEH	Humboldt County Division of Environmental Health
HP	horsepower
H2O	water vapor
kWh	kilowatt-hours
Ldn	Day/Night Average Sound Level
Leq	equivalent noise level
LOP	Local Oversight Program
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MGD	million gallons per day
MG/L	Milligrams Per Liter
MtBE	methyl tertiary butyl ether
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NCRWQCB	North Coast Regional Water Quality Control Board
NCUAQMD	North Coast Unified Air Quality Management District
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
N2O	nitrous oxide
NOP	Notice of Preparation

ACRONYMS AND ABBREVIATIONS

NOX	nitrogen oxides
NO2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSR	New Source Review
NWPRR	Northwestern Pacific Rail Road
OES	Office of Emergency Services
OWTS	onsite wastewater treatment systems
O3	ozone
PAHs	polycyclic aromatic hydrocarbons
PGA	peak ground acceleration
PG&E	Pacific Gas & Electric
PM	particulate matter
PM10	particulate matter 10 microns or less in diameter
PM2.5	particulate matter 2.5 microns or less in diameter
Ppm	parts per million
PPV	Peak Particle Velocity
PRC	Public Resources Code
PSD	Prevention of Significant Deterioration
ROG	reactive organic gases
ROW	right of way
RTPA	Regional Transportation Planning Agency
RWQCB	Regional Water Quality Control Board
SF	square feet
SRA	State Responsibility Areas
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TACs	Toxic Air Contaminants
THPO	Tribal Historic Preservation Officer
UBC	Uniform Building Code
USACE	U.S. Army Corps of Engineers
USA	North Underground Service Alert North
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
UST	underground storage tank
WDP	Waste Discharge Permit
WDR	Waste Discharge Requirements

CHAPTER 1.

INTRODUCTION

The following Sections are included in this Chapter:

Introduction
Environmental Setting Summary
Proposed Project Description
Summary of Impact and Mitigation Measures
Summary of Alternatives

CHAPTER 1 INTRODUCTION

Purpose and Intended Uses of this Environmental Impact Report

The City of Arcata has received an application for a redesignation/rezoning, merger, and Planned Development Permit to allow development of a market-rate student housing community; these applications are collectively referred to as **The Village Student Housing Project**, or "project." The project site consists of seven parcels (assessor's parcel number (APNs) 505-022-011, 505-022-012, 503-372-002, 503-372-003, 503-372-004, 503-372-005, and 503-372-006) located off of St. Louis Road. See Table 1-2 for a list of the required entitlements for the proposed project.

The project requires discretionary approval and as such is subject to the California Environmental Quality Act (CEQA). The City, as the lead agency, must identify and document the potential environmental impacts of the project in accordance with CEQA (Public Resources Code § 21000 et seq.), and the CEQA Guidelines (California Administrative Code Section 15000 et seq.). To fulfill CEQA's environmental review requirement, the City of Arcata determined that an Environmental Impact Report (EIR) be prepared for the project. The applicant, AMCAL Equities LLC (AMCAL), contracted the services of the Streamline Planning-SHN team to assist with EIR preparation. This is a project EIR.

The purpose of the EIR is to:

- Provide public disclosure of the potentially significant environmental effects of the project;
- Indicate means by which to avoid, minimize, or mitigate potentially adverse environmental effects;
- Analyze a range of alternatives to the project that may reduce or avoid one or more significant environmental effects; and
- Consider cumulative effects and other environmental effects.

The City of Arcata will use the EIR in determining whether or not to grant entitlements for the project. If the project is approved, all conditions and mitigations made in the adopted EIR will become part of any subsequent actions taken by the City to carry out the project. The EIR will also be used by permitting agencies to support project decisions (required project entitlements are described under the "Proposed Project Description" section below).

Processing the EIR

The environmental review process in accordance with CEQA contains many steps. For processing the EIR, formal steps began with the Notice of Preparation, and are completed with

posting a Notice of Determination (for approved projects) and the conclusion of a 30-day statute of limitations period. The following steps will be completed.

Notice of Preparation

On October 13, 2016, a Notice of Preparation (NOP) was prepared and distributed to the State Clearinghouse, responsible and trustee agencies, potentially affected private parties, and to the general public. The NOP announced that an EIR would be prepared for The Village Student Housing Project, and it provided a summary and imports to be analyzed. The NOP and responses to the NOP are contained in the appendices to the EIR (Appendix A).

Scoping Meeting

On November 2, 2016, a Scoping Meeting was held at the project site with the applicant and their consultants, and staff from several agencies including the City of Arcata, Caltrans, and the Arcata Fire District. The applicant presented the project proposal, and the agency staff provided comments concerning issues that should be addressed within the Environmental Impact Report being prepared for the project. Following the meeting, City of Arcata Community Development Staff provided a memorandum containing a list of the meeting participants and the comments received from the various agency staff. The Scoping Meeting memorandum is contained in the appendices of the EIR (Appendix B).

Public Review and Comment Period

The Draft EIR will be circulated for 45 days to allow public agencies and interested individuals to review and comment on the document. The Draft EIR will be available for review during this period at the following locations:

1) Arcata City Hall, 736 F Street, Arcata, California;
2) Arcata Public Library, 500 7th Street, Arcata, California;
3) Humboldt State University Library – Humboldt Room, Arcata, California; and
4) City of Arcata website (www.cityofarcata.org).

Public agencies and interested individuals are encouraged to submit written comments on the Draft EIR for consideration and inclusion in the Final EIR. (Note to Commenter's: To facilitate the response to comments, please list each comment separately and reference the EIR chapter and page number of the item you are responding to.) Comments must be sent by the end of the review period to:

David Loya, Community Development Director
City of Arcata Community Development Department
736 F Street
Arcata, CA 95521

Public Hearings

Duly noticed public hearings will be held by both the Planning Commission and City Council for various aspects of the project (General Plan Amendment/Zoning Reclassification, Planned Development Permit, etc.) which could occur during or subsequent to the public review and comment period for the EIR. These meetings will occur during regularly scheduled meetings of the City of Arcata Planning Commission and City Council. Several meetings may be held if requested by the Planning Commission or City Council. These meetings will provide opportunity for the public to comment on the project and the Environmental Impact Report. The City Council will be the review authority for all permits needed for the project and the EIR.

Final EIR

At the end of the public review period of the Draft EIR, written responses will be prepared for substantive comments (both oral and written) received during the public review and comment period. The comments and responses will then be included in the Final EIR and will be considered by the City prior to EIR certification. The City Council will be the review authority for all permits and the EIR

EIR Certification

Prior to approval of the project, the City of Arcata must certify that the EIR has been completed in compliance with CEQA and must make one or more of the following findings for each potentially significant impact identified:

- That changes or alterations that avoid or substantially lessen the significant effects have been required or incorporated into the project; or
- That specific economic, social, or other considerations make infeasible the mitigation measures or project alternatives identified in the Final EIR.

These findings must be supported by substantial evidence in the administrative record, which includes the NOP, comments on the NOP, Draft EIR, comments on the Draft EIR, Final EIR, comments received during public testimony, as well as all documents enumerated in Public Resources Code § 21167.6.

Each public agency is required to avoid or minimize the significant environmental effects of projects it approves or carries out whenever it is feasible to do so. If the significant effects cannot be avoided or mitigated, the public agency must make findings of overriding considerations prior to approving the project.

Notice of Determination

If the City (the lead agency) approves the proposed project, within five days it will file a Notice of Determination (NOD) with the Humboldt County Clerk who must then post it within 24 hours of receipt. The NOD will also be sent to the State Clearinghouse, and to anyone previously requesting notice. Posting the NOD begins a 30-day statute of limitations period for challenges to the City's decision under CEQA.

Organization of the EIR

The EIR for The Village Student Housing Project describes the proposed project and four project alternatives, and evaluates their anticipated environmental effects, including growth-inducing and cumulative impacts. The EIR also identifies mitigation measures that would avoid or minimize environmental effects that have been identified (in the EIR) as potentially significant. The EIR is organized as follows:

Chapter 1 - Introduction, Proposed Project, Mitigations, and Alternatives
In addition to describing the EIR process, this chapter summarizes: 1) project objectives and entitlements; 2) the regional and project site setting; 3) the proposed project description; 4) the environmental impacts and proposed mitigations (in table format); and 5) summary of alternatives.

Chapter 2 - Community Environment
Chapter 2 describes the existing environmental setting, thresholds of significance, potential environmental impacts, and proposed mitigation measures associated with the following "community environment" topics:

2.1 Land Use and Planning – The land use analysis describes existing land uses, identifies applicable General Plan policies and Zoning standards, and analyzes the potential impacts of the site being developed with the proposed student housing community. The analysis includes a discussion of the Operations and Management Plan (Appendix C) prepared by the applicant and the Industrial Market Analysis completed by BAE Urban Economics (Appendix D).

2.2 Population and Housing – The population and housing impacts of developing additional student housing units is evaluated. The potential to induce population growth, and displace existing structures or population is analyzed.

2.3 Public Services – The projected police, fire, school, park, and other service demands of the project are analyzed to determine whether existing services have adequate capacity to accommodate those demands. The City's applicable service standards are applied to determine potential impacts.

2.4 Recreation – The potential impacts to existing recreational facilities in the project area and from construction of the proposed on-site recreational facilities. The City's applicable parks and recreation standards are applied to determine potential impacts.

2.5 Cultural Resources – The EIR analyzes the potential disturbance to known cultural, historical, and paleontological resources and potential disturbance to unknown resources, and determines the potential significance of these impacts. This analysis is based on the information provided with the project application, historic and cultural resources records search by the Northwest Information Center (NWIC),

Cultural Resources Investigation by William Rich and Associates (Appendix E), and consultation with Native American tribes as required by AB 52 and SB 18.

2.6 Aesthetics – The EIR analyzes the effects on scenic resources such as potential impacts to views of the site from various locations in the area, potential degradation of visual character or quality of the site and its surroundings, and creation of a new light or glare source. The analysis includes a discussion of the View Shed Analysis completed by Architect Media (Appendix F).

2.7 Air Quality – The EIR analyzes short-term construction emissions and long-term operational emissions from the development of the site. The analysis describes typical air quality impacts from a residential development and uses the CalEEMod air emissions model to estimate emissions that will be generated during construction and operation of the project (Appendix G).

2.8 Greenhouse Gas Emissions – The EIR analyzes greenhouse gas emissions generated by short-term construction activity and long-term operation of the proposed residential development. The analysis describes typical greenhouse gas emissions generated by a residential development and uses the CalEEMod air emissions model to estimate greenhouse gas emissions that will be generated during construction and operation of the project (Appendix G).

2.9 Noise – The EIR analyzes the potential noise impacts of short-term construction activities and long-term operation of the project. The analysis discusses the findings of the Exterior Noise Analysis prepared by BridgeNet International (Appendix H) which evaluates the impacts of transportation noise levels on the proposed residential uses.

2.10 Hazards and Hazardous Materials – The EIR analyzes health and safety hazards associated with the project, including potential hazards from hazardous materials remaining at the site from the past industrial uses. The analysis discusses the findings of the Phase I Environmental Site Assessment (Appendix I) and Phase II Investigation Report (Appendix J) completed by Blue Rock Environmental, Inc.

2.11 Utilities and Service Systems – The projected water, wastewater, drainage and solid waste demands of the project are analyzed to determine whether existing utilities and service systems have adequate capacity to accommodate the needs of the proposed project. The analysis includes the findings of the Memorandum prepared by the City of Arcata to assess the potential impacts to wastewater facilities from the approved/planned Sunset Area housing projects (Appendix K). The projects, referred to as the Sunset Area housing projects, are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR.

2.12 Tribal Cultural Resources – The EIR analyzes the potential to cause a substantial adverse change in the significance of a tribal cultural resource (see definition in PRC Section 21074) listed or eligible for listing in the California

Register of Historical Resources or in a local Register of Historical Resources. The EIR also analyzes the potential to cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the Lead Agency to be significant per Public Resources Code Section 5024.1. This analysis is based on the information provided with the project application, tribal cultural resources records search by the Northwest Information Center (NWIC), Cultural Resources Investigation by William Rich and Associates (Appendix E), and consultation with Native American tribes as required by AB 52 and SB 18.

Chapter 3 – Transportation-Traffic
Chapter 3 describes the environmental setting, thresholds of significance, impacts, and proposed mitigation measures associated with the following transportation components:

Roadways – Traffic related impacts on level-of-service at selected intersections are evaluated as well as proposed improvements to nearby streets. The analysis discusses the findings and recommendations of the Central Arcata Areawide Traffic Study completed by W-Trans (Appendix L).

Public Transit – Potential increases in ridership resulting from the project will be evaluated to determine if there would be any adverse impacts on local transit system providers.

Pedestrian and Bicycle Systems – The potential impacts of these connections through the project, and on the overall bicycle and pedestrian system, is analyzed. The EIR evaluates the potential impacts of the development of several pedestrian and bicycle trails designed to increase connectivity to the site.

Chapter 4 - Natural Environment
Chapter 4 describes the environmental setting, impact evaluation criteria, potential environmental impacts, and proposed mitigation measures associated with the following "natural environment" topics.

4.1 Geology and Soils – The EIR analyzes geology and soils information, including the Geotechnical Investigation prepared by Geocon Consultants, Inc. (Appendix M) and the subsurface investigations conducted by Blue Rock Environmental, Inc. The potential for seismic ground effects, seismically-induced strong ground shaking, liquefaction, and the potential for consolidation under anticipated structural loads are analyzed using information provided in the Geotechnical Investigation and subsurface investigations. Soil limitations, such as potential for erosion and shrink-swell capability is also analyzed.

4.2 Hydrology and Water Quality – The potential floodplain safety issues associated with Janes Creek and its tributaries are analyzed. These potential effects are compared to conditions in the Drainage Master Plan adopted by the City, and also compared to best available hydrological practices. The volume of surface run-off associated with development of the project site is examined, and on-site stormwater

management systems are evaluated based on the information provided in the Preliminary Stormwater Management Report prepared by Manhard Consulting (Appendix N). Also, because the project site is a former lumber mill site, groundwater conditions are analyzed.

4.3 Biological Resources – The EIR evaluates potential impacts to biological resources, including wetlands, resulting from development of the site for residential uses. The evaluation considers adequacy of proposed buffers from environmentally sensitive habitat areas. This section's analysis is based on information provided in Biological Review (Appendix O) and Wetland Delineation (Appendix P) prepared by Natural Resources Management (NRM) Corporation.

4.4 Agriculture and Forestry Resources – The EIR evaluates potential impacts to agriculture and forestry resources, including prime agricultural land and forest land.

4.5 Mineral Resources – The EIR evaluates potential impacts to mineral resources, including the loss of availability of an important mineral resource, from the proposed development.

Chapter 5 – Energy Conservation
Chapter 5 includes a discussion of the potential energy impacts of the proposed project and describes the energy conservation measures that will be incorporated to avoid or reduce inefficient, wasteful, and unnecessary consumption of energy.

Chapter 6 – Alternatives Analysis
Chapter 6 describes and evaluates the alternatives to the proposed project including the following: Alternative 1 (No Project), Alternative 2 (Existing Zoning), Alternative 3 (Reduced Size), and Alternative 4 (Traditional Multi-Family Development).

Chapter 7 – Cumulative Impact Analysis
Chapter 7 describes the potential cumulative impacts of the proposed project in conjunction with other past, present, and probable future projects.

Chapter 8 – Other CEQA Considerations
Chapter 8 includes discussion and analysis of the following required CEQA topics: growth-inducing impacts, significant irreversible environmental changes, and significant environmental effects which cannot be avoided.

Chapter 9 – Mitigation Monitoring and Reporting Program
Chapter 9 lists the mitigation measures required for the proposed project and describes the timing for implementation, the person/agency that is responsible for monitoring implementation, the frequency of monitoring, and what constitutes evidence of compliance.

Chapter 10 - Document Preparers
Chapter 10 lists the persons responsible for preparing the EIR.

Appendices
Certain documents referred to in the EIR are attached as appendices. Other documents are on file at the City of Arcata Community Development Department.

Background Information used in EIR Preparation

The following documents were referenced for background information during preparation of the EIR. Copies of these documents are available for review at the City of Arcata.

- City of Arcata. 2000. *Draft Final Program EIR (PEIR) for the Arcata General Plan: 2020 and Local Coastal Land Use Plan*. SCH# 98072069;
- City of Arcata. 2008. *Arcata General Plan and Local Coastal Land Use Plan.* Amended Oct. 2008;
- City of Arcata. 2008. *City of Arcata Municipal Code – Title 9 – Land Use Code*. Oct. 2008.
- City of Arcata. 2008. *CEQA Final Environmental Impact Report for the Creek Side Homes Annexation and Zoning Modification*. SCH# 2004022067.
- City of Arcata. 2014. *Arcata Housing Element*. Adopted 07/23/14.

As part of the design of The Village Student Housing Project, AMCAL has conducted technical studies as required to assist the City in certifying an environmental document pursuant to the California Environmental Quality Act (CEQA) and obtain project approval. These studies include biological, wetlands, air quality, cultural, stormwater, geotechnical, environmental site assessments, noise, traffic, industrial market analysis, and aesthetics. These are currently available at the City of Arcata and will be placed in the appendices of the EIR.

ENVIRONMENTAL SETTING SUMMARY

This section describes the regional setting within Humboldt County, and the project setting in the City of Arcata.

Regional Setting

The project site is located in the north central portion of the City of Arcata directly west of Highway 101. The City of Arcata has an estimated population of 17,898 persons (2015 DOF). Arcata is located in Humboldt County, on the northern coast of California, and is the second largest City in the County. The City is approximately 7.25 square miles in size and is situated on a coastal terrace at the north edge of Humboldt Bay, the second largest marine embayment in California. Arcata's natural landforms include forested hillsides to the east; a sloping coastal terrace in the central area of town; a river corridor to the north; and flat bottomlands known as the Arcata Bottom, forested coastal dunes, bay front and tidelands to the west and south. Arcata is bordered by the Mad River to the north, Arcata Bay to the south, the Arcata Bottom to the west, and Fickle Ridge to the east. These features form distinctive natural edges to the City's planning area and are some of its most important aesthetic resources. The project's location, relative to the city, is shown in Figure 1A (Location Map).

Project Site Description

The project site's street address is 2905 St. Louis Road. The project site covers approximately 11-acres and consists of seven parcels (APNs 505-022-011, -012, 503-372-002, -003, -004, -005, and -006). The site is located near the intersection of St. Louis Road and the Highway 101 Overcrossing, on the northeast edge of the Sunset Neighborhood in the City of Arcata. The site is north of Eye Street, west of St. Louis Road and Highway 101, and east of Maple Lane. An aerial photograph of the project site is shown in Figure 1B (Aerial Photograph of Project Site).

The project site was used as a lumber mill in the past, but has not been used for this purpose since the 1960s. Most of the project site is currently home to the Craftsman's Mall, a collection of artisan and light industrial rental spaces within wood-framed warehouse buildings, and outdoor storage areas for local contractors. Two single-family residences also occur on the project site on parcels 507-372-003 and 505-022-012.

As shown on Figure 1B (Aerial Photograph of Project Site), the project site is underutilized with only portions of the site containing light industrial and residential uses. Six of the seven project parcels are currently designated and zoned Industrial Limited (IL). Parcel 503-372-006 is currently designated and zoned Residential Low Density (RL). See Figure 1C (Existing Project Site Zoning) for a map of the project site parcels and existing Zoning Districts.

The majority of the project site is an elevated terrace (~50 feet elevation) above the Arcata Bottom that is developed with two remaining warehouse buildings from the former mill (Arcata Manufacturing Company), two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. All of the existing structures at the project site are proposed to be demolished to allow for development of the proposed project. The site contains very little vegetation with the exception of the undeveloped western portion of the site. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, concrete culvert, and a small wetland area.

The portion of the project site containing the Craftsman's Mall (APNs 503-372-002, 505-022-011, and -012) has been subject to enforcement action in the past by the City of Arcata due to multiple violations of the City's Building Code and Land Use Code. In November 2006, a "Notice and Order of Dangerous Buildings" (Recording Number 2006-33094-7) was recorded on the title of the property due to numerous Building Code violations including: 1) partitioning of a structure into individual units for use by several businesses; 2) conversion of several metal shipping containers into work spaces; and 3) major structural and electrical changes to various buildings at the site without Building Department review and compliance with the Building Code. In January 2008, a "Notice of Nuisance" (Recording Number 2008-1543-7) was recorded on the title of the property due to numerous violations of the City's Building Code and Land Use Code including: 1) unpermitted signs; 2) outdoor storage; 3) landscaping/screening; 4) unpermitted utility connections; 5) unpermitted spray booth; 6) potential unauthorized placement of fill materials in a sensitive habitat; 7) lack of business licenses; and 8) noise. In August 2010, an additional "Notice of Nuisance" (Recording Number 2010-17106-14) was recorded on the title of the property due to electrical code violations and the lack of progress in obtaining the necessary building and land use permits to correct the violations identified in the 2008 "Notice of Nuisance." As indicated in the records available at the City of Arcata Community Development Department, many of these past violations at the Craftsman's Mall have not been adequately addressed. Ultimately, the rents offered at the Craftsman's Mall are either below or at the low end of market rents based in part on the property not being maintained to code or with proper permits. Current rent levels would not be sustainable at other properties or even long-term at the Craftsman's Mall itself.

Surrounding land uses include single-family development to the north, west, and south, industrial uses to the north, and Highway 101 to the east. Mad River Lumber is located directly northeast of the project site between St. Louis Road and Highway 101. The Janes Creek Meadows riparian/open space area occurs to the north of the site which contains a section of Janes Creek and one of its tributaries. Arcata Elementary School occurs to the southwest of the site. The Humboldt State University (HSU) campus is located approximately 0.5 miles southeast of the project site. The Northwestern Pacific Railroad tracks are located to the east of the site parallel to St. Louis Road. The railroad is now inactive and owned by the North Coast Railroad Authority (NCRA). St. Louis Road is a two lane City roadway with an approximate 40 foot right-of-way.

Figure 1A Location Map

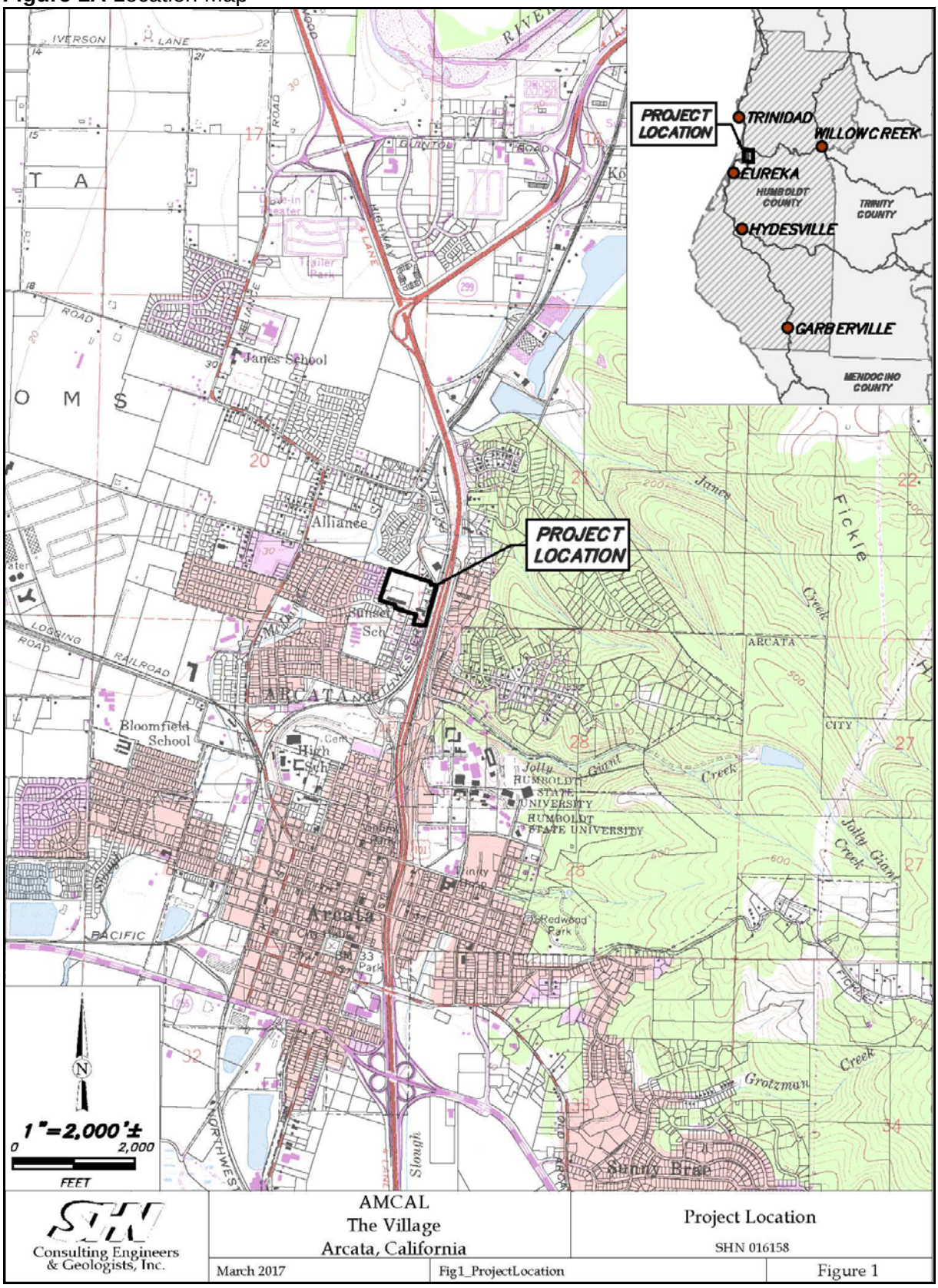
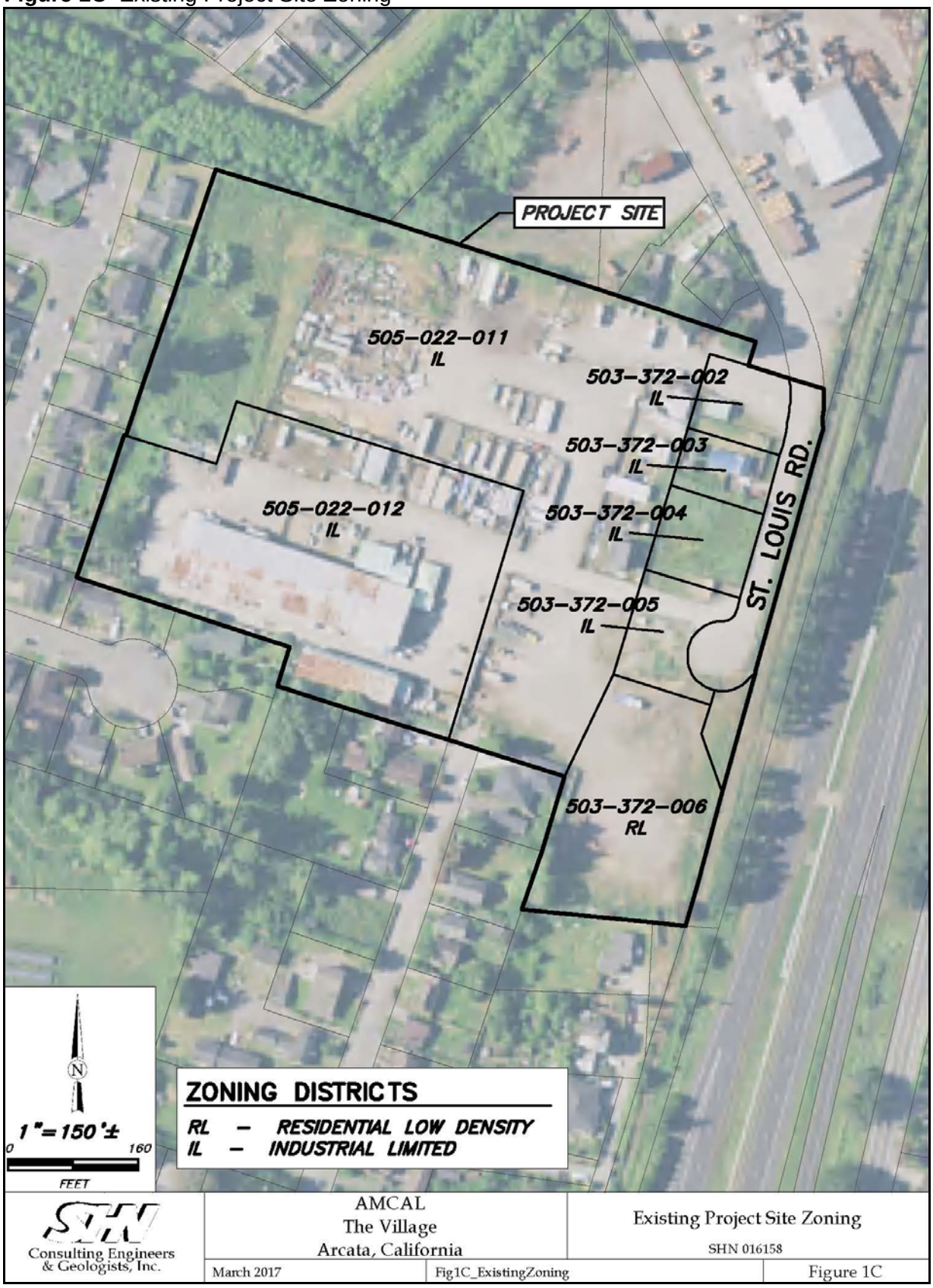


Figure 1B Aerial Photograph of Project Site

Figure 1C Existing Project Site Zoning



PROPOSED PROJECT DESCRIPTION

Project Objectives

Both the City of Arcata and the project applicant have set objectives for the proposed student housing development. The proposed project's ability to meet these objectives is analyzed in the EIR.

- To provide for orderly development of the City, including additional housing development;
- To comply with the General Plan and other relevant adopted planning documents and implementing ordinances (e.g. Land Use Code);
- Assist the City with implementation of the General Plan Housing Element goals by providing more housing units for students and returning single-family homes for ownership opportunities;
- Maximize student housing development within walking distance of Humboldt State University to reduce impacts of traffic and parking on local roads and significantly reduce carbon footprint;
- Remove urban blight and unsafe, unpermitted facilities with modern, energy-efficient residential buildings;
- Get the most out of infill development opportunities to reduce urban sprawl and create sustainable communities;
- Make the best use of student housing development to sites in close proximity to Humboldt State University in order to create linkages between residential and educational spaces;
- Create a strong sense of community through open space and indoor and outdoor recreational facilities within the development;
- Boost student performance and success rates through a purpose-built and programmed student housing community;
- Alleviate the added demand on Arcata housing stock resulting from Humboldt State University's projected enrollment growth and housing demands;
- Assist the City with the implementation of the Community Greenhouse Gas Reduction Plan by constructing energy-efficient buildings and promoting alternative modes of transportation through pedestrian and bicycle improvements;
- Expand opportunities to increase ridership of the Arcata and Mad River Transit System;
- Improve connectivity to the existing City trail system, parks neighborhoods, and schools.

Summary of Proposed Project

Student Housing

AMCAL Equities, LLC, (AMCAL) is proposing The Village (Project), a student housing development on the property located at 2905 St. Louis Road (Assessor Parcel Numbers (APNs) 505-022-011, -012 and 503-372-002, -003, -004, - 005, -006). The project proponent is also requesting the city to vacate a portion of St Louis Road. According to the applicant, the Project will be *"Arcata's first state of the art, purpose-built, off-campus student housing community. It is planned both physically and operationally to provide a healthy, safe and mentoring environment for students attending Humboldt State University (HSU).*" Since project conception, the applicant has been working closely with HSU Student Housing representatives to ensure this project will support the student housing needs of HSU and the housing goals of the City of Arcata (City).

As currently proposed by the applicant, the project is a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings each with an interior courtyard for socializing and studying. The average net unit size of the units will be approximately 1,245 s.f. and the breakdown of unit types is shown below in Table 1-1 below:

Table 1-1 Proposed Number and Type of Units

Unit Type	# of Units	% of Units By Unit Type
Studios	16	7%
2 Bedroom/2 Bath	48	20%
3 Bedroom/3 Bath	16	7%
4 Bedroom/4 Bath	160	67%
Total Units	**240**	**100%**

As submitted by the applicant, it is intended that "*the students will share a common kitchen and living room in 2, 3, and 4 bedroom housing "pods." Each of the bedrooms will have its own bathroom and each individual bedroom will be lockable for privacy and security*.

Figures 1E (Site Plan) and 1G (Architectural Elevations) show the proposed site layout and architectural renderings of the proposed buildings.

Recreational/Academic Facilities

As submitted by the applicant, "*The Village student housing development will offer a wide range of community features and amenities designed to promote both academics and healthy, positive, recreation and socializing. The Village academic features facilitate convenient and collaborative studying with a fully equipped computer lab, study rooms and space for group project development and presentation. In addition to the academic amenities, The Village will offer student residents a state of the art fitness center, internet café, game room, flat-screen televisions, movie theater and outdoor recreation courts. The fitness center will be open from*

6:00 a.m. to midnight each day. The study rooms, theater and computer lab will be open 24 hours each day. The game room and internet café will be open 8:00 a.m. to Midnight each day."

As shown on the Site Plan (see Figure 1E) and the Preliminary Landscape Plan (see Figure 1F), the site design includes a large park area in the central part of the site that includes various grass areas and landscaping, pathways, a half-basketball court, and numerous paved areas that include seating, tables, and covered areas. Each residential building is also designed with interior courtyards that include paving, seatwalls, and landscape beds. In addition, the edges of the project site are proposed to be developed with trails as well as a community garden space that will be located on the southwestern edge of the project site.

Per Section 9.70.050 (Recreation Fee for New Construction) of the Arcata Land Use Code, the City will collect Recreation Fees from the applicant (AMCAL), which will be used for either park acquisition or the improvement of existing parks in the project area. The future development of off-site recreational facilities in the project area is not analyzed in the EIR, as it is currently unknown how the fees provided by the proposed project will be used, and this future development will be subject to subsequent CEQA analysis conducted by the City.

Access (Vehicular & Non-Vehicular)

Vehicular access to the project site is provided from St. Louis Road which dead-ends at the southeast edge of the site. There are currently two gated access roads to the site off of St. Louis Road. The portion of St. Louis Road on the eastern boundary of the project site is proposed to be vacated and incorporated into the site design as access, parking, and landscaping. This will include development of a roundabout in the northeast corner of the project site. As shown on the Site Plan (see Figure 1E), driveways and parking within the site will occur on the perimeter of the elevated portion of the site and provide access around the proposed residential structures.

The proposed access improvements have been reviewed by, and will be constructed to, the standards of the City Engineer to ensure that adequate circulation is provided and no hazardous design features will be developed as part of the project. The City Engineer has reviewed the proposed transportation improvements for the project and determined that they are appropriate for the amount and type of traffic that will result from the proposed project.

The project's ingress/egress and on-site circulation are required to meet the requirements of the Arcata Fire Protection District and Arcata Police Department, which ensures that new development provides adequate access for emergency vehicles. The project has been reviewed by the Fire and Police Departments, and their requirements have been included in the proposed project design.

Parking

Section 9.36.060 (Number of Parking Spaces Requires) of the Arcata Land Use Code lists the minimum and maximum number of off-street vehicle parking spaces required by land use. For multi-family residential uses with 3 or more units, a minimum of one and a maximum of two off-street parking spaces are required per residential unit. With the 240 residential units proposed by the project, a minimum of 240 and a maximum of 480 parking spaces could be required. As

shown on the Site Plan (see Figure 1E), the project proposes 369 off-street parking spaces for vehicles. Twenty of these spaces (5% of total parking) will be reserved for clean air vehicles and twelve of these spaces (3% of total parking) will have EV-charging stations. This number of vehicle parking spaces exceeds the City's minimum requirement but is less than the maximum.

Section 9.36.060 (Bicycle Parking) of the Arcata Land Use Code lists the minimum number of bicycle parking spaces required, which is based on the number of vehicle parking spaces required. For a site with 11 or more vehicle parking spaces, the minimum number of bicycle parking spaces required is equal to 50% of the number of vehicle parking spaces required. As noted above, a 240-unit residential development would require a minimum of 240 vehicle parking spaces. Based on this requirement, the minimum number of bicycle parking spaces required for the project would be 120. Each floor of the proposed four-story buildings will have 20 bicycle parking spaces. This will provide 80 spaces per building and 320 indoor bicycle parking spaces total. As shown on the Site Plan (see Figure 1E), the project also proposes to provide 185 outdoor bicycle parking spaces which are required to be covered. As such, the project proposes to provide 505 bicycle parking spaces, which is greater than four times the City's minimum requirement.

Section 9.36.070 (Motorcycle Parking) of the Arcata land Use Code lists the minimum number of motorcycle parking spaces required, which is based on the number of vehicle parking spaces provided. A parking lot with 20 or more vehicle parking spaces shall provide motorcycle parking spaces at a ratio of one motorcycle space per 20 vehicle spaces. As noted above, the project proposes to provide 369 vehicle parking spaces which would require 18 motorcycle parking spaces. As shown on the Site Plan (see Figure 1E), the project proposes 20 motorcycle parking spaces which is greater than the City's minimum requirement.

Emergency Access Road

The proposed interior access roads on the project site have been designed (e.g., adequate width, turning radius, etc.) to allow access for emergency vehicles around the perimeter of the proposed residential buildings (see Figure 1E [Site Plan]). A gated access from the project site to Eye Street exists along the southern boundary of parcel 505-022-011. As recommended by the Arcata Fire District and other City Departments, it is proposed to develop this access into a secondary access for emergency purposes as part of the project. In addition to providing access for emergency vehicles, this access will also be used as a pedestrian/bicycle pathway to Eye Street. The applicant shall be required to dedicate an emergency access easement between the public portion of St. Louis Road at the northeast corner of the project site and the Eye Street access on the southern edge of the site.

Pedestrian/Bicycle Trails

To comply with Policy T-5 (Bicycle and Pedestrian Facilities) of the Arcata General Plan Transportation Element, the Arcata Pedestrian & Bicycle Master Plan (2010), and the recommendations of the W-Trans Central Arcata Areawide Traffic Study (Appendix L), the proposed project will construct new pedestrian/bicycle improvements throughout the development. This includes the following pedestrian/bicycle trails:

- An approximate 675-foot section of the Arcata Rail with Trail along the eastern edge of the project site from the northeast corner of the site to the southeast corner.
- An approximate 500-foot section of trail along the north property line of the project site from the northeast corner of the site to the northern central portion of the site. This trail will connect to the City-owned Janes Creek Meadows Openspace area and ultimately provide access to Maple Lane (see Figure 1H [Non-Vehicular Circulation]).
- Sidewalk and pedestrian trails throughout the project site as illustrated on the Preliminary Landscape Plan prepared by KLA Landscape Architecture (see Figure 1F).

The applicant will also work with the City to develop off-site improvements that will improve pedestrian/bicycle access including the following:

- An approximate 200-foot section of the Arcata Rail with Trail from the southeast corner of the site to the northern end of Todd Court. This section of the trail will be developed through parcels 505-042-003 and -022 (see Figure 1H [Non-Vehicular Circulation]).
- An approximate 700-foot section of sidewalk from the northeast corner of the site to the existing sidewalk at the St. Louis Road overcrossing (see Figure 1H [Non-Vehicular Circulation]).

The proposed pedestrian/bicycle improvements will result in connecting the project site to the St. Louis Road overcrossing to the north, Maple Lane to the west, and Todd Court to the south (see Figure 1H [Non-Vehicular Circulation]). These improvements will provide connectivity to the existing trail systems in the project area, Humboldt State University, and to regional trails in the Humboldt Bay area, including the Annie and Mary Trail and the Humboldt Bay Trail: Arcata to Eureka segment. It is anticipated that this increased connectivity will encourage residents to walk or bike to HSU instead of driving. As recommended in the W-Trans Traffic Study (Appendix L; Pgs. 61 and 64) and by the City of Arcata, pedestrian and bicycle traffic will be directed toward Eye Street and Todd Court until such time that this section of the Arcata Rail with Trail is completed to Sunset Avenue.

Transit Service

Due to The Village's close proximity (0.5 miles) to the Humboldt State campus, it is expected that most of its residents will either walk or ride their bicycles to school, which will serve to mitigate traffic and parking congestion in the surrounding neighborhoods. For those Village residents that may have additional transportation needs, the applicant will work closely with the City of Arcata and the Arcata-Mad River Transit System to provide bus service directly to The Village. Humboldt State University offers free, unlimited bus rides to students on City and County bus systems through the 'Jack Pass' program. This will allow students to easily utilize their 'Jack Pass' for continuous service to campus during school hours and to local community, retail, recreational and entertainment venues in the evenings and on weekends.

Car and Bike Share Program

The applicant proposes to implement a car and bike share program at the student housing community for residents who do not have cars or bikes. The program is intended to encourage

carpooling, reduce vehicle miles traveled, encourage alternative modes of transportation, and reduce the number of cars and bikes that are stored at the site.

Management/Security

As submitted by the applicant, *"Over the past 38 years, AMCAL has built an impeccable reputation not only for developing an award-winning portfolio of multifamily properties, but also meticulously maintaining them on the leading edge of their respective markets. On-site management will be available 24 hours/day, 7 days/week, including property employees and resident assistants in each building. Leases will provide for community "quiet hours", which will be from 11:00 p.m. to 8:00 a.m. each day. Special 24 hour quiet hours will be implemented during exam periods at the end of each semester. At The Village student housing community, students will be encouraged and mentored by "Resident Assistants" - upper-classmen who will reside on each floor of The Village's four buildings and will support, encourage and counsel their fellow HSU residents. The Resident Assistants will collaborate with on-site property management in order to organize regular educational, recreational and community-based charitable events that will provide positive, alcohol-free activities for The Village student residents."*

To reduce the anticipated increased demand for local law enforcement services, the Arcata Police Department has requested that the applicant prepare a security plan detailing all of the security measures that will be implemented for the project. The requirement to prepare a security plan for the proposed student housing community will be included as a condition of approval for the project.

Landscaping

A Preliminary Landscape Plan was prepared by KLA Landscape Architecture (2016) for the proposed project, which is shown in Figure 1F. The concept for the Landscape Plan is described on Sheet Number L0.0 which states, "*The landscape design concept for the Village apartments is to provide an enjoyable and aesthetic space for employees and customers that fits within the landscape framework of the exiting neighborhood and the surrounding area, as well as the requirements of the City. Plant material has been selected that performs well in the special conditions of the Northwest Coast (Sunset Zone #17).*" The Plant Palette chosen for the proposed project is described and illustrated on Sheet Numbers L0.1 and L0.2 of the Landscape Plan.

As it relates to water use, the Landscape Plan states (Sheet Number L0.0), "*No high water use turf areas are included. Low and medium water use hardy trees, shrubs, and groundcover are proposed for the landscape around the site. The landscape (and associated irrigation) has been designed to be compliant with City of Arcata's Water Efficient Landscape Ordinance (WELO).*" The water efficient landscaping and low flow irrigation system proposed in the Landscape Plan is designed to significantly reduce irrigation water use.

Figure 1D Proposed Project Site Zoning

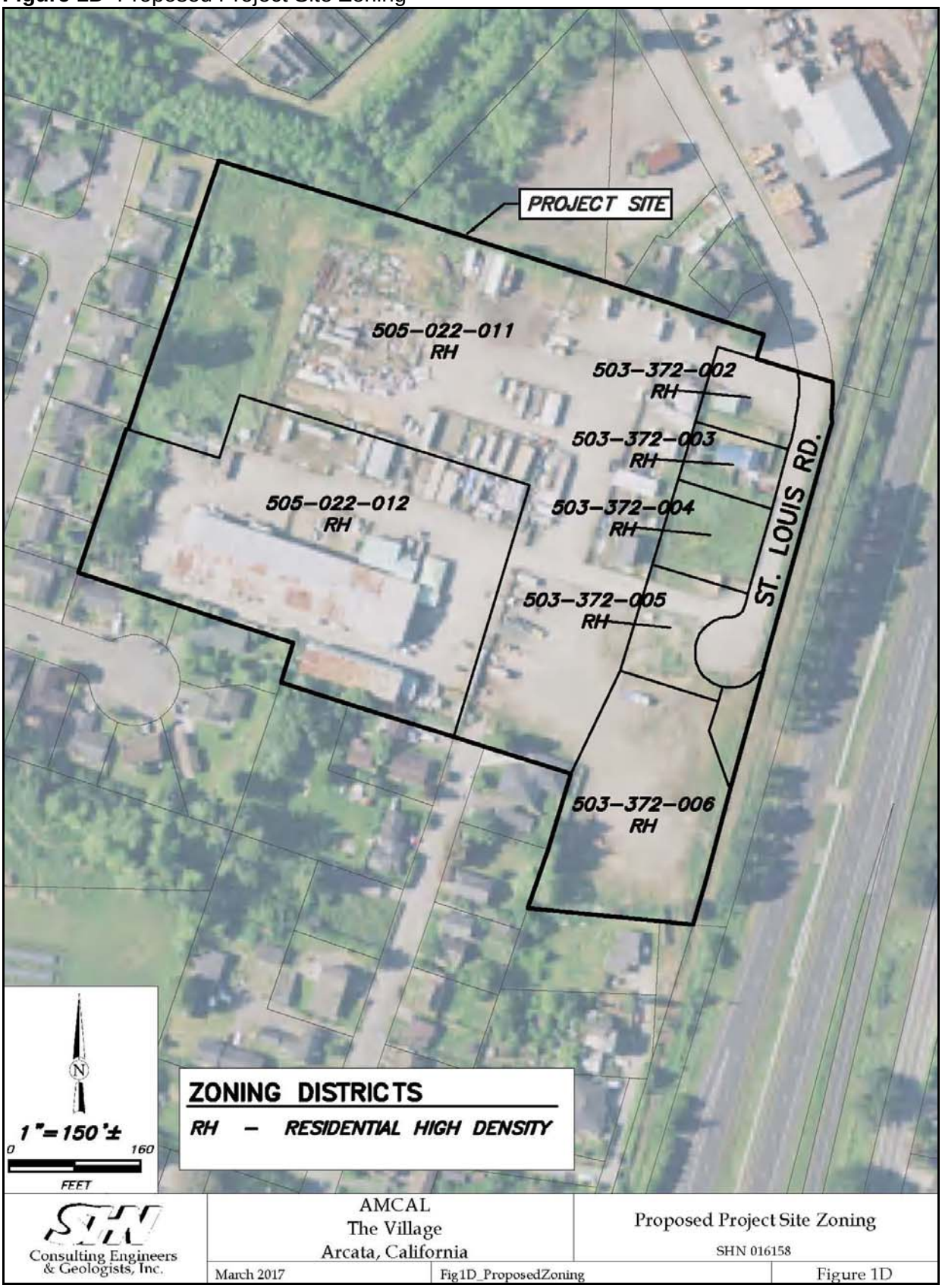


Figure 1E Site Plan

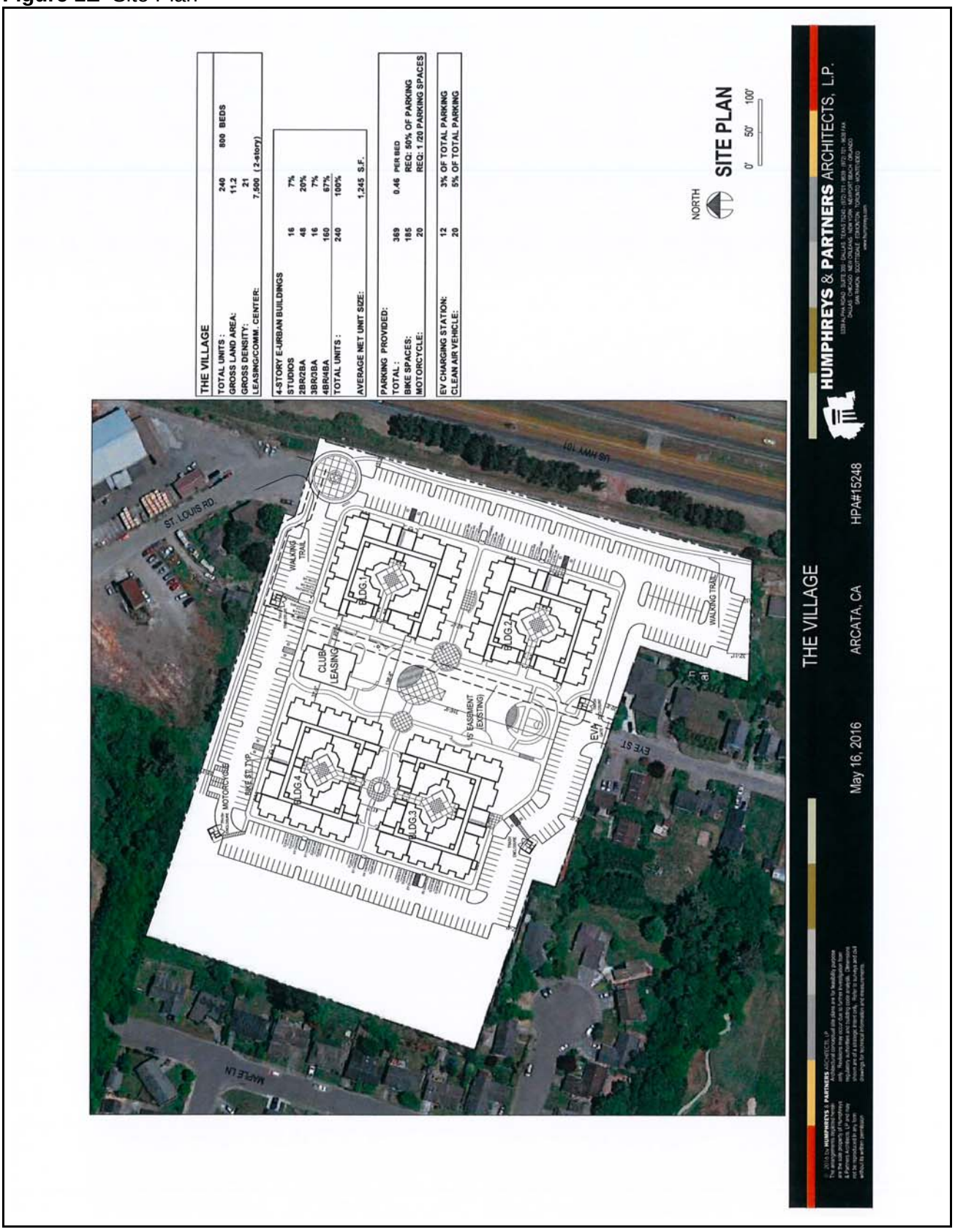


Figure 1F Preliminary Landscape Plan

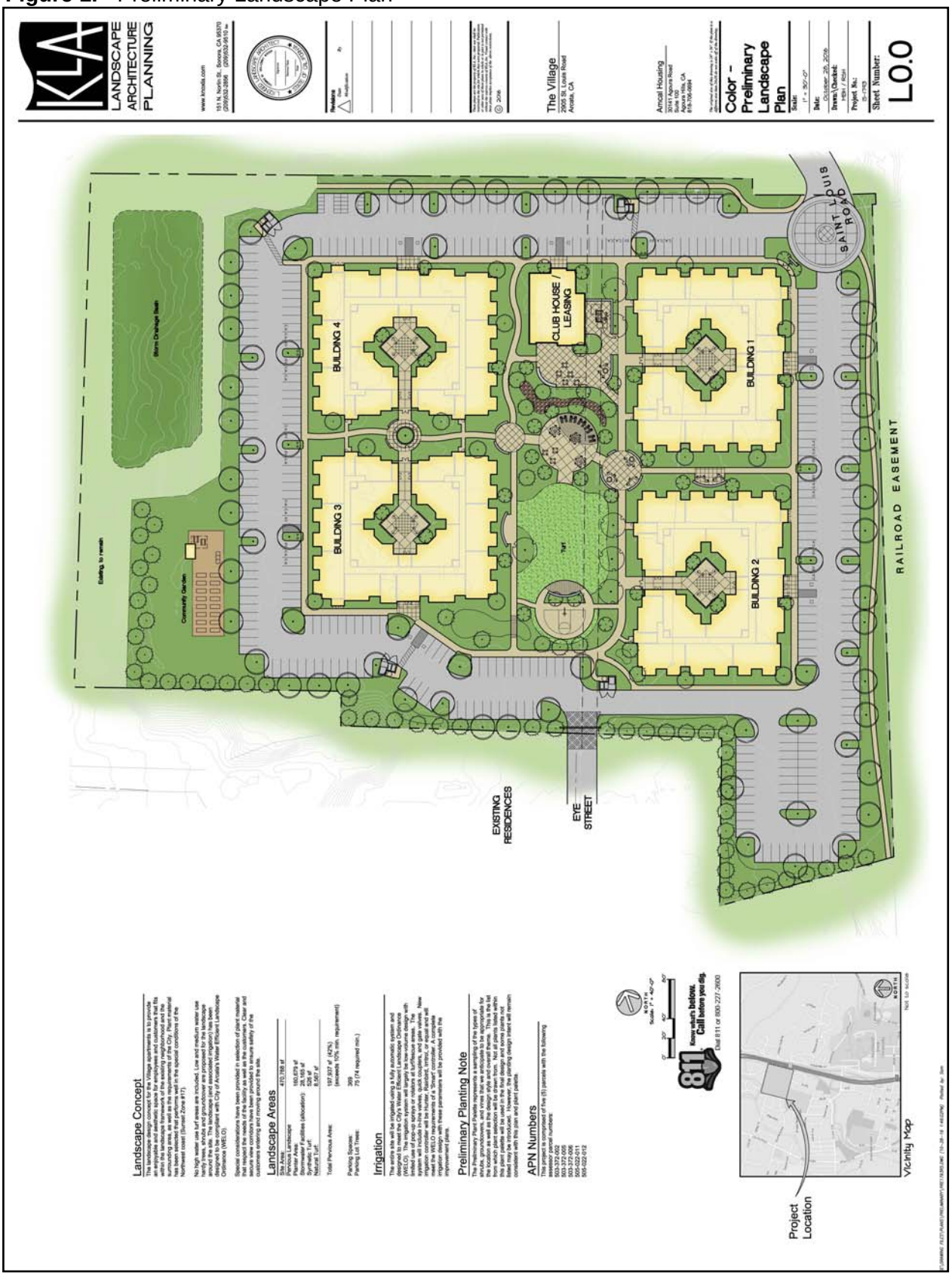
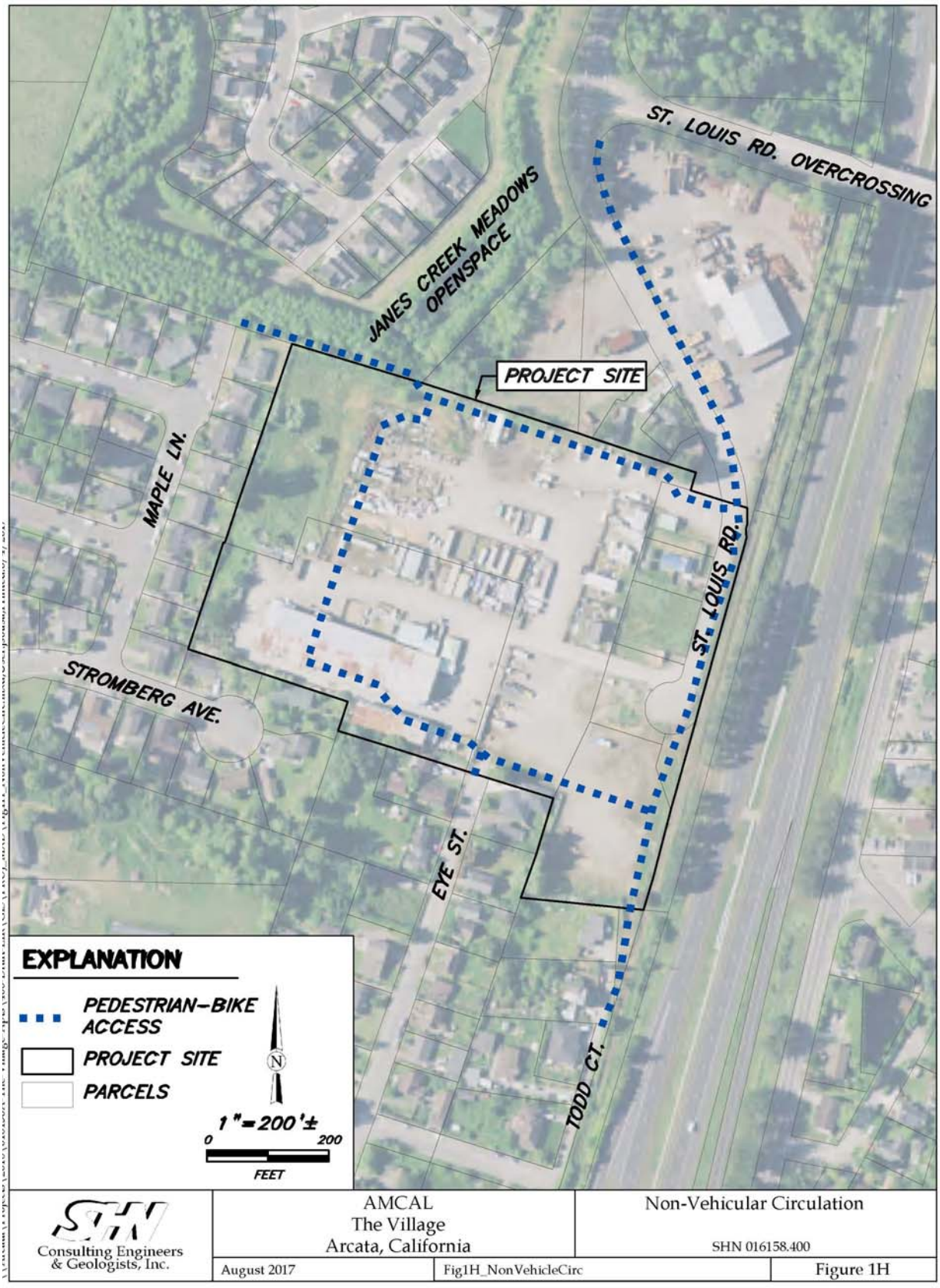


Figure 1G Architectural Elevations

Figure 1H Non-Vehicular Circulation



As required by Section 9.34.050 (Landscape Location Requirements), perimeter landscaping is required for all surface parking areas to provide screening for adjacent streets and properties. As shown on the Preliminary Landscape Plan (see Figure 1F), trees and shrubs are proposed to be planted within and on the perimeter of the parking areas which will screen views from surrounding properties and minimize the impact of headlight glare.

Utilities and Easements

Proposed development of the project site would include provision of site utilities. All utilities (water, sewer, gas, electricity, and telecommunications services) are located adjacent to the site and would be extended underground to serve the proposed development. The City of Arcata, through its solid waste disposal contractor, would collect solid waste and recyclables.

The project would also involve the use of existing onsite easements or the development of new easements for access, utilities, and drainage. These would be necessary for the emergency access road to Eye Street, the section of the Arcata Rail with Trail, the section of the trail to Maple Lane, utilities to serve the proposed development, and directing drainage to the stormwater facilities on the western boundary of the project site.

Arcata Wastewater Treatment Plant

The City of Arcata prepared a memorandum (dated June 23, 2017) that analyzed the potential wastewater impacts of the approved/planned Sunset Area housing projects, which includes the Village Student Housing project (Appendix K). The projects, referred to as the Sunset Area housing projects, are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. The memorandum contains an analysis that estimates the increase in population and residential units that will occur from buildout of available land in the City in combination with upzoning and annexation proposed by the Sunset Area housing projects. The analysis determined that there is sufficient wastewater treatment capacity for the existing feasible residential development potential in the City and the upzoning and annexation proposed by the Sunset Area housing projects. However, as described above, the wastewater treatment facilities must be improved to meet the demand of both current and future population. The proposed project, which includes upzoning the project site to Residential High Density (RH), will be required to pay standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, which will be used to fund some of the proposed improvements to the City's wastewater treatment system.

Lighting

The proposed project includes various sources of new outdoor lighting (street, pedestrian-scale, security, and buildings). The project proposes outdoor lighting consistent with the City's design guidelines, Section 9.30.070 (Outdoor Lighting) of the Arcata Land Use Code, and the recommendations of the International Dark-Sky Association (IDA), which includes standards for fixtures, shielding, wattage, placement, height, and illumination levels. To comply with these requirements, lighting for the project will be the minimum lumens necessary, directed downward, shielded, and pedestrian level when feasible. This will ensure lighting is contained

within the site and does not cause significant lighting and glare impacts for surrounding land uses and the Janes Creek riparian corridor.

Energy Conservation

Appendix F of the CEQA Guidelines requires that an EIR must include a discussion of the potential energy impacts of a proposed project and describe the energy conservation measures that will be incorporated to avoid or reduce inefficient, wasteful, and unnecessary consumption of energy. For the proposed project, this discussion is included in Chapter 5 (Energy Conservation) of the EIR, with the exception of the summarized discussion below.

Sources

In Humboldt County, energy is used as a transportation fuel and as electrical and heat energy in homes, businesses, industries, and agriculture. The majority of primary energy used in Humboldt County is imported, with the exception of biomass energy. Essentially all of the county's transportation fuels are imported. Although the majority of electricity is generated in the county, a large portion of it is generated using natural gas. The county imports about 90% of its natural gas; the rest is obtained locally from fields in the Eel River valley (Schatz Energy Lab, 2005; Pgs. 1-2).

Humboldt County is remotely located at the end of the electrical and natural gas supply grids, and this limits both energy supply options and system reliability. PG&E owns the natural gas and electricity transmission and distribution systems in Humboldt County. There is one major natural gas supply line that serves the county and four electrical transmission circuits (Schatz Energy Lab, 2005; Pg. 3).

Prior to May 2017, electricity to the project site was provided by the PG&E Humboldt Bay Generating Station (HBGS) which is located just south of the City of Eureka along Humboldt Bay. The HBGS began commercial operation in 2010 and normally runs on natural gas, with ultra-low sulfur diesel as its backup fuel. As indicated on the PG&E website (www.pge.com), the HBGS is 33 percent more efficient than the previous Humboldt Bay Power Plant (HBPP) fossil fuel units.

Beginning in May 2017, electricity service for the City of Arcata was transitioned to the Redwood Coast Energy Authority (RCEA) Community Choice Energy (CCE) program. The CCE program allows city and county governments to pool (or aggregate) the electricity demands of their communities in order to increase local control over electric rates, purchase power with higher renewable content, reduce greenhouse gas emissions, and reinvest in local energy infrastructure. The electricity continues to be distributed and delivered over the existing power lines by Pacific Gas & Electric (PG&E). The CCE program procures approximately 40% of its power from renewable and carbon-free sources, which is approximately 5% more renewable energy than the power sources previously provided by PG&E (RCEA, 2017). In addition, customers can choose to opt up to a premium service called Repower+, which is 100% renewable energy at only $0.01 more per kilowatt hour (kWh). The proposed project will be automatically enrolled in the RCEA CCE program and will contribute towards increasing the

amount of renewable power placed on California's grid, which has the effect of reducing greenhouse gas emissions and stimulating new renewable development in our region and State.

The proposed residential development will require electricity, natural gas for heating, and fuel for transportation. Energy will be consumed during both construction and operation of the proposed project, which is described below.

Construction
During demolition of the existing structures at the project site and construction of the proposed residential development, energy will be consumed in the form of diesel fuel (mobile construction equipment) and electricity (e.g. power tools).

The applicant proposes to only use construction equipment that complies with U.S. Environmental Protection Agency Tier 1 engine standards or better. Tier 1 engines have reduced emissions, increased performance, and improved fuel efficiency compared to engines that do not meet these standards. The applicant also proposes to recycle or salvage over 50% of the construction waste from the project. The applicant will be required to submit a construction waste diversion plan to the City as part of the building permit submittal.

Operation
During long-term operation of the proposed project, energy use will include electricity and natural gas consumption by the residents, energy consumption related to obtaining water, and fuel consumption by operation of vehicles. The proposed project's inherent site and design features will reduce the consumption of energy during long-term operation. As described in Sections 2.7 (Air Quality) and 2.8 (Greenhouse Gas Emissions) of the EIR, the project proposes land use, community design, and water and energy conservation site and design features including the following:

- The project proposes a density of 21 units/acre which is an increase of 13 residential units/acre compared to surrounding single-family residential uses (~8 units/acre);
- To reduce the energy needs of the proposed buildings, the project seeks a Leadership in Energy and Environmental Design (LEED) Silver rating which would include energy-efficient design for windows, walls, HVAC, and lighting. Other aspects of the project that will contribute towards achieving a LEED Silver rating include: 1) infill development project away from sensitive habitats and in close proximity to mass transit; 2) on-site pedestrian/bicycle improvements; 3) bicycle storage in excess of the City's Land Use Code standards; 4) preferred off-street parking for clean fuel vehicles; 5) electric vehicle charging stations; 6) use of low flow plumbing fixtures; 7) water efficient landscaping; and 8) diversion of construction waste (see additional discussion of these measures in this section and Chapter 5 [Energy Conservation] of the EIR);
- To reduce indoor water use it is proposed to install low flow plumbing fixtures in the residential buildings and club house; and
- To reduce outdoor water use, the project proposes to install water efficient landscaping and a low flow irrigation system in compliance with the City of Arcata's Water Efficient Landscape Ordinance (WELO).

With the project design features that reduce energy use, the project would result in an estimated 950,760 kWh per year (950.8 MWh per year) of electricity and 1,045,210 kBtu per year (10,452 therm) of natural gas each year (Appendix G).

As described in Chapter 3 (Traffic/Transportation) of the EIR, the proposed project would be expected to have a combined total daily trip generation of 1,578 trips. Based on the design measures and location, the project would generate approximately 4.42 million vehicle miles traveled (VMT) per year. Based on the estimated increase in VMT, the proposed project would result in an increased energy use of approximately 17.2 billion BTUs per year associated with transportation. This is based on an average of 3,885 BTUs per vehicle mile. To reduce the amount of fuel consumed for transportation, the project proposes the following measures that will encourage the use of low-emission vehicles and alternative forms of transportation:

- Twenty of the vehicle parking spaces (5% of total parking) will be reserved for clean air vehicles and twelve of the spaces (3% of total parking) will have EV-charging stations.
- The applicant proposes to provide 505 bicycle parking spaces, which is greater than four times the City's minimum requirement.
- The applicant proposes on-site pedestrian/bicycle improvements, and will work with the City on off-site improvements, that will result in connecting the project site to the St. Louis Road overcrossing to the north, Maple Lane to the west, and Todd Court to the south (see Figure 1H [Non-Vehicular Circulation]). These improvements will provide connectivity to the existing trail systems in the project area, Humboldt State University, as well as to regional trails in the Humboldt Bay area including the Annie and Mary Trail and the Humboldt Bay Trail: Arcata to Eureka segment.

Stormwater Management

The proposed residential development will create additional impervious surface at the project site, which includes four apartment buildings totaling approximately 2.2 acres, approximately 2.75 acres of paved parking, and 1.32 acres of paved open space. Approximately 4.54 acres of the site will be pervious area. This increase in impervious surface at the site could result in an increase in stormwater runoff. Stormwater drainage facilities for the development are required to be designed to meet both State and local stormwater regulations which are focused on maintaining or improving a site's pre-development runoff characteristics. As described in the Preliminary Stormwater Management Report completed by Manhard Consulting (Appendix N), the stormwater design for the project is required to meet the following objectives:

1. **City of Arcata requirements**

   No net increase on the peak stormwater release rate in the post-development condition compared to the pre-development condition.

2. **Humboldt County LID/State Water Quality Control Board's MS4 Permit requirements**

a. Implement Site Design Measures with the performance standard of "achieving infiltration, evapotranspiration, and/or harvesting/reuse of the 85th percentile 24-hour storm runoff event."

b. Hydromodification management (for developments that create and/or replace one acre or more of impervious surface) – Post-project runoff shall not exceed estimated pre-project flow rate for the 2-year 24-hour storm.

As described in the Preliminary Stormwater Management Report (Appendix N), compliance with State and local stormwater regulations will be achieved by the on-site management of stormwater through low impact development (LID) site design measures including the following:

1. **Tree Planting and Preservation**

   The existing industrial yard currently lacks any tree cover. Effort will be made to plant a variety of trees throughout the site. Doing so will help improve infiltration into the underlying soils and will provide a variety of benefits including heat island reduction, air quality improvement, and added wildlife habitat. A total of approximately 201 trees are proposed in the Preliminary Landscaping Plan prepared by KLA Landscape Architecture (2016).

2. **Soil Quality Improvement and Maintenance**

   The majority of soil quality improvement will come in the form of amending existing site topsoil and subsoils. Per historic aerial photoimagery, the site has been host to an industrial yard for at least 25 years and thus has highly compacted, bare soils. In order to revive these compacted soils and regain more natural infiltration rates, scarification will be done in conjunction with site grading work. Topsoil will be placed within landscaped areas to improve infiltration. Hardpacked soil/gravel will be improved for the new landscaped area throughout the site.

3. **Rain/Rock Garden**

   Rain and rock gardens help provide runoff volume reduction and improve runoff quality while still providing aesthetic landscaping. Wherever suitable, rain and rock gardens will be installed. Target areas include landscape islands and drainage structures in landscaped areas. Drainage inlets serving these gardens would be raised 6" or more in order to allow water to infiltrate and evaporate in these areas.

4. **Native Plantings**

   Similar to the use of rain/rock gardens, native plantings offer a more aesthetically pleasing, runoff-friendly alternative to standard turf grasses. Native plantings, which use deeper-rooted species, help improve infiltration, remove certain pollutants found in runoff, provide a habitat for many native wildlife species, and are minimally water-intensive. Appendix 4 of the Humboldt Low Impact Development Stormwater Manual provides an extensive list of recommended plants.

5. **Bio and Vegetated Swales**
   Bioswales are vegetated swales meant to convey water onsite while providing a degree of infiltration and runoff quality treatment. Where slopes and widths allow, the proposed development will use bio-swales to convey water to drainage inlets. In addition to the benefits stated above, the use of swales will help reduce the amount of benefit-neutral storm sewer needed. Approximately 4,800 square feet of bio-swales are proposed.

6. **Impervious Area Disconnection**
   As shown on the Conceptual Engineering Plan attached to the Preliminary Stormwater Management Report, parking areas, roof areas, proposed trails, sidewalks, and other hardscape will be drained into pervious areas to allow water an opportunity to infiltrate. Roof drainage will be directed towards the courtyard area as much as is feasible into rain gardens and other landscape features to provide the maximum opportunity for evaporation and transpiration of stormwater. All parking lot drainage will be drained to bio-swales and rain gardens. Drainage inlets receiving flow from parking lots will be surrounded by a rain garden set 6" below the inlet to allow rainwater an opportunity to infiltrate and evaporate.

7. **Infiltration Gallery/Trench**
   An infiltration gallery or trench system will be implemented to infiltrate any volume not addressed by other site design measures. A buried stone trench or proprietary system will be implemented. See details appended to the Preliminary Stormwater Management Report from the Humboldt Low Impact Development Stormwater Manual. Final design details will be included in the engineering plans submitted for project.

In developing the stormwater system design for the project site, infiltration testing was performed to identify areas suitable for intensive infiltration measures. Due to the results of the infiltration testing, it is proposed to locate the underground infiltration basin in the southwest corner of the site. Based on the proposed stormwater system design, the site will drain west via storm sewer and open swales to the infiltration basin. The basin will overflow to the lower western portion of the site to the City's existing stormwater infrastructure. The design of the stormwater system is shown on the Low Impact Development BMP Plan and Conceptual Engineering Plan in the Preliminary Stormwater Management Report (Appendix N).

The proposed stormwater system design will reduce peak flows from existing conditions in both the 2-year and 100-year 24-hour storm events. With the proposed LID site design measures proposed by the project, the project will improve drainage conditions for the surrounding area and will be a net positive impact to the watershed.

Flooding

As indicated in the Village Scoping Meeting Follow-Up document (Appendix B), the residential properties along Maple Lane and Stromberg Avenue have been previously impacted by flooding on the western portion of the project site. Due to the existing flooding issues at the site, the City of Arcata will require the applicant to conduct an analysis of the existing City stormwater infrastructure from the western edge of the project site to the intersection of Maple Lane and

Stromberg Avenue. The analysis will determine the as-built design and capacity of the existing stormwater infrastructure and recommend improvements to reduce the localized flooding that occurs on the residential properties to the west of the project site. The improvements may include a small enhancement wetland basin adjacent to the existing wetlands at the site. The infiltration basin overflow pipe would drain to this feature, and the enhancement wetland would control the release of stormwater from the site to ensure it does not exceed the capacity of the City's infrastructure. The design of the proposed improvements must demonstrate that after providing the detention required by the MS4 permit requirements and the HLIDSM, the City's stormwater infrastructure will have adequate capacity to convey the overland flow of stormwater that enters the ditch on the western boundary of the project site.

The analysis of the City's existing stormwater infrastructure and any improvements recommended for reducing existing seasonal flooding on the project site, are not analyzed in the EIR. These improvements would occur as part of the City of Arcata Long-Term Drainage Maintenance Program, which includes the drainage ditch on the western boundary of the project site (Site #14 in the mapping [Sheet 3 of 10] for the City's Long Term Drainage Maintenance Program). Implementation of this program will allow the City to conduct as needed maintenance activities including removing obstructions from drainage swales and culverts to restore capacity and reduce localized flooding. This program also includes improvements to existing drainage infrastructure such as widening and relocating drainage swales, culvert replacement, grading to alter drainage patterns and reduce seasonal flooding, and stream bank stabilization. A Mitigated Negative Declaration was adopted by the City of Arcata for the Drainage Maintenance Program in March 2017 (SCH# 2017022003).

Subsequent CEQA analysis may be required for the improvements recommended for the project site, if they were not previously analyzed in the Mitigated Negative Declaration adopted for the Drainage Maintenance Program. If proposed, the enhancement wetland feature would be designed as a habitat restoration project which is categorically exempt from the California Environmental Quality Act (CEQA) per Section 15333 (Small Habitat Restoration Projects) of the CEQA Guidelines. Any permits required for the proposed improvements would be obtained by the City of Arcata as part of implementation of the City's Drainage Maintenance Program.

With the proposed on-site stormwater system and improvements to the City's existing stormwater infrastructure, the existing flooding on the western boundary of the site will be reduced by the proposed project and implementation of the City's Drainage Maintenance Program.

Wetlands

A wetland delineation of the project site was conducted by Natural Resource Management (NRM) Corporation (Appendix P) in the winter and spring of 2016 and spring of 2017. Since the elevated developed portion of the project site is highly disturbed and does not contain wet areas or depressions, the report focuses on the 1.4 acre undeveloped western portion of the project site. Within the 1.4 acre study area, 0.21 acres (9,148 s.f.) of two- and three-parameter wetlands were identified. The wetland areas at the project site are shown in Section 4.3 (Biological Resources)

of the EIR (see Figure 4.3C [Wetland Areas]). A tributary to Janes Creek also occurs within the Janes Creek Meadows openspace area to the north of the project site.

The project proposes to develop the elevated, disturbed portion of the project site with a student housing project. As described above in the section on stormwater management, as part of the stormwater system for the development, an infiltration basin is proposed to be constructed in the upper, southwest corner of the site which will overflow to the lower, western portion of the site to the City's existing stormwater infrastructure. The design of the infiltration basin is shown on the Conceptual Engineering Plan prepared by Manhard Consulting (Appendix N). As shown on the Conceptual Engineering Plan, the proposed overflow pipe for the infiltration basin will be setback approximately 40 feet from the wetland area on the project site. This complies with Section 9.59.060.B.8 of the Arcata Land Use Code, which allows stormwater basins within 25 feet of wetland boundaries.

As designed and in compliance with the requirements of the Arcata Land Use Code, the proposed project will not impact the delineated two- and three-parameter wetlands on the western edge of the project site.

Project Entitlements

In order to proceed, the project must receive entitlements from the City of Arcata as well as several other agencies. These entitlements are listed in Table 1-2 below.

Table 1-2 Project Entitlements

Agency	Approval	Description
City of Arcata	General Plan Amendment	Redesignate the parcels that comprise the project site from Industrial Limited (IL) and Residential Low Density (RL) to Residential High Density (RH).
City of Arcata	Zoning Reclassification	Rezone the parcels that comprise the project site from Industrial Limited (IL) and Residential Low Density (RL) to Residential High Density (RH).
City of Arcata	Merger	Merge the seven parcels that make up the project site.
City of Arcata	Acceptance of Dedications	Acceptance of dedications for access, drainage, and other infrastructure improvements.
City of Arcata	Right-of-Way Vacation	Vacation of the portion of St. Louis Road along the eastern boundary of the project site.
City of Arcata	Planned Development Permit	Approval of Planned Development Permit pursuant to Land Use Code (LUC).
City of Arcata	Development Agreement	Development Agreement by and between the City of Arcata and AMCAL Equities, LLC (AMCAL) to establish rights for development of the project and provide public benefits to the City and its residents.

Agency	Approval	Description
Regional Water Quality Control Board	MS4 Permit and Construction General Permit	A Storm Water Pollution Prevention Plan (SWPPP) must be prepared prior to initiation of construction activities that complies with the General Permit for Discharges of Stormwater Associated with Construction Activities. A Storm Water Control Plan (SWCP) must be prepared prior to the initiation of construction activities that complies with the MS4 Permit requirements for long-term storm water management at the site.
City of Arcata	Grading Permit	Permits for grading activities pursuant to LUC Chapter 9.64, Article 6.
City of Arcata	Building Permit	Permits for all construction activities subject to the City of Arcata Municipal Code Title 8, Chapter 1.

General Plan Amendment/Zoning Reclassification

Currently, the General Plan Designation for the project site parcels is Industrial Limited and Residential Low Density, which is implemented by the Industrial Limited (IL) and Residential Low Density (RL) zoning districts (See Figure 1C – Existing Project Site Zoning). The applicant is proposing a General Plan Amendment and Zone Reclassification for the subject properties to Residential High Density (RH), which would allow for the proposed student housing project (See Figure 1D – Proposed Project Site Zoning). Per the City of Arcata's Land Use Code (LUC) §9.24.020(D), the RH zoning district is applied to areas appropriate for various types of multi-family housing, including duplexes, townhouses and apartments.

The allowable density in the RH zoning district ranges from 15.01 to 32 units per acre. As previously stated, the project will consist of 240 units. The total of the seven parcels that comprise the project site is approximately 11 acres in size. As such, the project proposes a gross density of 21 units/acre which is just below the mid-point (23.5 units per acre) of the density range allowed in the RH zoning district.

Planned Development Permit

As described in Section 9.72.070 (Planned Development Permit) of the Arcata Land Use Code, a Planned Development Permit is required for any residential development on sites one acre and larger. This project proposes to apply for a Type "B" Planned Development Permit to allow exceptions to the development standards in the Arcata Land Use Code including the height standard in the RH zoning district (Section 9.24.050) and the minimum private recreation space requirement (Section 9.42.130). Otherwise, the project complies with the development standards in the Land Use Code.

Development Agreement

As part of the proposed project, the City of Arcata and AMCAL Equities, LLC (AMCAL) will enter into a Development Agreement by which the extent of approval, timing and/or cost of

improvements, and the provision of public amenities will be described. The EIR describes and analyzes all on-site and off-site development that is required through City and other regulatory requirements and as mitigation for the proposed project. Any improvements required through the Development Agreement will be addressed by the applicant in a subsequent CEQA document.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Chapter 3 – Transportation/Traffic

Table 1-3 Transportation/Traffic Impacts and Mitigation Measures

Impact	Mitigation Measures	Significance After Mitigation
3.1: Conflict with an Applicable Plan, Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System, Taking into Account all Modes of Transportation	**3.1a:** To minimize the traffic impacts of the proposed project, the applicant will be responsible for paying a fair share proportion for near-term and future transportation improvements identified in the W-Trans Central Arcata Areawide Traffic Study (Appendix L) and as recommended by the City of Arcata. These improvements will reduce potential traffic impacts and provide compliance with the City's General Plan Transportation Element. As discussed in Chapter 3 (Transportation/Traffic), until all of the transportation improvements recommended in the W-Trans Traffic Study are constructed, there is the potential for significant traffic impacts from the proposed project. As such, a Statement of Overriding Considerations may be adopted for the proposed project.	Potentially significant impact until construction of the future transportation improvements identified in Mitigation Measure 3.1a.
	3.1b: To comply with the City's General Plan policies, related to alternative modes of transportation, the proposed project will construct new on-site pedestrian/bicycle pathways to serve the development, which are identified in the Arcata Pedestrian and Bicycle Master Plan (2010) and W-Trans Traffic Study (Appendix L). These improvements will encourage the use of alternative modes of transportation and provide compliance with the City's General Plan.	Less than significant with Mitigation incorporated

Chapter 4 – Natural Environment

Table 1-4 Natural Environment Impacts and Mitigation Measures

Impact	Mitigation Measures	Significance After Mitigation
Section 4.3 (Biological Resources)		
4.3.1: Have a Substantial Adverse Effect on Any Species Identified as a Candidate, Sensitive, or Special-Status Species	**4.3.1a:** To prevent impacts to protected wildlife species, the applicant shall have a qualified biologist conduct a focused survey for the protected wildlife species identified in the NRM Biological Review (Appendix O; Pg. 4, Table 1) as having potential habitat on the 1.4 acre western portion of the project site, including amphibians and nesting birds. If protected wildlife species are observed at or directly adjacent to the project site, the qualified biologist shall design appropriate project activity buffer widths and operational restrictions. The survey shall be completed and submitted to the City of Arcata Community Development Department prior to issuance of the building permit for the project.	Less than significant with Mitigation incorporated

SUMMARY OF ALTERNATIVES

The California Environmental Quality Act (CEQA) requires that the EIR shall describe a range of reasonable alternatives to the project that would "*feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives*" (CEQA Section 15126.6(a)). The CEQA guidelines also note in Section 15126.6(a) that an EIR "*need not consider every conceivable alternative to a project*" and that "*An EIR is not required to consider alternatives which are infeasible*". The development of alternatives is a means to provide ways of "*avoiding or substantially lessening any significant effects of the project*" (CEQA Section 15126.6(b)). Refer to Chapter 5 of the EIR for a detailed discussion of alternatives.

Several alternatives were identified but were eliminated from further review because they do not meet several of the basic requirements of CEQA; Section 15126.6(c) states "*The EIR should also identify any alternatives that were considered . . . . but were rejected as infeasible during the scoping process . . . .Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts*."

The alternatives considered but eliminated from detailed study included (see Chapter 6 [Alternatives Analysis] for additional discussion):

- **Offsite Location**: This alternative would have located the proposed project at another off-site location.

- **Low Density Residential Development**: This alternative would have developed the project site parcels for the maximum density allowed under the Residential Low Density (RL) zone which allows up to 7.25 units per acre. This would have allowed the development of 77 residential units on the 11-acre project parcels.

- **Medium Density Residential Development**: This alternative would have developed the project site parcels for the maximum density allowed under the Residential Medium Density (RM) zone which allows 7.26 to 15 units per acre. This would have allowed the development of 160 residential units on the 11-acre project parcels.

In addition to the Proposed Project, the alternatives analyzed in the EIR are the following (see Chapter 6 [Alternatives Analysis] for additional discussion):

- **No Project:** As the name implies, the No Project Alternative is an alternative in which there is no project. As such, no changes would occur and the project parcels would remain in their current state and use (i.e., Craftsman's Mall, outdoor storage, and several residential units).

- **Existing Zoning:** The Existing Zoning Alternative assumes that the project parcels would be developed according to the City of Arcata General Plan and Land Use Code. This would allow the development of uses allowed within the Industrial Limited (IL) zoning district for 6 of the 7 project site parcels. This would also allow the development of uses allowed within the Residential Low Density (RL) zoning district for parcel 503-372-006. It is assumed that the existing light industrial and residential buildings on the project parcels would remain and new buildings would be constructed on the vacant or underutilized portions of the project parcels. For this alternative, it is also assumed that discretionary approvals would be required from the City of Arcata and the project would not be Categorically Exempt from the California Environmental Quality Act (CEQA).

- **Reduced Size:** The Reduced Size Alternative would propose a similar development to the Proposed Project, but with three-story buildings instead of four-story buildings. This alternative would reduce the number of residential units by approximately 25 percent, which would result in 180 units that would provide housing for approximately 600 students. Similar to the Proposed Project, this alternative would also propose the redesignation/rezoning of the project parcels to Residential High Density (RH). The resulting residential density for this alternative would be approximately 16.4 units per acre.

- **Traditional Multi-Family Development:** The Traditional Multi-Family Development Alternative would develop the project parcels for traditional two-story apartment-type residential development similar to the approved/planned projects discussed in Chapter 7 (Cumulative Impact Analysis), including Canyon Creek Apartments and Sunset Terrace. This alternative would be traditional in the sense that it would be operated as an apartment complex and not a purpose-built student housing community with on-site property managers, resident assistants, organized events, quiet hours, etc. Similar to the Proposed Project, this alternative would also propose the redesignation/rezoning of the project parcels to Residential High Density (RH). This alternative proposes a density of 16 units per acre which would result in 176 units on the 11-acre project site that would provide housing for approximately 370 residents.

CHAPTER 2.

COMMUNITY ENVIRONMENT

The following Sections are included in this Chapter:

SECTION 2.1 LAND USE AND PLANNING

This section contains a discussion of the existing land use and planning setting for the proposed project and surrounding area, and evaluates the potential impacts related to land use and planning during construction and operation of the project. To provide the basis for this evaluation, the Environmental Setting section describes the existing land use and zoning for the project area and the Regulatory Framework section describes the regulatory background that applies to the project. The Impact Analysis section establishes the thresholds of significance, evaluates potential land use and planning impacts, and identifies the significance of impacts. Where appropriate, mitigation measures are presented to reduce impacts to less-than-significant levels.

ENVIRONMENTAL SETTING

The project site is located in the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus. The project site is set at an elevation of approximately 50 feet above mean sea level, and topography dips west-northwesterly toward a tributary of Janes Creek. The majority of the project site is an elevated terrace (~50 feet elevation) above the Arcata Bottom. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, concrete culvert, and a small wetland area.

The project site was used as a lumber mill in the past, but has not been used for this purpose since the 1960s. Most of the project site is currently home to the Craftsman's Mall – a collection of artisan and light industrial rental spaces within wood-framed warehouse buildings. Two single-family residences also exist on the project site on parcels 507-372-003 and 505-022-012. Six of the seven project parcels are currently designated and zoned Industrial Limited (IL). Parcel 503-372-006 is currently designated and zoned Residential Low Density (RL). See Figure 2.1A – Existing Project Site Zoning for a map of the project site parcels and existing Zoning Classifications.

Surrounding land uses include single-family residential development to the north, west, and south, industrial uses to the north, and Highway 101 to the east. A tributary to Janes Creek and its associated riparian corridor occurs surrounding the Janes Creek Meadows residential development to the northwest of the site. Arcata Elementary School occurs to the southwest of the site. The Northwestern Pacific Railroad tracks are located to the east of the site parallel to St. Louis Road. The railroad is now inactive and owned by the North Coast Railroad Authority (NCRA). St. Louis Road is a two-lane City roadway with an approximate 40 foot right of way. The following table describes the current land uses and land use designations of land adjacent to the project.

Table 2.1-1 Adjacent Land Uses and General Plan Land Use Designations

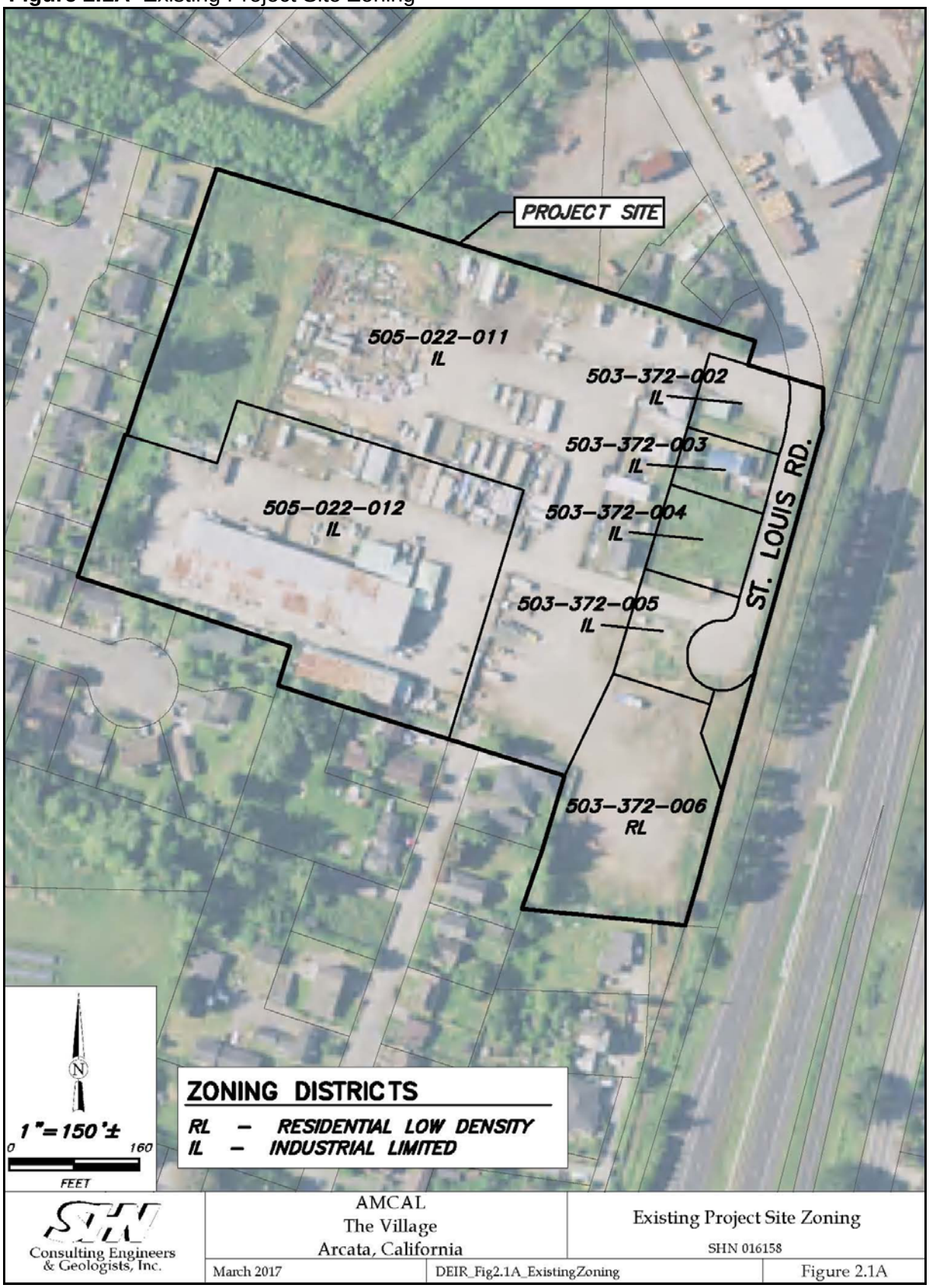
Direction	Current Usage	Arcata General Plan
North	Single-family residential, industrial uses, and riparian corridor	Residential Medium Density (RM) Planned Development (PD) , Industrial Limited (IL), and Natural Resource (NR) Planned Development (PD)
East	St. Louis Road and Highway 101	Public right-of-way
South	Single-family residential and Arcata Elementary School	Residential Low Density (RL) and Public Facility (PF)
West	Single-family residential	Residential Low Density (RL)

Currently, the General Plan Designation for the project site parcels is Industrial Limited and Residential Low Density, which is implemented by the Industrial Limited (IL) and Residential Low Density (RL) zoning districts. The following table sets forth the Arcata General Plan land use designations and zoning for the project site parcels pursuant to the Arcata Land Use and Development Guide (see Figure 2.1A for existing City zoning):

Table 2.1-2 Project Site Existing General Plan Designation and Zoning

Parcels	General Plan Designation	Zoning Classification
505-022-011, -012 and 503-372-002, -003, -004, -005	Industrial Limited (IL)	Industrial Limited (IL)
505-372-006	Residential Low Density (RL)	Residential - Low Density (RL)

Figure 2.1A Existing Project Site Zoning



REGULATORY FRAMEWORK

City of Arcata

Arcata General Plan and Land Use Code

The City of Arcata General Plan was developed in 2000, amended in 2008, and establishes land use designations to allow for the orderly development and use of lands in the City. The City of Arcata General Plan addresses residential development in their Land Use Element and Housing Element. The City's Housing Element has specific Goals and related Policies that address the housing needs in the City. The City's Land Use Code establishes zones for residential development and contains development standards to ensure orderly housing development that is consistent with the character of existing residential neighborhoods.

As shown on Figure LU-a of the Arcata General Plan Land Use Element, the project site parcels are designated Industrial Limited (IL) and Residential Low Density (RL). As described in Chapter 1 (Introduction) of the EIR, the project proposes a General Plan Amendment and Zoning Reclassification to change the designation/zoning of the project site parcels to Residential High Density (RH). The RH land use designation and zone allows residential densities from 15.01 to 32 units per acre and the following types of multi-family residential development: mobile/manufactured homes, duplexes, townhouses, planned developments, group residential, and apartments (City of Arcata 2008a, General Plan Table LU-2). Table 2.1-3 below contains a list of policies from the Arcata General Plan and regulations from the Arcata Land Use Code that are applicable to the proposed project.

Table 2.1-3 Applicable General Plan Policies and Land Use Code Requirements

Policy	Objective	Applicable Sub-Policies
ARCATA GENERAL PLAN		
LU-1 Overall Land Use Pattern	Provide an overall land use arrangement that concentrates city-wide uses and functions in the central Plaza Area, linked with a series of neighborhood centers which provide a mix of commercial services, residential uses, and community facilities.	LU-1a, LU-1e, LU-1f
LU-2 Residential Land Use	Allow for a mix of housing types and densities to meet the physical, social, and economic needs of residents, with new and converted housing designed to be compatible with the established neighborhood character.	LU-2a, LU-2b, LU-2d
LU-4 Industrial Land Use	Provide for uses which will retain and generate jobs, including labor-intensive manufacturing, processing, assembly, warehousing, services, and complementary non-industrial uses, in appropriate locations.	LU-4b (Conversion and reuse of old industrial sites)
ARCATA HOUSING ELEMENT (2014)		
Goal A Housing	Promote the development of new housing that meets	HE-1, HE-6

Policy	Objective	Applicable Sub-Policies
Quality	safety standards, offers a variety of housing types in a variety of locations, and enhances existing neighborhoods, services, and the environment.	
Goal B Housing Quantity	Provide housing opportunities for people of all income levels, through the development of a wide range of housing types and the preservation of existing housing.	HE-7
Goal E Natural Resources, Energy Conservation, and Sustainable Living	Promote the conservation of natural resources and energy in housing design requirements and the use of green building technologies and designs.	HE-29
ARCATA LAND USE CODE		
Chapter 9.24 RH (Residential High Density)	The RH zone is applied to areas appropriate for various types of multi-family housing, including duplexes, townhouses, and apartments.	Sections 9.24.010 through 9.24.070
Chapter 9.30 (Standards for All Development and Land Uses)	This chapter expands upon the zoning district development standards by addressing additional details of site planning, project design, and the operation of land uses. The intent of these standards is to ensure that proposed development is compatible with existing and future development on neighboring properties, and produces and environment of stable and desirable character, consistent with the General Plan and any applicable specific plan.	Sections 9.30.050, 9.30.070, and 9.30.100
Chapter 9.34 (Landscaping Standards)	This chapter establishes requirements for landscaping to enhance the appearance of development projects, reduce heat and glare, control soil erosion, conserve water, screen potentially incompatible land uses, preserve the integrity of neighborhoods, improve air quality, and improve pedestrian and vehicular traffic safety.	Sections 9.34.010 through 9.34.070
Chapter 9.36 (Parking and Loading)	The requirements of this chapter are intended to minimize impervious areas, to ensure that accessible, suitable, and well maintained off-street parking and loading facilities are provided for all uses and development, and that the facilities are properly designed, attractive, and located to be unobtrusive while meeting the needs of the specific use.	Section 9.36.010 through 9.36.110
Chapter 9.42 (Standards for Specific Land Uses)	This chapter provides site planning, development, and/or operating standards for certain land uses that are allowed within individual or multiple zoning districts, and for activities that require special standards to mitigate their potential adverse impacts.	Section 9.42.130
9.58 (Tree Preservation and Hazardous Tree Removal)	Provide procedures for the filing, processing, and approval or disapproval of applications for tree removal. Establishes minimum standards and regulations to preserve and protect trees which are considered important to the character of the City of Arcata and its neighborhoods.	Sections 9.58.010 through 9.58.070

Policy	Objective	Applicable Sub-Policies
Chapter 9.59 (Environmentally Sensitive Habitat Areas Protection and Preservation)	Environmentally sensitive habitat areas (ESHA) within the City (Janes Creek, riparian corridors, wetlands, etc.) are important natural resources that provide ecological balance, ecosystem function, biological productivity, and values such as wildlife habitat, water quality, open space and scenic resources, flood control, and opportunities for scientific study and education. This chapter contains requirements that are intended to protect ESHAs through measures including setback restrictions, easements, overlay zones, limitations on uses within ESHAs, and mitigation.	Sections 9.59.010 through 9.59.100
Chapter 9.72 PD (Planned Development Permit)	Provide a method whereby land may be designed and developed as a single unit by taking advantage of modern site planning techniques thereby resulting in a more efficient use of land and a better living environment than is otherwise possible through strict application of the development standards. Ensure that approved development meets high standards of environmental quality, public health and safety, the efficient use of the City's resources, and the purpose, intent, goals, policies, programs, and land use designations of the General Plan, the Local Coastal Program, and any applicable specific plan.	Section 9.72.070

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if the project would result in any of the following effects:

- Physically divide an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Proposed Project

Finding 2.1.1: Physically Divide an Established Community.

Discussion:
The project proposes student housing on a former industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus. Development of the project would locate new student housing adjacent to existing residential neighborhoods that occur to the north, west, and south of the project site. A portion of St. Louis is proposed to be vacated to provide access and parking adjacent to the proposed buildings. The project will include the development of several pedestrian and bicycle trails that will provide connectivity to adjacent neighborhoods and the nearby trail systems. Vehicular and non-vehicular access within and adjacent to the project site will be improved as a result of the proposed project.

Therefore, the proposed project would not physically divide an established community.

Determination:
No impact.

Mitigation:
None required.

Finding 2.1.2: Conflict with any Applicable Land Use Plan, Policy, or Regulation of an Agency with Jurisdiction over the Project (Including, but not Limited to the General Plan, Specific Plan, Local Coastal Program, or Zoning Ordinance) Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect.

Discussion:
As shown on Figure LU-a of the Arcata General Plan Land Use Element, the project site parcels are designated and zoned Industrial Limited (IL) and Residential Low Density (RL). Parcel 503-372-006 is the only parcel with the RL designation and zoning. The IL designation and zone allows for light and moderate impact manufacturing and limited commercial uses. The IL zone also allows residential uses (e.g., caretaker/employee unit, live/work unit, emergency shelter, and group quarters) at a density of 7.26 to 15 units per acre where they are compatible with the nature of industrial uses allowed within the zone. The development standards in the IL zone allow limited setback requirements (10-foot front setback and 20-foot side and rear setback when adjacent to a residential zone), a floor area ratio of 1.5, and a maximum building height of 45 feet. The RL designation and zone allows for single-family residential development at a density of 2 to 7.25 units per acre. The Arcata Land Use Code (Glossary) defines 'Density, Residential' as "*The number of permanent residential dwelling units per gross acre of land*."

As described in Chapter 1 (Introduction) of the EIR, the project proposes a General Plan Amendment and Zoning Reclassification to change the designation/zoning of the project site parcels to Residential High Density (RH) (see Figure 2.1B – Proposed Project Site Zoning). The RH designation and zone allows residential densities from 15.01 to 32 units per acre and the following types of multi-family residential development: mobile/manufactured homes, duplexes, townhouses, planned developments, group residential, and apartments (City of Arcata 2008a, General Plan Table LU-2).

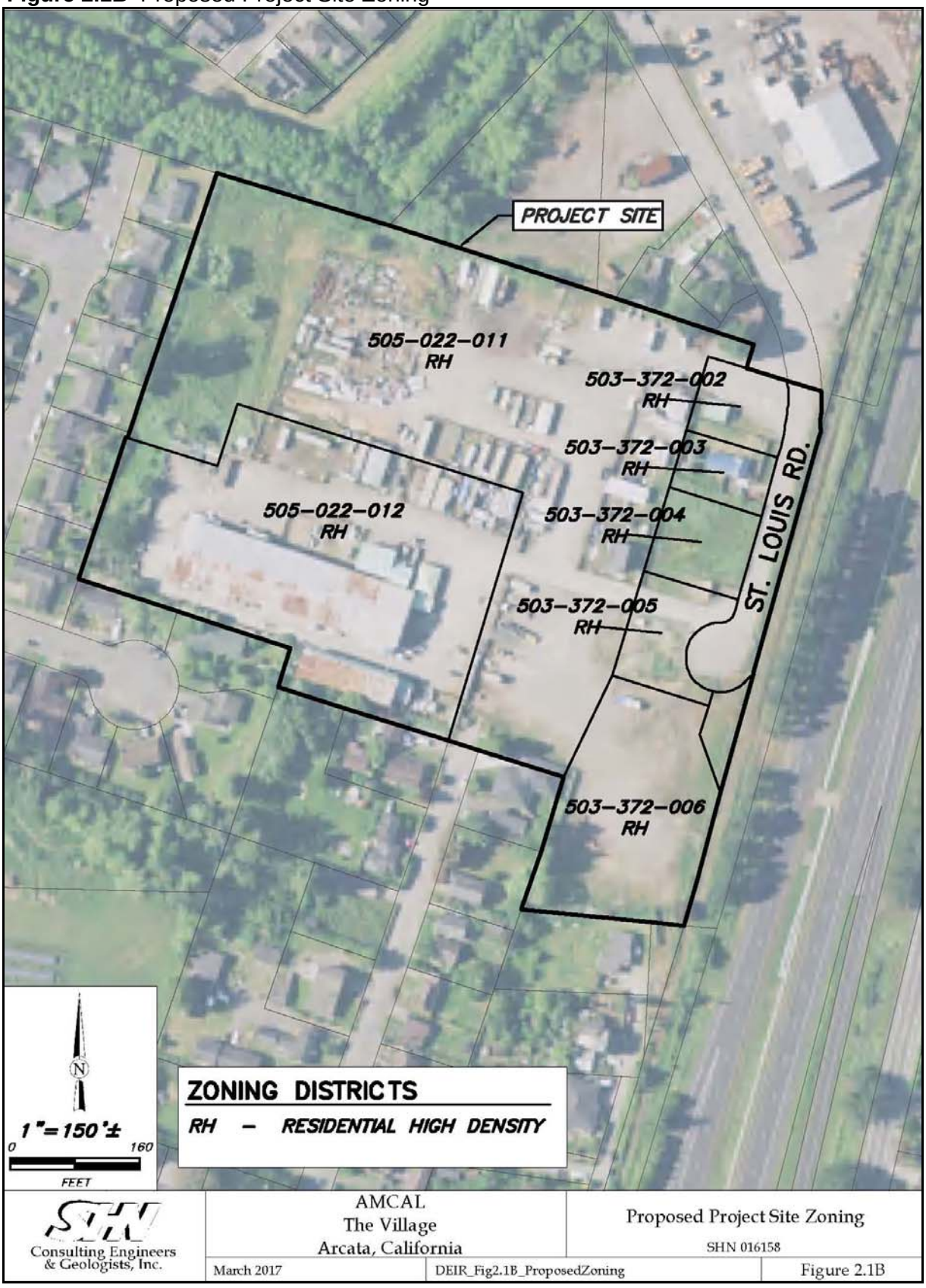
The existing Industrial Limited (IL) designation/zoning was applied to the project site to accommodate the former industrial uses on the property. This site is described as underutilized in the EIR as it could be further developed with structures/uses allowed in the IL zone. The existing IL zone would generally allow development of a similar scale as is proposed for this project. The project proposes 50-foot tall residential structures with setbacks ranging from 60 to 240 feet from adjacent residential property lines. The IL zone would allow buildings that are 45 feet in height and have 20-foot setbacks from adjacent residential property lines.

However, the manufacturing and commercial type uses allowed in the IL zone have a greater potential for impacts to residential uses surrounding the project site. The IL zone would allow agricultural processing (low impact), furniture manufacturing, laboratories, contractor yards, outdoor storage, and a variety of other lower impact manufacturing/processing businesses as principally permitted uses. The IL zone would also allow biodiesel production, composting, recycling collection and processing facilities, solid waste disposal transfer stations, and other moderate impact manufacturing/processing businesses with a use permit or minor use permit. These types of businesses involve activities and use equipment that have the potential to generate greater noise levels, odors, and dust than the proposed project. These uses also often require outdoor lighting of a greater intensity than what is needed for residential development. In addition, these uses would generate greater levels of truck and equipment traffic to and from the project site. As such, the proposed student housing will provide an equal or greater land use compatibility with nearby residential development than the manufacturing and commercial uses potentially allowed in the IL zone.

The project proposes to merge the seven parcels that make up the project site and develop the site with student housing. This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four four-story buildings. The gross density for the project is approximately 21 units per acre and the average net unit size is 1,245 s.f. The density of units proposed by the project (21 units per acre) is just below the mid-point (23.5 units per acre) of the density range (15.01 to 32 units per acre) allowed by the proposed RH designation and zone.

As described in Section 9.72.070 (Planned Development Permit) of the Arcata Land Use Code, a Planned Development Permit is required for any residential development on sites one acre and larger. This project proposes to apply for a Type “B” Planned Development Permit to allow exceptions to the development standards in the Arcata Land Use Code including the height standard in the RH zoning district (Section 9.24.050) and the minimum private recreation space requirement (Section 9.42.130). Otherwise, the project complies with the development standards in the Land Use Code.

Figure 2.1B Proposed Project Site Zoning



As described in Chapter 1 (Introduction) of the EIR, potential impacts of the proposed student housing (e.g., noise from residents, additional service calls for law enforcement, etc.) will be minimized through the following measures identified in the Operations and Management Plan prepared for the project (Appendix C):

- "Resident Assistants" will reside on each floor of the proposed buildings who will be responsible for supporting, counseling, and mentoring their fellow students.
- On-site management will be available 24 hours/day, 7 days/week, including property employees and resident assistants in each building.
- Leases will provide for community "quiet hours" which will be from 11:00 p.m. to 8:00 a.m. each day.

As described in Chapter 1 (Introduction) of the EIR, the project proposes a residential development that would remove the existing buildings and tenants from the project site which includes a development commonly known as the "Craftsman's Mall." For this reason, the City of Arcata requested that the applicant conduct an economic impact analysis due to concerns about the ability of the tenants to find other suitable space, and the impact on the City's overall inventory of industrial land. Based on this request, an Economic Impact Study was conducted by BAE Urban Economics (2016) for the proposed project to determine what impact to the industrial land supply and market in the City of Arcata would occur from removing the project site from the City's industrial land inventory (Appendix D). The BAE study makes the following findings related to the impacts of the proposed project:

- The reuse of the project site for residential use would have little impact on the overall availability of industrial land supply in Arcata, as it constitutes less than two percent of the industrial land in the City. The manufacturing sector has seen a sharp decline in the region over the last 25 years, and Arcata has multiple properties that are no longer in their original use (e.g., as mills). Arcata and Humboldt County overall are projected to have very limited employment growth in sectors generating demand for industrial land over the next 25 years. Furthermore, there is additional land available in Eureka that competes to meet regional demand.
- Available real estate listings show properties with outdoor storage space available for prices similar to the rates at Craftsman's Mall, indicating that these tenants should be able to find alternative space.
- While the supply of existing industrial building space in Arcata shows limited vacancies in currently on-market space, other nearby communities have a larger inventory of available space, and there may be vacant properties that could come back onto the market in response to demand, as well as vacant industrial land available to meet any additional demand in improving market conditions. Vacancy rates are much higher in Eureka, which has a sizable inventory of industrial space. While Arcata is designating one area for potential future use by the marijuana industry (albeit not restricting other uses), these users are looking for larger spaces than those used by the tenants at the Craftsman's Mall.
- Overall, while there is currently a limited supply of smaller spaces, interviews with local real estate brokers indicate the potential to subdivide some of the larger vacant properties.

> Additionally, some of the tenants may be able to find space in underutilized retail/commercial spaces. Ultimately, the rents offered at the Craftsman's Mall are either below or at the low end of market rents based in part on the property not being maintained to code or with proper permits. Current rent levels would not be sustainable at other properties or even long-term at the Mall itself. Based on local real estate broker information, as well as the interview with the property owner and their attorney, other space is available in the area that could be subdivided and used by the current Craftsman's Mall tenants if demand is demonstrated at viable market rent levels.

Based on the findings of the BAE study, the proposed project would not create a shortage of industrial zoned property in the City and there is a sufficient inventory of industrially zoned land in the Humboldt Bay area to accommodate the businesses that would be displaced by the proposed project.

In addition, the proposed project would otherwise not conflict with any applicable goals, objectives, and policies of the Arcata General Plan and Land Use Code. As discussed throughout the EIR, in all instances where potentially significant impacts have been identified, mitigation is provided to reduce each impact to less than significant levels. This was necessary in the following sections of the EIR:

- Traffic/Transportation (Chapter 3)
- Biological Resources (Section 4.3)

The analysis contained in the EIR addressed the potential conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect including, but not limited to, Arcata General Plan and Land Use Code, Arcata Pedestrian and Bicycle Master Plan (2010), Arcata Community Greenhouse Gas Reduction Plan (2006), Arcata Stormwater Management Plan (2005), HCAOG 20-Year RTP (2014) – Variety in Rural Options of Mobility (VROOM), Humboldt County Regional Housing Needs Plan (2014-2019), and NCUAQMD Particulate Matter (PM10) Attainment Plan (1995).

Therefore, based on the analysis conducted in the EIR, it was determined that the project was not in conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.1.3: Conflict with any Applicable Habitat Conservation Plan or Natural Community Conservation Plan.

Discussion:
According to the U.S. Fish & Wildlife Service Environmental Conservation Online System (ECOS, 2016), the project site is not located within the boundaries of a Habitat Conservation Plan. Habitat Conservation Plans in Humboldt County include the following: 1) Green Diamond Resource Company California Timberlands & Northern Spotted Owl (formerly Simpson Timber Company); 2) Humboldt Redwood Company (formerly Pacific Lumber, Headwaters); and 3) Regli Estates. These Habitat Conservation Plans primarily apply to forest lands in the County. The project site is approximately 0.5 mile from the nearest forest lands which occur on the eastern side of Highway 101.

According to the California Department of Fish & Wildlife website (CDFW, 2016), the project site is not located in the boundaries of a Natural Community Conservation Plan. The conservation plans for Humboldt County, listed on California Regional Conservation Plans Map on the CDFW website, include the Green Diamond and Humboldt Redwoods Company (previously Pacific Lumber Company) Habitat Conservation Plans.

Therefore, the proposed project will not conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan.

Determination:
No impact.

Mitigation:
None required.

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SECTION 2.2 POPULATION & HOUSING

This section evaluates the potential impacts related to population and housing with implementation of the proposed project. The Environmental Setting section describes the project site and existing setting in Humboldt County and the City of Arcata as it relates to population and housing. The Regulatory Framework section describes the applicable regulations at the federal, state, and local level. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to population and housing, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less-than-significant levels.

ENVIRONMENTAL SETTING

Project Site

The project site is located in the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus. The project site was used as a lumber mill in the past, but has not been used for this purpose since the 1960s. Most of the project site is currently home to the Craftsman's Mall – a collection of artisan and light industrial rental spaces within wood-framed warehouse buildings. Two single-family residences also exist on the project site on parcels 507-372-003 and 505-022-012.

Six of the seven project parcels are currently designated and zoned Industrial Limited (IL). Parcel 503-372-006 is currently designated and zoned Residential Low Density (RL). The IL designation and zone allows for light and moderate impact manufacturing and limited commercial uses. The IL zone also allows residential uses at a density of 7.26 to 15 units per acre where they are compatible with the nature of industrial uses allowed within the zone. The RL designation and zone allows for single-family residential development at a density of 2 to 7.25 units per acre. The Arcata Land Use Code (Glossary) defines 'Density, Residential' as "*The number of permanent residential dwelling units per gross acre of land*."

Surrounding land uses include single-family residential development to the north, west, and south, industrial uses to the north, and Highway 101 to the east. A tributary to Janes Creek and its associated riparian corridor occurs surrounding the Janes Creek Meadows residential development to the northwest of the site. Arcata Elementary School occurs to the southwest of the site. The Northwestern Pacific Railroad tracks are located to the east of the site parallel to St. Louis Road. The railroad is now inactive and owned by the North Coast Railroad Authority (NCRA).

Population

Humboldt County

Humboldt County is a rural county with a large land area and low population density. The 2010 Census reported the county's population to be 134,623, which represents an increase of 8,105 over the population reported in the 2000 Census. The California Department of Finance (DOF) prepares estimates of statewide, county, and city populations for years between the decennial census that are used by state and local government to allocate funding and for planning purposes. The DOF estimates the 2015 population of Humboldt County to be 134,398, which is a decrease of 225 people since the 2010 Census.

The DOF also develops projections of State and county population 50 years beyond the decennial census. Between 2010 and 2020, the Humboldt County population is projected to increase by approximately 2.2%, from 136,056 to 139,033 (an increase of 2,977 people). Between 2020 and 2030, the population is projected to increase by approximately one percent, from 139,033 to 140,608 (an increase of 1,575 people).

Table 2.2-1 Humboldt County Population Projections, 2010- 2030

Year	Humboldt County	Percent Change
2010	136,056	---
2020	139,033	2.2
2030	140,608	1.1

Source: Humboldt County population projections from the State Department of Finance (Table P-1).

City of Arcata

According to the U.S. Census, the City of Arcata had a population of 17,231 in the year 2010. The Department of Finance (DOF) estimates that Arcata's 2017 population is 18,374 persons. This population estimate comprises 16,091 living in households and 2,283 living in group quarters. This represents a 6.6% increase in population between 2010 and 2017.

The City of Arcata prepared a memorandum (dated June 23, 2017) that analyzed the potential water and wastewater impacts of the approved/planned Sunset Area housing projects, which includes the Village Student Housing project (Appendix K). The projects, referred to as the Sunset Area housing projects, are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. The memorandum contains an analysis that estimates the increase in population and residential units that will occur from buildout of available land in the City in combination with upzoning and annexation proposed by the Sunset Area housing projects. The analysis estimated the buildout household population by adding the feasible housing stock potential under current market conditions to the proposed upzone and annex housing stock, and multiplying by persons per household. This estimating approach resulted in a population just over the 20,000 persons envisioned for the Arcata General Plan: 2020 planning period. More specifically, total population is estimated to reach between 20,084 and 20,267. Of this, approximately 566 persons

from 283 households are from properties currently zoned and planned for residential development. Development of the parcels currently zoned and planned for residential development is anticipated over the next five years.

Housing

Household Characteristics

According to the 2010 Census, there were a total of 61,559 housing units in Humboldt County, which is an increase of 5,647 over the total housing units reported in the 2000 Census. Average household size (i.e., the average number of residents per household) declined in Humboldt County between 2000-2010 from 2.39 to 2.31.

According to the 2010 Census, there were a total of 7,722 housing units in Arcata, which is an increase of 450 over the total housing units reported in the 2000 Census. Average household size (i.e., the average number of residents per household) declined in Arcata between 2000-2010 from 2.16 to 2.10.

A small number of residential uses occur on the project site including a single-family residence on parcel 507-372-003. The project site is also surrounded on the north, west, and south by single-family residential neighborhoods.

Projected Housing Growth and Needs

Pursuant to Government Code Section 65584, the State Department of Housing and Community Development and the Humboldt County Association of Government (HCOAG) projects housing needs for Humboldt County to guide the revision of local Housing Elements. The HCOAG Regional Housing Needs Plan projects local housing needs between the planning period of 2014-2019 and allocates those needs between all cities in Humboldt County and the unincorporated area. Based on the Regional Housing Needs Plan, a total of 2,060 housing units will be need to be developed countywide in the 5th planning cycle to keep pace with population growth, which is little more than half of the allocation that was needed in the 4th planning cycle. The City of Arcata is expected to accommodate 363 units of the total county housing need by 2019, or 17.6% of the total need.

The City of Arcata prepared a memorandum (dated June 23, 2017) that analyzed the potential water and wastewater impacts of the approved/planned Sunset Area housing projects, which includes the Village Student Housing project (Appendix K). The projects, referred to as the Sunset Area housing projects, are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. The memorandum contains an analysis that estimates the increase in population and residential units that will occur from buildout of available land in the City in combination with upzoning and annexation proposed by the Sunset Area housing projects. The analysis estimated the residential buildout by adding the feasible residential development potential to the residential development proposed by the Sunset Area housing projects. The feasible buildout analysis

resulted in a total of 252 units. The residential development proposed by the Sunset Area housing projects totals 313 units. In total, estimated feasible buildout, prospective proposed, and entitled unit production is 565. As noted above, it is anticipated that 283 of these units will be developed over the next five years and will assist the City in meeting its Regional Housing Need Allocation for the 2014-2019 period.

REGULATORY FRAMEWORK

Humboldt County

Humboldt County Association of Governments (HCAOG)

The HCAOG is a joint powers authority comprised of the County of Humboldt and the seven incorporated cities, each with a seat on the Board of Directors. As directed in State Government Code Section 65584, the Department of Housing and Community Development (HCD) determines the existing and projected housing need for distinct regions in the state. In consultation with HCD, HCAOG is required to adopt a Regional Housing Needs Plan (RHNP) that allocates a share of the regional housing need to each city and county. The most recent RHNP was adopted in December 2013 and covers the period of January 1, 2014 – June 30, 2019. HCAOG's RHNP establishes housing development targets in each of its member jurisdiction's state-mandated Housing Element Updates. Each of the seven incorporated cities and the County of Humboldt unincorporated area are required to update their Housing Element to accommodate adequate general plan and zoning capacity for their allocation by income. It is up to each local government to plan where and how the allocated housing units will be developed in their communities. The allocations provided in the current RHNP are shown below in Table 2.2-2.

Table 2.2-2 HCAOG's 2013 RHNA Allocations

	Very Low	Low	Moderate	Above Moderate	Total Allocation	Regional Share
Arcata	85	56	62	160	363	17.6%
Blue Lake	4	1	2	4	11	0.5%
Eureka	145	96	104	264	609	29.6%
Ferndale	6	3	4	8	21	1.0%
Fortuna	39	24	27	71	161	7.8%
Rio Dell	8	4	4	15	31	1.5%
Trinidad	2	0	1	2	5	0.3%
Unincorporated Area	211	136	146	366	859	41.7%
Totals	**500**	**320**	**350**	**890**	**2060**	**100%**

Arcata General Plan and Land Use Code

The City of Arcata General Plan addresses residential development and population growth in the Land Use Element and Housing Element. The City's Housing Element has specific Goals and related Policies that address the housing needs in the City. Some of the future housing needs listed in the Housing Element include the need for additional senior housing, student housing, and an increase in owner occupied housing units. The City's Land Use Code establishes zones for residential development and contains development standards to ensure orderly housing development that is consistent with the character of existing residential neighborhoods. Table 2.2-3 below contains a list of policies from the Arcata General Plan and regulations from the Arcata Land Use Code that are applicable to the proposed project.

Table 2.2-3 Applicable General Plan Policies and Land Use Code Requirements

Policy or Goal	Objective	Applicable Sub-Policies
ARCATA GENERAL PLAN		
LU-2 Residential Land Use	Allow for a mix of housing types and densities to meet the physical, social, and economic needs of residents, with new and converted housing designed to be compatible with the established neighborhood character.	LU-2a, LU-2b, LU-2d
ARCATA HOUSING ELEMENT (2014)		
Goal A Housing Quality	Promote the development of new housing that meets safety standards, offers a variety of housing types in a variety of locations, and enhances existing neighborhoods, services and the environment.	HE-1, HE-6
Goal B Housing Quantity	Provide housing opportunities for people of all income levels, through the development of a wide range of housing types and the preservation of existing housing.	HE-7, HE-14
Goal E Natural Resources, Energy Conservation, and Sustainable Living	Promote the conservation of natural resources and energy in housing design requirements and the use of green building technologies and designs.	HE-29
ARCATA LAND USE CODE		
Chapter 9.24 RH (Residential High Density)	The RH zone is applied to areas appropriate for various types of multi-family housing, including duplexes, townhouses, and apartments.	Sections 9.24.010 through 9.24.070
Chapter 9.72 PD (Planned Development Permit)	Provide a method whereby land may be designed and developed as a single unit by taking advantage of modern site planning techniques thereby resulting in a more efficient use of land and a better living environment than is otherwise possible through strict application of the development standards. Ensure that approved development meets high standards of environmental quality, public health and safety, the efficient use of the City's resources, and the purpose, intent, goals, policies,	Sections 9.72.070

programs, and land use designations of the General Plan, the Local Coastal Program, and any applicable specific plan.

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if the project would result in any of the following effects:

- Induce substantial population growth in the area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through the extension of roads or other infrastructure);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Proposed Project

Finding 2.2.1: Induce Substantial Population Growth in the Area, Either Directly (for example, by Proposing New Homes and Businesses) or Indirectly (for example, through the Extension of Roads or Other Infrastructure).

Discussion:
The project proposes student housing on an underutilized industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University (HSU) campus. The project will support the student housing needs of HSU and the housing goals of the City of Arcata.

As described in Chapter 1 (Introduction) of the EIR, the project proposes a General Plan Amendment and Zoning Reclassification to change the designation/zoning of the project site parcels to Residential High Density (RH). The RH designation and zone allows residential densities from 15.01 to 32 units per acre and the following types of multi-family residential development: mobile/manufactured homes, duplexes, townhouses, planned developments, group residential, and apartments (Arcata General Plan Table LU-2).

This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings. The gross density for the project is approximately 21 units per acre and the average net unit size is 1,245 s.f. The density of units proposed by the project (21 units per acre) is just under the mid-point (23.5 units per acre) of the density range (15.01 to 32 units per acre) allowed by the proposed RH designation and zone.

As discussed in the Environmental Setting, this project will assist the City in meeting its Regional Housing Need Allocation of 363 housing units for the 2014-2019 period. Section 3.3 (Summary of Future Housing Needs) of the Arcata Housing Element (2014) identifies the following student housing needs:

- On- and off-campus housing is needed. The demographic trends may reflect the student population housed in Arcata, the off-campus population is estimated to be 3,600 individuals.
- Need additional off-campus student housing opportunities to relieve pressure on single-family housing market.

This project would also assist the City with Implementation Measure 29 (Humboldt State University Master Planning) of the Arcata Housing Element, which encourages communication and coordination with HSU in providing additional housing for the student population.

Humboldt State University (HSU) reports they currently have 2,100 dormitory housing units that are estimated by the CA Department of Finance (DOF) to provide housing for approximately 2,283 students (Appendix K, Pg. 3). As of Fall 2016, HSU had 8,503 students enrolled with 8,020 of these being Full-Time Equivalent Students (HSU, 2016). As such, the dormitory housing units on-campus provide housing for less than 30% of the student population. As noted above, the off-campus student population is estimated to be 3,600 individuals. This project would provide purpose-built housing for 800 students that will help to meet the demand for student housing in the City and ultimately relieve pressure on the single-family housing market. According to the applicant, the Project will be *"Arcata's first state of the art, purpose-built, off-campus student housing community. It is planned both physically and operationally to provide a healthy, safe and mentoring environment for students attending Humboldt State University (HSU)."*

In relation to the City of Arcata's resident population of 18,374 (DOF, 2017), the potential increase from the proposed project (~800 persons) would not be substantial (~4.4%). However, the proposed project will not attract additional students to attend Humboldt State University, but will help to meet the demand for student housing, for which there is a shortage in the City of Arcata. The proposed project will also allow for single-family residences currently occupied by students to be available to families and other City residents.

In addition, the proposed project will provide infill residential development on a site that is surrounded by existing residential neighborhoods and has all utilities and services available. As discussed in Section 2.3 (Public Services) of the EIR, the ability for public service providers to provide services will not be significantly reduced by the proposed project.

Therefore, the proposed project will not induce substantial population growth in the area either directly or indirectly.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.2.2: Displace Substantial Numbers of Existing Housing, Necessitating the Construction of Replacement Housing Elsewhere.

Discussion:
The project site was used as a lumber mill in the past, but has not been used for this purpose since the 1960s. Most of the project site is currently home to the Craftsman's Mall – a collection of artisan and light industrial rental spaces within wood-framed warehouse buildings. Two single-family residences also exist on the project site on parcels 507-372-003 and 505-022-012.

According to the 2010 Census, average household size (i.e., the average number of residents per household) in Arcata is 2.10. Based on this, it is estimated that the residential units at the project site provide housing for an estimated four residents. Although, the proposed project would eliminate these residential units from the project site, the displacement of four persons would not result in the need for construction of replacement housing elsewhere. The elimination of two residential units does not comprise a substantial number of existing homes.

In addition, the proposed project will provide housing for approximately 800 students, which could potentially provide housing for the existing residents at the project site if they were attending HSU, once the proposed project is available for occupancy. There are also several other approved/planned projects in the northern central portion of the City of Arcata which are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. These projects propose to provide approximately 256 additional multi-family residential units which will be more than sufficient for meeting the demand for housing created by the displacement of the 4 persons from the project site.

Therefore, the project will not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

Determination:
No impact.

Mitigation:
None required.

Finding 2.2.3: Displace Substantial Numbers of People, Necessitating the Construction of Replacement Housing Elsewhere.

Discussion:
As described under Finding 2.2.2 of this section, it is estimated that the proposed project will eliminate two residential units that provide housing for an estimated four persons. Although, the proposed project would eliminate these residential units from the project site, the displacement of four persons would not result in the need for construction of replacement housing elsewhere and does not comprise a substantial number of people.

Therefore, the proposed project will not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Determination:
No impact.

Mitigation:
None required.

REFERENCES

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SECTION 2.3 PUBLIC SERVICES

This section evaluates the potential impacts related to public services with construction and operation of the project. The Environmental Setting section describes the setting as it relates to public services. The Regulatory Framework section describes the applicable regulations at the state and local level. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to public services, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

Public Services

Fire Protection

The project site and the City of Arcata are located within the Arcata Fire District (AFD). The AFD district boundaries encompass 65 square miles and extend west to the Pacific Ocean, north to the Clam Beach area, east to Essex, and south to Indianola and Manila. The AFD is an all-risk fire department responsible for protecting life, property, and the environment from the hazards of fire and hazardous materials incidents, and providing emergency medical services.

The AFD is governed by a five-member independently elected Board of Directors and has a paid staff that includes one chief, three battalion chiefs, nine captains, and twelve firefighters. In addition, the AFD relies on a volunteer fire department consisting of approximately twenty-five firefighters. All AFD firefighters receive training to the Firefighter I level. At a minimum, one battalion chief, three captains, and four paid firefighters are on duty at any given time (Arcata Fire District, 2017). In addition to providing fire protection and emergency services, the AFD works to educate the public about fire hazards and disseminate information on public safety.

The AFD responded to 2,930 calls for service in 2016 from three fire stations within its district (Arcata Fire District, 2017). Two of the stations are located in Arcata, and one is located in McKinleyville. The project site is in the Mad River Station's (3235 Janes Road) existing response area, and the Main Fire Hall's (631 9th Street) back-up area. The Mad River Station is approximately one mile northwest of the project site and the Main Fire Hall is approximately 1.25 miles south of the project site. The AFD is part of the multi-agency Standardized Emergency Management System emergency response network.

The Arcata Fire District indicated that, due to the expiration of a federal grant, the District will have to cut six positions in September 2017 and un-staff the Mad River Station. In addition, the proposed project will need to be served by the District's ladder truck, which is approaching the end of its 20-year service life, and there is currently no funding to replace it. As such, the

District has indicated that future development in the District will impact the services they provide (Arcata Fire District, 2017).

Police Protection

The City of Arcata Police Department provides public safety services within the City limits. As such, law enforcement services would be provided by the Arcata Police Department. The Arcata Police Department provides 24-hour police protection within Arcata. The main station office is at City Hall, 736 F Street, which is approximately 1.25 miles from the project site. The department currently employs twenty-seven sworn officers (full-time), one police service officer (full-time), thirteen full-time support positions (dispatch, parking, front office, etc.), and four part-time positions (parking, front office, maintenance, etc.). The Arcata Police Department has indicated that it has the capacity to provide law enforcement services to the project and maintain acceptable service ratios with existing facilities and personnel (Arcata Police Department, 2017). The Arcata Police Department is part of the multi-agency Standardized Emergency Management System emergency response network.

The Humboldt County Sheriff's Department is responsible for law enforcement in the unincorporated areas around the City and provides service from the Sheriff's Department Eureka Main Station located at the Humboldt County Courthouse. The main station patrol unit is currently comprised of one Captain, two Lieutenant, five Sergeants, 21 Deputy Sheriff's, and three Community Services Officers (Humboldt County Sheriff's Office, 2017). Service is available 24-hours a day, seven days a week to the unincorporated areas of Humboldt County. The County Sheriff's service area consists of two main beats: Central and South. The central beat covers the unincorporated areas of Arcata (Bayside, Fickle Hill) and Eureka (Myrtletown, Cutten, Pine Hill, Samoa, Fairhaven), along with the areas of Kneeland and Elk River.

The California Highway Patrol (CHP) is responsible for traffic enforcement services on public streets and highways within the unincorporated area. CHP traffic enforcement service is provided from the CHP Northern Division Humboldt Area office located in Arcata on Samoa Boulevard. CHP also provides other special law enforcement services, as well as mutual aid to the City of Arcata Police Department and the Sheriff's Department, upon request.

Schools

The project site is located within the Arcata School District. The Arcata School District offers kindergarten through eighth grade education. Arcata School District includes Arcata Elementary School and Sunny Brae Middle School. Grades pre-school through fifth are offered at Arcata Elementary School (2400 Baldwin Street) and grades six through eight are offered at Sunnybrae Middle School (1430 Buttermilk Lane). Enrollment in the district is currently about 545 students (Arcata School District Website, 2016).

The City of Arcata and the surrounding area are within the Northern Humboldt Union High School District. Public high school students in the area attend Arcata High School (1720 M Street). Enrollment at Arcata High at the beginning of the 2016-17 school year was approximately 850 students. The estimated capacity of the school is approximately 1,000

students (Arcata High School, 2017). Arcata High has seen a slight increase in school enrollment over the past several years, due to attracting student from outside the school's residence boundary (Arcata High School WASC Self Report 2013, Pgs. 14 and 22).

Portions of The Pacific Union Elementary School District and Jacoby Creek Elementary School District are also within the City of Arcata and feed the Northern Humboldt Union High School District.

In addition to the school districts described above, there are several public, charter, and private schools in Arcata serving pre-school through high school grade level students. These include:

- Arcata Christian School, 1700 Union Street;
- Gateway Community School, 1464 Spear Avenue;
- Coastal Grove Charter School, 2400 Baldwin Street;
- Jacoby Creek Charter School, 1617 Old Arcata Road, Bayside;
- Humboldt Bay Christian School, 70 Stephens Lane, Bayside;
- Mistwood Center for Education, 1928 Old Arcata Road, Bayside;
- St. Mary's Catholic School, 1730 Janes Road;
- Fuente Nueva Charter School, 1730 Janes Road;
- Redwood Coast Montessori School, 1611 Peninsula Drive;
- Union Street Charter School and Equinox Center for Education, 470 Union Street; and
- Northcoast Preparatory and Performing Arts Academy, 285 Bayside Road.

The City of Arcata is also home to Humboldt State University (HSU), which is the northernmost campus in the California State University system of twenty campuses. HSU offers undergraduate and graduate degrees in more than fifty subject areas. The University also offers cultural activities, music, art, theater, and athletic events that are open to the community.

Parks

The City of Arcata maintains a network of parks distributed throughout the City. Arcata's parks have varied facilities and offer many recreational and educational opportunities.

The State of California guidelines establish a ratio of at least five acres of parkland for each 1,000 residents of the State. Arcata's existing park system, according to the 2010 Arcata Park and Recreation Master Plan, contains 3,744 acres of parkland at 41 sites. More than 97% (3,655.29 acres) of this acreage is provided as natural areas or undeveloped park reserves. Consequently, less than 2.5% (88.74 acres) of the City's park system consists of developed parks. Based on the City's current population of 18,374 (CA DOF, 2017), there is approximately

4.83 acres of developed parks and 198.94 acres of undeveloped park reserves per 1,000 residents in the City.

The existing parks closest to the project site are Cahill Park, Janes Creek Meadows Park, Larson Park, and the Arcata Skateboard Park. Cahill Park, located at 1300 Stromberg Avenue (APN 505-032-017), has a play structure, swing set, tire swing, benches, a grass play area, and other play apparatus. Janes Creek Meadows Park, located at 2985 Janes Creek Drive (APN 507-511-055), has three play structures, a climbing structure, a picnic bench, a grass play area, and other play apparatus. Larson Park, located at 901 Grant Avenue (APN 505-051-002), has three tennis courts, a hand ball court, three bocce ball courts, multiple play structures, benches and picnic tables, a gazebo, and a grass play area. The Arcata Skateboard Park, located at 900 Sunset Avenue (APN 505-051-025), has a bowl, snake run, table top, and other skateboard play structures.

Other Public Facilities

Other public facilities in the City of Arcata include public health services and library services. The City of Arcata does not directly provide health care programs or facilities; however, these facilities are operated in the City by a variety of health care providers and professional, as well as, non-profit and other organizations (Arcata General Plan 2008, Pg. 6-17). Public health services in the City of Arcata include, but are not limited to, Mad River Community Hospital, North Country Clinic, Humboldt Open Door Clinic, and numerous other smaller facilities throughout the City. Library services in the City of Arcata include the Arcata Library at City Hall, which is a branch of the Humboldt County Library, and the Humboldt State University library.

REGULATORY FRAMEWORK

State of California

California Department of Forestry and Fire Prevention (CAL FIRE)

The California Department of Forestry and Fire Prevention (CAL FIRE) has the primary fire prevention and suppression responsibility within the State. They coordinate these activities with numerous other agencies and local volunteer fire organizations to provide fire protection and emergency first responder services to citizens of California. The Humboldt-Del Norte Unit (HUU) is one of 21 CAL FIRE administrative units in the State, and has primary responsibility for about 1.9 million acres of State Responsibility Area (SRA) in the counties of Humboldt, Del Norte, and a portion of Trinity County. The unit extends north to south approximately 180 miles, and inland approximately 50 miles.

The Humboldt-Del Norte Unit is composed of eleven fire stations, three camps, one air attack base, and one helitack base. CDF HUU maintains 14 frontline engines, with two engines in

reserve, two dozers, 15 inmate crews, one helicopter, one air attack, and one air tanker for fire suppression efforts. There are approximately 100 permanent fire suppression personnel, 12 resource management personnel, and 6 clerical personnel to staff these efforts. Additionally, the Unit hires approximately 90 limited-term and seasonal personnel to supplement permanent staff during the fire season.

As part of the responsibility for lands within their area of responsibility, CAL FIRE is responsible for reviewing and ensuring that new development activities meet the requirements of the California Fire Safe Regulations, also known as the 4290 regulations (PRC 4290), for ingress and egress of roads and clearing of flammable vegetation around buildings. CAL FIRE, as the County Fire Marshall, reviews and inspects roads and clearings to ensure public safety and provides comments to land development activity proposals.

City of Arcata

Arcata General Plan

The Arcata General Plan contains guidelines for public service within the Public Facilities and Infrastructure Element and the Public Safety Element. Table 2.3-1 contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 2.3-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
PF-4 Educational Facilities	Identify student enrollment increases, based on the projected future population of the City, and coordinate with local school (public and private) districts, Humboldt State University, and other education providers to maintain and improve educational facilities and services, while preserving established community/student ratios.	--
PF-5 Public Facilities	Provide adequate facilities for services and programs administered by the City and other public service providers, including City administrative and meeting facilities (City Hall), police and fire departments, libraries, and community centers.	--
PS-1 Emergency Preparedness	Ensure that the City, its residents, businesses, agencies, and organizations are prepared for emergencies or disasters and have effective response and recovery plans in place.	PS-1e
PS-5 Fire Hazards	Minimize risk of personal injury and property damage resulting from structural (urban) and wildland fires.	PS-5b and 5e

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if the project meets any of the following criteria.

If the project would:

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

    a) Fire protection;

    b) Police protection;

    c) Schools;

    d) Parks;

    e) Other public facilities.

Proposed Project

Finding 2.3.1: Fire Protection.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings. The project site is within the boundaries of the Arcata Fire District (AFD). The proposed project would increase the number of households and residential population within the boundaries of the AFD. This increase in population would likely result in an increase in the number of calls for service, primarily medical aid-related calls, to which the AFD responds. The project site is in the Mad River Station's (3235 Janes Road) existing response area, and the Fire District Headquarters (631 9th Street) back-up area. Currently the Mad River Station is equipped with one engine which is staffed with two (2) personnel (Arcata Fire District, 2017).

As discussed in the Environmental Setting, the Arcata Fire District indicated that, due to the expiration of a federal grant, the District will have to cut six positions in September 2017 and un-staff the Mad River Station. In addition, the proposed project will need to be served by the District's ladder truck which is approaching the end of its 20-year service life, and there is

currently no funding to replace it. As such, the District has indicated that future development in the District will impact the services they provide (Arcata Fire District, 2017).

The Arcata General Plan PEIR (2000, Pg. 3-34) states that buildout under the General Plan will require additional personnel and equipment for the Arcata Fire District, but will not require additional facilities such as a new fire station. This is attributed to the fact that the projected growth in the General Plan is primarily infill development within the City's Urban Services Boundary. In addition, the PEIR (2000, Pg. 3-34) states that no significant decrease in response time is expected since the distance to fire stations is not expected to increase for the majority of the projected population.

The proposed project is an example of the type of infill development anticipated in the projected General Plan buildout since it proposes to convert a former lumber mill site into off-campus student housing for Humboldt State University. The project site currently contains industrial and residential uses and is served by the Fire District from their Mad River Station and Main Fire Hall, which are 1 mile northwest and 1.25 miles south of the project site, respectively. Furthermore, the proposed project would include fire protection features as required in the CA Fire Code including fire alarm systems, fire sprinkler systems, and exit illumination.

Although, the proposed project will result in additional service calls and place a greater demand on fire protection services, it will not result in the need for the construction of new fire protection facilities to maintain acceptable service ratios. The Arcata Fire District currently has sufficient facilities to adequately serve the population within its District but will need to obtain additional sources of funding (e.g. parcel tax, grants, etc.) to maintain its current service level in the future.

Therefore, the proposed project will not result in substantial adverse physical impacts associated with the construction of new fire protection facilities.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.3.2: Police Protection.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings. The project will be served by the City of Arcata Police Department, which has a police station at City Hall approximately 1.25 miles south of the project site. The Arcata Police Department (APD) determines its level of service based upon calls for service, geographic location, and response times. The proposed project would increase the number of households and population within the Arcata Police Department's jurisdiction. This increase in population would likely result in an increase in the

annual number of calls for service relating to traffic accidents, theft, break-ins, or other incidents, to which the Police Department must respond.

A review of the project by the Police Department determined that the department has the capacity to provide law enforcement services to the project and maintain acceptable service ratios with existing facilities and personnel (Arcata Police Department, 2017). In addition, the Police Department has requested that the applicant prepare a Security Plan with the purpose of reducing the need for local law enforcement services. The requirement to prepare a Security Plan for the proposed student housing community will be included as a condition of approval for the project by the City of Arcata.

Therefore, as conditioned, the proposed project will not result in substantial adverse physical impacts associated with the construction of new police service facilities.

Determination:
Less than significant impact.

Mitigation:
None required

Finding 2.3.3: Schools.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four four-story buildings. The proposed student housing project would provide housing for Humboldt State University (HSU) students. The proposed project will not attract additional students to attend Humboldt State University, but will help to meet the demand for student housing for which there is a shortage in the City of Arcata. Since the proposed development provides housing for HSU students, the project would not contribute to local primary and secondary school enrollment.

Therefore, the proposed project will not result in substantial adverse physical impacts associated with the construction of new school facilities.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.3.4: Parks.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings. Currently, there are several existing parks within a convenient walking distance (e.g., less than half-mile) of the project site. Of these, Cahill Park, Janes Creek Meadows Park, Larson Park, and the Arcata Skateboard Park are closest to the project site and would be expected to be utilized by project residents. The new residents from the proposed project would be expected to increase the demand for local parks and recreational services. Other City park and recreational facilities such as the Plaza, Community Center, Community Forest, and playing fields would experience slight increases in use from project residents.

As described in Chapter 1 (Introduction) of the EIR and shown on the Site Plan, the proposed project includes several types of indoor and outdoor recreational facilities. The project proposes a 7,500-15,000 s.f. clubhouse that will include a fitness center for use by the residents. As shown on the Site Plan, the site design includes a large park area in the central part of the site that includes various grass areas and landscaping, pathways, a half-basketball court, and numerous paved areas that include seating, tables, and covered areas. Each residential building is also designed with interior courtyards that include paving, seatwalls, and landscape beds. In addition, the edges of the project site are proposed to be developed with trails as well as a community garden space that will be located on the southwestern edge of the project site. The use of nearby City recreational facilities will be minimized due to provision of the indoor and outdoor recreational facilities described above. In addition, since the future residents of the proposed development will be HSU students, it is anticipated that they will make use of the variety of recreational facilities offered on the HSU campus, which will also minimize the use of City recreational facilities near the project site.

Despite the proposed on-site recreational facilities (e.g., fitness center, basketball court, trails, community garden, etc.) and the nearby facilities available in the City and on the HSU campus, Section 9.70.050 of the Arcata Land Use Code requires the payment of a Recreation Fee for all new construction of residential, commercial, and industrial structures. The City will collect Recreation Fees from the applicant, which will be used for either park acquisition or the improvement of existing parks in the project area. As such, with the proposed on-site recreational facilities, the nearby facilities in the City and on the HSU campus, and the additional park development that will occur through the City's Recreation Fee program, there will be adequate recreational facilities to meet the needs of the future residents.

Therefore, the proposed project as designed, and in compliance with the requirements of the Arcata Land Use Code, will not substantially impact park facilities in the City.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.3.5: Other Public Facilities.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings. Development of the proposed project would result in an increase in the population in the project area and would result in a small increase in the demand for public services, including public health and library services.

This project will assist the City in meeting its Regional Housing Need Allocation of 363 housing units for the 2014-2019 period. In relation to the City of Arcata's resident population of 18,374 (DOF, 2017), the increase from the proposed project (~800 persons) would not be substantial (~4.4%). The proposed project will not attract additional students to attend Humboldt State University, but will help to meet the demand for student housing for which there is a shortage in the City of Arcata. It is expected that some of these existing students are already using public services and facilities in the project area. As such, the population increase generated by the proposed project would not require the construction of new or expanded public facilities.

Therefore, the proposed project will not result in substantial adverse physical impacts associated with the construction of other public facilities.

Determination:
Less than significant impact.

Mitigation:
None required.

REFERENCES

Arcata Fire District. 2017. *E-mail dated 03/03/17 from Fire Chief Justin McDonald concerning current staffing levels and the ability to serve The Village Student Housing project with law enforcement services.*

Arcata Police Department. 2017. *E-mail dated 03/01/17 from Police Business Manager Eileen Verbeck concerning current staffing levels and the ability to serve The Village Student Housing project with law enforcement services.*

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Northern Humboldt Union High School District. 2013. *Arcata High School WASC Self Study 2012/2013*.

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SECTION 2.4 RECREATION

This section evaluates the potential impacts related to recreation with implementation of the project. The Environmental Setting section describes the existing setting as it relates to recreational resources in and adjacent to the City of Arcata. The Regulatory Framework section describes applicable regulations at the federal, state, and local level. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to recreational resources, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less-than-significant levels.

ENVIRONMENTAL SETTING

The City of Arcata has a variety of public recreational facilities for both indoor and outdoor recreation, suitable for group and individual activity. Public indoor recreational facilities include the community center, veteran's hall, and community swimming pool. Opportunities for outdoor recreation are discussed below.

The project site was used as a lumber mill in the past, but has not been used for this purpose since the 1960s. Most of the project site is currently home to the Craftsman's Mall – a collection of artisan and light industrial rental spaces within wood-framed warehouse buildings. Two single-family residences also exist on the project site on parcels 507-372-003 and 505-022-012. The project site parcels do not currently include any type of recreational facilities. As discussed below, there are several City parks within a half-mile of the project site.

Existing Parks and Recreation

The City of Arcata maintains a network of parks distributed throughout the city. Arcata's parks have varied facilities and offer a variety of recreational and educational opportunities.

The State of California guidelines establish a ratio of at least five (5) acres of parkland for each 1,000 residents of the State. Arcata's existing park system, according to the 2010 Arcata Park and Recreation Master Plan, contains 3,744 acres of parkland at 41 sites. More than 97% (3,655.29 acres) of this acreage is provided as natural areas or undeveloped park reserves. Consequently, less than 2.5% (88.74 acres) of the City's park system consists of developed parks. Based on City's current population of 18,374 (CA DOF, 2017), there is approximately 4.83 acres of developed parks and 198.94 acres of undeveloped park reserves per 1,000 residents in the City.

The existing parks closest to the project site are Cahill Park, Janes Creek Meadows Park, Larson Park, and the Arcata Skateboard Park. Cahill Park, located at 1300 Stromberg Avenue (APN 505-032-017), has a play structure, swing set, tire swing, benches, a grass play area, and other play apparatus. Janes Creek Meadows Park, located at 2985 Janes Creek Drive (APN 507-511-

055), has three play structures, a climbing structure, a picnic bench, a grass play area, and other play apparatus. Larson Park, located at 901 Grant Avenue (APN 505-051-002), has three tennis courts, a hand ball court, three bocce ball courts, multiple play structures, benches and picnic tables, a gazebo, and a grass play area. The Arcata Skateboard Park, located at 900 Sunset Avenue (APN 505-051-025), has a bowl, snake run, table top, and other skateboard play structures.

Existing Open Space

Areas designated "*natural resource*," such as agricultural lands, are considered to fall under the category of open space and are sometimes available for recreational use. Open space areas that are located in Arcata city limits and managed by the City Environmental Services Department are Arcata Baylands, Arcata Community Forest, Aldergrove Marsh, Arcata Marsh and Wildlife Sanctuary which includes McDaniel Slough, Janes Creek Meadows, Community Forest Sunnybrae Tract, as well as creek and wetland protection zones. The closest city-managed open space area to the project site is the approximately 9-acre open space area, referred to as the Janes Creek Meadows Open Space, directly northwest of the project site. This area was required to be preserved as open space as part of the Janes Creek Meadows residential development. This area is designated and zoned Natural Resource Planned Development and contains a portion of Janes Creek as well as one of its tributaries. As shown on Figure 5D of the City of Arcata Pedestrian and Bicycle Master Plan (2010), it is planned to develop a pedestrian/bicycle trail to provide connectivity between the project site and the Janes Creek Meadows open space area.

REGULATORY FRAMEWORK

City of Arcata

Arcata General Plan and Land Use Code

The City of Arcata General Plan contains guidelines for recreation within the Open Space Element (2008) and the Parks and Recreation Element (1994). The City's Land Use Code establishes zones for recreational facilities and contains requirements for park land dedication and/or fees for new development. Tables 2.4-1 through 2.4-3 below contain a list of policies from the Arcata General Plan and regulations from the Arcata Land Use Code that are applicable to the proposed project.

Table 2.4-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
OS-4 Open Space for Outdoor Recreation and Coastal Access	Designate and secure public access to a sufficient supply of land and water areas with recreation resource value, including parks, forests, coastal areas, baylands, and stream corridors, to meet the outdoor recreation needs of Arcata residents and visitors.	OS-4c

Table 2.4-2 Applicable Parks and Recreation Element Policies (Arcata General Plan: 1994)

Policy	Objective	Applicable Sub-Policies
Goal II, Policy C: Acquisition of Parklands to Accommodate Population Growth	The City of Arcata shall acquire additional parklands as needed to accommodate population growth. Fees and or parkland dedications pursuant to the Quimby Act (California Govt. Code § 66477, as amended) shall be used to provide or improve park and recreation facilities, which serve the residents of the subdivision from which such fees or land are obtained.	Implementation Measures 1(a) – through 1(d), 1(f), 1(g), 1(i), 1(j), and 3(c)
Goal IV, Policy A: Develop and Improve Parks as Funds Become Available	The City of Arcata shall develop and improve parks and related facilities as funds become available.	Implementation Measure 5(a)
Goal V: Provide Aesthetically Pleasing Parks and Recreational Facilities which are Compatible with the Environment	The City of Arcata shall support a system of recreational services and facilities which minimize adverse impacts on the environmental, fiscal, and social well-being of Arcata.	Implementation Measure 2

Table 2.4-3 Applicable Land Use Code Requirements

Policy	Objective	Applicable Sub-Policies
Chapter 0.70 (Permit Application Filing and Processing)	This Chapter provides procedures and requirements for the preparation, filing, and initial processing of applications for the planning permits required by the Arcata Land Use Code. Section 9.70.050 requires recreation fees for new construction for the purpose of raising revenue for park acquisition and improvements.	Section 9.70.050

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if the project would result in any of the following effect:

- 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.
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Proposed Project

Finding 2.4.1: 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.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings. Currently, there are several existing parks within a convenient walking distance (e.g., less than half-mile) of the project site. Of these, Cahill Park, Janes Creek Meadows Park, Larson Park, and the Arcata Skateboard Park are closest to the project site and would be expected to be utilized by project residents. The new residents from the proposed project would be expected to increase the demand for local parks and recreational services. Other City park and recreational facilities such as the Plaza, Community Center, Community Forest, and playing fields would also experience increases in use from project residents.

As described in Chapter 1 (Introduction) of the EIR and shown on the Site Plan, the proposed project includes several types of indoor and outdoor recreational facilities. The project proposes a 7,500-15,000 s.f. clubhouse that will include a fitness center for use by the residents. As shown on the Site Plan, the site design includes a large park area in the central part of the site that includes various grass areas and landscaping, pathways, a half-basketball court, and numerous paved areas that include seating, tables, and covered areas. Each residential building is also designed with interior courtyards that include paving, seatwalls, and landscape beds. In addition, the edges of the project site are proposed to be developed with trails as well as a community garden space that will be located on the southwestern edge of the project site. The

use of nearby City recreational facilities will be minimized due to provision of the indoor and outdoor recreational facilities described above. In addition, since the future residents of the proposed development will be HSU students, it is anticipated that they will make use of the variety of recreational facilities offered on the HSU campus, which will also minimize the use of City recreational facilities near the project site.

Despite the proposed on-site recreational facilities (e.g., fitness center, basketball court, trails, community garden, etc.) and the nearby facilities available in the City and on the HSU campus, Section 9.70.050 of the Arcata Land Use Code requires the payment of a Recreation Fee for all new construction of residential, commercial, and industrial structures. The City will collect Recreation Fees from the applicant which will be used for either park acquisition or the improvement of existing parks in the project area. As such, with the proposed on-site recreational facilities, the nearby facilities in the City and on the HSU campus, and the additional park development that will occur through the City's Recreation Fee program, there will be adequate recreational facilities to meet the needs of the future residents.

Therefore, the proposed project as designed and in compliance with the requirements of the Arcata Land Use Code, will not 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.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.4.2: Include Recreational Facilities or Require the Construction or Expansion of Recreational Facilities that Might Have an Adverse Physical Effect on the Environment.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings. Currently, there are several existing parks within a convenient walking distance (e.g., less than ½ mile) of the project site. Of these, Cahill Park, Janes Creek Meadows Park, Larson Park, and the Arcata Skateboard Park are closest to the project site and would be expected to be utilized by project residents. Figure 2.4A below from the City of Arcata Web GIS System, shows the location of nearby recreational facilities in the project area.

The new residents from the proposed project would be expected to increase the demand for local parks and recreational services. Other City park and recreational facilities such as the Plaza, Community Center, Community Forest, and playing fields would also experience increases in use from project residents.

Figure 2.4A Recreation Facilities

As described in Chapter 1 (Introduction) of the EIR and shown on the Site Plan, the proposed project includes several types of indoor and outdoor recreational facilities. The project proposes a 7,500-15,000 s.f. clubhouse that will include a fitness center for use by the residents. As shown on the Site Plan, the site design includes a large park area in the central part of the site that includes various grass areas and landscaping, pathways, a half-basketball court, and numerous paved areas that include seating, tables, and covered areas. Each residential building is also designed with interior courtyards that include paving, seatwalls, and landscape beds. In addition, the edges of the project site are proposed to be developed with trails as well as a community garden space that will be located on the southwestern edge of the project site.

The development of the on-site indoor and outdoor recreational facilities would result in physical impacts to the surface and subsurface of the project site. These impacts are evaluated in the appropriate sections of the EIR including, but not limited to, Sections 2.5 (Cultural Resources), 2.12 (Tribal Cultural Resources), 4.1 (Geology and Soils), 4.2 (Hydrology and Water Quality), and 4.3 (Biological Resources). In instances where significant impacts have been identified, mitigation measures are included to reduce these impacts to less than significant levels. No additional mitigation measures beyond those already defined in the EIR would be required.

As described under Finding 2.4.1 above, the proposed project will be required to pay fees to the City, per Section 9.70.050 of the Arcata Land Use Code, which will be used for either park acquisition or the improvement of existing parks in the project area. The future development of off-site recreational facilities in the project area is not analyzed in the EIR, as it is currently unknown how the fees provided by the applicant will be used, and this future development will be subject to subsequent CEQA analysis conducted by the City.

With the proposed mitigation measures contained in the other sections of the EIR, the proposed project will not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Determination:
Less than significant impact.

Mitigation:
None required.

REFERENCES

California Department of Finance (DOF). 2017. *E-5 Population and Housing Estimates for Cities, Counties, and the State – January 1, 2011-2017*. May.

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SECTION 2.5 CULTURAL RESOURCES

This section evaluates the potential impacts related to cultural resources during construction and operation of the project. To provide the basis for this evaluation, the Environmental Setting section describes the archaeological and historical setting for the project area, and the Regulatory Framework section describes the applicable federal, state, and local regulations affecting the project area. Descriptions in this section are based on reviews of published information, reports, and plans regarding cultural resources. The Impact Analysis section establishes the thresholds of significance, evaluates potential cultural resource impacts, and identifies the significance of impacts. Where appropriate, mitigation measures are presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

Cultural & Archeological Resources

Resources in the Vicinity

The first known inhabitants of the Humboldt Bay Region were Wiyot Indians, a member of the Algonquin linguistic group. The Wiyot population prior to 1850 is estimated to have been between 1,000 and 3,300 individuals (E. Taylor & J. Roscoe, October 1998). Wiyot settlements were located chiefly along the lower Mad River, and around Humboldt Bay and the lower Eel River. Village sites were located at the water's edge, ocean, bay, or creek, with trails leading to grassy openings and from one village to another. A small part of the population lived in an area from the Mad River to the northern portion of Humboldt Bay; they lived in settlements of one to three families. Within the Arcata planning area, they lived in semi-permanent settlements and often traveled seasonally for hunting and gathering. The estimated population for the Arcata planning area, in or about the year 1848, is 600 inhabitants (City of Arcata General Plan).

After the start of the California Gold Rush, from 1850 to 1860, Wiyot territory became the center of the largest concentrations of European settlers in California north of San Francisco. The settlers utilized Humboldt Bay as a major shipping point for supplies to the gold mines on the Trinity, Klamath, and Upper Sacramento Rivers. In addition, the establishment of the Redwood timber industry, and homesteading of the Eel River and Arcata Bottom for ranching and farming purposes, brought more people into the area. The influx of new settlers brought violence, including the Indian Island Massacre of February 26, 1860, which nearly destroyed the entire Wiyot population.

There are currently 32 recorded archeological sites in the Arcata planning area. Most sites are situated along the margins of Humboldt Bay, along the edges of marshes and sloughs, and in the

Arcata Bottom area. Sites also tend to be located at the base of hills and on mid-slope terraces near sources of water.

Data collected by L. L. Loud (1918) identified a number of Wiyot habitation and resource procurement sites in the general vicinity of the project site. One site is Camp Curtis, located on LK Wood Blvd., approximately one mile east of the project area (E. Taylor & J Roscoe, 1998). Taylor & Roscoe (1998) also state that there are reported locations of several other prehistoric village sites near Camp Curtis.

According to the Arcata General Plan, the most likely location for additional (unrecorded) archeological sites is a band approximately 1,000 meters wide along the Humboldt Bay shoreline and the Mad River. There is also the possibility of encountering archeological resources elsewhere in the Arcata planning area.

Resources at the Project Site

The Native American Heritage Commission (NAHC) performed a cultural resources record search for the project area, and responded stating that the search of the sacred land file failed to indicate the presence of Native American cultural resources in the immediate project area.

A complete records search for the project area was also conducted by the Northwest Information Center (Appendix E). According to the records on file at the NWIC, the project site had not been subject to previous cultural resource investigations and no recorded resources are known to occur at the project area or within a half-mile buffer. Within a half-mile radius, five previous investigations have been conducted for various residential development projects which resulted in negative findings for archaeological resources.

As per the Arcata General Plan, an archaeological survey by a professional archaeologist or other qualified expert is required if the project area is determined to have a high probability of archaeological resources (Policy H-7b). In compliance with this policy, a Cultural Resources Investigation of the project area was conducted by William Rich and Associates (WRA) in May 2016 (Appendix E). The investigation concluded that inadvertent discovery protocols for the discovery of cultural resources should be implemented during the project construction activities.

As required by AB 52 and SB 18, the City of Arcata sent requests for formal consultation to the Tribal Historic Preservation Officers (THPOs) for the Blue Lake Rancheria, Wiyot Tribe, and the Bear River Band of the Rohnerville Rancheria. As part of the consultation under AB 52 and SB 18, the THPOs requested for a Cultural Resources Investigation to be conducted, reviewed the WRA Cultural Resources Investigation that was completed, and concurred with the WRA recommended inadvertent discovery protocol. As stated in the July 06, 2016 e-mail from the Blue Lake Rancheria Tribal Historic Preservation Officer (THPO) "*I concur with the Inadvertent Discovery protocol as a project condition, and that no further SB18/AB52 consultation is necessary for this project*."

Historical Resources

Resources in the Vicinity

Arcata represents one of the last settled areas in United States history, and has historical resources dating back to the early 1850s. There are historical structures and sites throughout the central core of Arcata, on the lower slopes of Fickle Ridge, and in the Arcata Bottom (City of Arcata General Plan).

As noted above, within a half-mile radius, five previous investigations have been conducted for various residential development projects which resulted in negative findings for archaeological resources. However these investigations do disclose the presence of several historic resources within a half-mile of the project site including historic period mill sites and related features, a historic-era house, barn and milk house, a segment of the Northwestern Pacific Railroad (NWPRR), and Camp Curtis (California Historic Landmark #215). As concluded on Page 38 of the Cultural Resources Investigation (Appendix E) prepared for the project, "Other than nearby Camp Curtis (California Historic Landmark #215), no record of National Register of Historic Places, California Register of historical resources, or other, locally registered historic resources, occur in the direct project area or immediately adjacent zone."

Resources at the Project Site

Before being developed for its historical use as a lumber mill and housing, the project site was open space and may have been used for pasture. Prior to construction of the mill, four small working-class homes were constructed at the project site in-between the mill site and St. Louis Road. Elmer W. Spalding purchased much of the project area in 1947 and began construction of a lumber mill at the project site in 1947, which was in full operation as the Arcata Manufacturing Company by 1948. In early 1957, Van Fleet Products Company purchased the mill and continued to operate it until 1964, when he ran into financial difficulties and closed the mill. In September 1964, the mill came under the ownership of Milton J. Wershow Co., and due to a decline in the timber industry, the mill was demolished and removed by 1965. In the Cultural Resource Investigation completed by WRA (2016), four buildings from the early modern period were identified in the project area (Appendix E). These include two large warehouses associated with the former mill (Arcata Manufacturing Company) and two residential houses.

Due to changes in the design of the two warehouse buildings over time, changes to their original materials used in construction, the loss characteristics that embodied the craftsmanship of the builders, changed overall feeling associated with their original uses, and demolition of the rest of the mill buildings and railroad spur associated with the company, these remaining warehouses appear ineligible for inclusion to National, State, or local historical register listings. For these reasons, the two remaining warehouse buildings remaining at the former Arcata Manufacturing Company property should not be considered historical resources, pursuant to CEQA and would not qualify for City of Arcata Historic Landmark status (Appendix E; Pgs. 42-43).

The two residential buildings located in the project area are in a similar condition to the warehouse building described above. Although both are representative of the mid century working-class vernacular style, with hints of colonial and craftsman influences in a growing city, neither seem to be a particularly good example of their type. Furthermore, the changes introduced to these buildings has compromised their ability to convey their sense of historical significance. It is these conditions that support a finding that these buildings would not qualify for listing to any historical registers and should not be considered an historical resource pursuant to CEQA or an Arcata Historical Landmark.

A railroad grade with intact ties and tracks is also present outside of the project area but along the east margin of St Louis Road. These tracks were last used in 1998 by the Northwestern Pacific Railroad Company (NWPRR) servicing the mills at Korbel along West End Road, just to the north of the project area (NCRA, 2016). The NWPRR grade lies outside of the project area and was not recorded during the Cultural Resource Investigation as it will not be physically affected as a result of the proposed project.

Paleontological Resources

Paleontology is the study of organisms that lived in prehistoric or geologic times. Paleontological resources are the fossils of plants, animals, and other organisms that existed in those times. Regionally, paleontological resources exist primarily in the form of marine organisms and shells preserved in consolidated sedimentary sand layers, and occasionally brought to the surface as a result of geologic processes, such as regional uplifting and other seismic activity. Discovery of paleontological resources in the Arcata area has been limited (Arcata General Plan, 2008).

REGULATORY FRAMEWORK

Federal

National Register of Historic Places

The National Register of Historic Places (NRHP) is a guide used by federal, state and local governments and private groups to identify and catalogue the Nation's cultural resources. It also provides a compendium of documentation related to the properties and processes for their protection and from destruction and impairment. Historic "properties" are defined by the Advisory Council on Historic Preservation to include "prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior" (36 CFR 800.16(1)). For inclusion in the NRHP, the following criteria must be met:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:

- That are associated with events that have made a significant contribution to the broad patterns of our history; or,
- That are associated with the lives of persons significant in our past; or,
- That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or,
- That have yielded, or may be likely to yield, information important in prehistory or history.

State of California

California Register of Historical Resources

Assembly Bill 2881 (AB 2881) established the California Register of Historical Resources (CRHR). The CRHR is an authoritative guide in California used by state and local agencies, and private groups to identify the State's historical resources (similar to the NRHP for federal resources). The criteria for eligibility and listing on the CRHR are based on the requirements of the National Register. The California Office of Historic Preservation (OHP) has authority under federal and state law for historic preservation programs in the State, and the OHP can make determinations of eligibility for listing resources on both the National Register and the CRHR. Resources can be listed singly as a California Resource or on both the National and California Registers.

In California, in addition to meeting one or more of the listed criteria for inclusion on the CRHR, eligibility for the California Register requires that a resource retains sufficient integrity to convey a sense of its significance or importance. Seven elements are considered key in considering a property's integrity, which are (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association. Additionally, the OHP advocates that all historical resources over 45 years old be recorded for inclusion in the OHP filing system, although the use of professional judgment is urged in determining whether a resource warrants documentation.

Public Records Act

The California Public Records Act authorizes state agencies to exclude archaeological site information from availability to the public. The rationale for this exclusion is for the protection of Native American cultural resources and their place of location. Resources protected under the

Act include Native American cultural places, graves, cemeteries, features, objects, and other items. Exclusion of information dissemination to the public also includes the information provided to resource professionals from the California Historical Resources Information System, from their various repositories in the state.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) established definitions and criteria that are applicable to historic resource evaluations. Broadly defined, CEQA combines the various federal and state laws and regulations to provide overall direction and criteria for the protection of cultural resources (historic, prehistoric, and paleontological).

Assembly Bill 52

Assembly Bill 52 (AB 52) establishes a consultation process with California Native American Tribes that involves Tribes in the early coordination and development of projects under the jurisdiction of state and local agencies that have discretionary approval authority for projects. AB 52 recognizes that California Native American Tribes have unique expertise regarding their tribal history, culture, and land use practices, and that this information may be useful during the environmental analysis process. The intent of AB 52 is to establish an early consultation process that hopefully will delay and avoid conflicts during the CEQA process and allow for the identification of Tribal Cultural Resources (TCR) that may exist or be affected by a project.

Senate Bill 18

Senate Bill 18 (SB 18) requires local governments to consult with California Native American Tribes, identified by the California Native American Heritage Commission (NAHC), prior to the adoption of amendment of a general plan or specific plan. The purpose of this consultation is to preserve or mitigate impacts to cultural places.

City of Arcata

Arcata General Plan

The Arcata General Plan contains guidelines for cultural resources within the Historic Preservation Element. The General Plan has developed specific Goals and related Policies that address cultural and archaeological resources within the City. Table 2.5-1 below contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 2.5-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
H-7 Archaeological and Cultural Resources	Protect and preserve Native American and Euro-American archaeological sites and cultural resources within the City of Arcata.	H-7b-d, and f

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact to cultural resources is considered to be significant if it meets any of the following criteria.

If the project would:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5**.**
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature**.**
- Disturb any human remains, including those interred outside of formal cemeteries.

Proposed Project

Finding 2.5.1: Cause a Substantial Adverse Change in the Significance of a Historical Resource as Defined in §15064.5.

Discussion:
As described in the Environmental Setting above, the seven parcels that make up the project site were historically used as a lumber mill (Arcata Manufacturing Company) and for housing. In addition, a section of the Northwestern Pacific Railroad (NWPRR) occurs directly east of the site along St. Louis Road.

A Cultural Resources Investigation of the project area was conducted by William Rich and Associates (WRA) in May 2016, which identified four buildings from the early modern period

on the project parcels (Appendix E). These include two large warehouses associated with the former mill (Arcata Manufacturing Company) and two residential houses. The investigation concluded these buildings should not be considered historical resources, pursuant to CEQA and would not qualify for City of Arcata Historic Landmark status.

As discussed on pages 42-43 of the WRA Cultural Resources Investigation (Appendix E), due to changes in the design of the two warehouse buildings over time, changes to their original materials used in construction, the loss characteristics that embodied the craftsmanship of the builders, changed overall feeling associated with their original uses, and demolition of the rest of the mill buildings and railroad spur associated with the company, these remaining warehouses appear ineligible for inclusion to National, State, or local historical register listings. The two residential buildings located in the project area are in a similar condition to the warehouse buildings. Although both are representative of the mid-century working-class vernacular style with hints of colonial and craftsman influences in a growing city, neither seem to be a particularly good example of their type. Furthermore, the changes introduced to these buildings has compromised their ability to convey their sense of historical significance.

It is also explained in the investigation report that the segment of the NWPRR was not recorded as part of the investigation since it lies outside of the project site and will not be physically affected as a result of the proposed project.

Therefore, the proposed project will not cause a substantial adverse change in the significance of a historical resource.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.5.2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5.

Discussion:
As per the Arcata General Plan, an archaeological survey by a professional archaeologist or other qualified expert is required if the project area is determined to have a high probability of archaeological resources (Policy H-7b). A Cultural Resources Investigation of the project area was conducted by William Rich and Associates (WRA) in May 2016, which included a field survey (Appendix E). The investigation resulted in negative findings for archaeological resources at the project site. Due to the potential to discover unknown archaeological resources during construction of the proposed project, the WRA investigation recommended an inadvertent discovery protocol which states the following:

> *"If archaeological resources are encountered during construction activities, all onsite work shall cease in the immediate area and with a 50-foot buffer of the discovery location. A qualified archaeologist will be retained to evaluate and assess the significance of the*

discovery, and develop and implement an avoidance or mitigation plan, as appropriate. For discoveries known or likely to be associated with Native American heritage (prehistoric sites and select historic period sites), the Tribal Historic Preservation Officers (THPOs) for the Bear River Band of Rohnerville Rancheria, Blue Lake Rancheria, and Wiyot Tribe are also to be contacted immediately to evaluate the discovery and, in consultation with the project proponent, and City of Arcata, and consulting archaeologist, develop a treatment plan in any instance where significant impacts cannot be avoided. Prehistoric materials which could be encountered include: obsidian and chert debitage or formal tools, grinding implements (e.g., pestles, handstones, bowl mortars, slabs), locally darkened midden, deposits of shell, faunal remains, and human burials. Historic archaeological discoveries may include 19th century building foundations, structural remains, or concentrations of artifacts made of glass, ceramics, metal, or other materials found in buried pits, old wells, or privies."

As required by AB 52 and SB 18, the City of Arcata sent requests for formal consultation to the Tribal Historic Preservation Officers (THPOs) for the Blue Lake Rancheria, Wiyot Tribe, and the Bear River Band of the Rohnerville Rancheria. As part of the consultation under AB 52 and SB 18, the THPOs requested for a Cultural Resources Investigation to be conducted, reviewed the WRA Cultural Resources Investigation that was completed, and concurred with the WRA recommended inadvertent discovery protocol. As stated in the July 06, 2016 e-mail from the Blue Lake Rancheria Tribal Historic Preservation Officer (THPO) "*I concur with the Inadvertent Discovery protocol as a project condition, and that no further SB18/AB52 consultation is necessary for this project*." The inadvertent discovery protocol recommended in the WRA investigation for the discovery of archaeological resources will be included as a condition of approval by the City of Arcata for the proposed project.

With the proposed conditions of approval, the project will not cause a substantial adverse change in the significance of an archaeological resource.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.5.3: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature.

Discussion:
The project area has already been substantially disturbed by industrial and residential activities in the past, and there are no known paleontological resources, or geological features on or near the site. Regional uplifting and other seismic activity in the area have limited the potential for discovery of paleontological resources. Arcata General Plan Policy H-7f (*Discovery of Archaeological Resources*) (Pg. 5-34) also addresses the inadvertent discovery of paleontological resources and will be required as a condition of approval by the City of Arcata for the proposed project.

With the proposed conditions of approval, the proposed project will not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.5.4: Disturb any Human Remains, Including Those Interred Outside of Formal Cemeteries.

Discussion:
The project site does not contain a cemetery and no known formal cemeteries are located within the immediate vicinity of the site. A Cultural Resources Investigation of the project area was conducted by William Rich and Associates (WRA) in May 2016, which included a field survey (Appendix E). No human remains were observed during the survey conducted by WRA. However, due to the potential of discovering unknown human remains during the proposed construction activities, the WRA investigation recommended an inadvertent discovery protocol which states the following:

> "*If human remains are discovered during project construction, work will stop at the discovery location, within 20 meters, and any nearby area reasonably suspected to overlie adjacent to human remains (Public Resources Code, Section 7050.5). The Humboldt County coroner will be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the NAHC (Public Resources Code, Section 5097). The coroner will contact the NAHC. The descendants or most likely descendants of the deceased will be contacted, and work will not resume until they have made a recommendation to the landowner or the person responsible for the excavation work for means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98. Work may resume if NAHC is unable to identify a descendant or the descendant failed to make a recommendation*."

The inadvertent discovery protocol recommended in the WRA investigation for the discovery of human remains will be included as a condition of approval by the City of Arcata for the proposed project.

With the proposed conditions of approval, the project will not disturb any human remains, including those interred outside of formal cemeteries.

Determination:
Less than significant impact.

Mitigation:
None required.

REFERENCES

Blue Lake Rancheria. 2016. *Comments on The Village project from Tribal Historic Preservation Officer Janet P. Eidsenss pursuant to consultation under AB52 and SB18.* July 6, 2016.

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E. Taylor & J. Roscoe. 1998. *Cultural Resources Study prepared by E. Taylor, J. Roscoe, and Susie Van Kirk.* October 1998. Submitted to the City of Arcata with project application for Janes Creek Meadow Subdivision on the Sorensen property.

North Coast Railroad Authority (NCRA). 2016. *Website*. www.northcoastrailroad.org.

William Rich & Associates (WRA). 2016. *A Cultural Resources Investigation for the Village Student Housing Project, Located at 2905, 2725, and 2765 St. Louis Road, Arcata, Humboldt County, California*. May.

Wiyot Tribe. 2016. *Comments on The Village project from Cultural Director/Tribal Historic Preservation Officer Dr. Tom Torma pursuant to consultation under AB52 and SB18.* July 5, 2016.

SECTION 2.6 AESTHETICS

This section evaluates the potential impacts related to aesthetics and visual resources during construction and operation of the project. To provide the basis for this evaluation, the Environmental Setting section describes the existing scenic resources and visual character for the project area, and the Regulatory Framework section describes the regulatory background that applies to the project. The Impact Analysis section establishes the thresholds of significance, evaluates aesthetic and visual impacts, and identifies the significance of impacts. Where appropriate, mitigation measures are presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

Aesthetic Character of Project Vicinity

The aesthetic character of the Humboldt Bay area is largely formed by its natural features and surroundings, including forested mountains to the north, south, and east; forested coastal dunes, the Samoa Peninsula, and the Pacific Ocean coastline to the west.

Situated at the north end of Humboldt Bay, the City of Arcata sits on a coastal terrace and is bordered by the Mad River corridor to the north; Arcata Bay to the south; the Pacific Ocean to the west; and Fickle Hill Ridge to the east. Arcata's surrounding natural scenery includes coastal, riparian, mountain, forest, flat bottomland, and bay-front landscapes. These features form distinctive natural edges and vistas, and are some of the city's most important visual resources.

Within the City of Arcata, there is a combination of natural, rural, and urban aesthetic settings. Prominent natural area visual features of the Arcata Planning Area include the Arcata Bay, the Arcata Community Forest, and the Lanphere Dunes Preserve. Arcata also has urban visual resources which include human-constructed features (e.g. architecture and street layout) and open areas. Arcata's urban visual resources are characterized both by diversity and harmony in terms of shape, size, color, and style. Arcata's distinct urban viewsheds include the central plaza commercial area, Northtown commercial area, Humboldt State University campus along the eastern hillside, and a number of city parks that provide open space. Schoolyards and playgrounds, cemeteries, residential yards, setback areas, and undeveloped lots also provide open space viewsheds within urban areas.

Arcata's viewsheds also include industrial and commercial areas, such as the businesses along Samoa Boulevard west of Highway 101, and businesses along Highways 101 and 299, Giuntoli Lane, and West End Road in the northern part of town.

Scenic Corridors

Arcata is situated at the western gateway to the Trinity Scenic Byway (on Highway 299), which is a designated National Forest Scenic Byway. It is at the southern gateway of the proposed Tri-State Scenic Byway (on Highway 101).

According to the California Scenic Highway Mapping System, there are no designated state scenic highways in the project vicinity. Highways 101 and 299 are listed as "Eligible State Scenic Highways-Not Officially Designated" (Caltrans, 2016)

One route that is designated as a coastal scenic highway in the Arcata General Plan (Policy D-3a) is within the project site's viewshed which includes the Highway 101 corridor from the southern city boundary to the Mad River.

Aesthetic Character of Project Site

The proposed project site is part of a larger view characterized by single-family residential land, industrial land, the Highway 101 corridor, and tree lines. The project site is an elevated terrace above the Arcata Bottom area and possesses certain industrial and residential characteristics, such as two remaining warehouse buildings from the former mill (Arcata Manufacturing Company), two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, and a small wetland area.

The site has not been used as a lumber mill since the mid-1960s when the Arcata Manufacturing Company closed and the mill was dismantled. Most of the project site is currently home to the Craftsman's Mall – a collection of artisan and light industrial rental spaces within wood-framed warehouse buildings. Two single-family residences also exist on the project site on parcels 507-372-003 and 505-022-012. The majority of the site contains compacted gravel surfaces and the site contains very little vegetation with the exception of the undeveloped western portion of the site.

Surrounding land uses include single-family residential development to the north, west, and south, industrial uses to the north, and Highway 101 to the east. The Janes Creek Meadows riparian/open space area occurs to the north of the site which contains a section of Janes Creek and one of its tributaries. Arcata Elementary School occurs to the southwest of the site. The Northwestern Pacific Railroad tracks are located to the east of the site parallel to St. Louis Road. The railroad is now inactive and owned by the North Coast Railroad Authority (NCRA). The different aesthetic characteristics of the adjacent lands are discussed next.

Below are several photos which show the existing conditions on the project site from various vantage points (See Figures 2.6A – 2.6J).

Figure 2.6A View of Project Site from the SE along L.K. Wood Blvd

Figure 2.6B View of Project Site and Mad River Lumber from the NE along Overcrossing

Figure 2.6C View of the Southern Edge of the Project Site at the end of Eye Street

Figure 2.6D View of the Main Project Site Entrance from St. Louis Road

Figure 2.6E View of the Warehouse Structures and Office at the Project Site

Figure 2.6F View from within the Project Site Looking North

Figure 2.6G View from within the Project Site Looking East

Figure 2.6H View from within the Project Site Looking Southeast

Figure 2.6I View of the Western Edge of the Project Site and Residences along Maple Ln

Figure 2.6J View of the Warehouse Structures from the Western Edge of the Project Site

Viewsheds

East

Views from the Project Site

The viewshed to the east includes the forested ridge in the distant background, and residential uses along LK Wood Boulevard in the middle ground. In the foreground, the view is of St. Louis Road and the Highway 101 corridor; much of this view is screened by existing trees planted along the Highway 101 corridor.

Views of the Project Site

From Highway 101 and the residential neighborhood along LK Wood Boulevard, views of the project site are partially blocked by existing vegetation along Highway 101 and LK Wood Boulevard. From Highway 101, there are views of the warehouse buildings and residential structure along St. Louis Road to the south of the overpass that connects St. Louis Road with LK Wood Boulevard. There is a more extended view driving on Highway 101 north. Driving south on Highway 101 there are limited views due to the St. Louis Road overpass, Mad River Lumber mill, and vegetation along the highway corridor (e.g. trees and shrubs). From LK Wood Boulevard, views of the site primarily consist of the warehouse buildings on the southwest portion of the project site. Views from LK Wood Boulevard are primarily available from Sunset Avenue to California Street and at LK Wood Boulevard and the St. Louis Road overpass when adjacent vegetation doesn't block the view.

Figure 2.6K View of the Project Site from the East along L.K. Wood Blvd

North

Views from the Project Site

From the site, the northern viewshed includes the bottom of the Fickle Hill ridge and the Highway 101 overpass in the background. The project site's north border abuts the Janes Creek Meadows riparian/open space area, and industrial and residential uses on St. Louis Road. This foreground view is of wooden fencing, trees, and the second story of a few of the residential and industrial structures.

Views of the Project Site

From the north, views of the project site are from residential and industrial properties to the north, traffic on the Highway 101 overpass, and southbound traffic on Highway 101. Views of the site from these areas are partially blocked by vegetation and structures along the northern boundary of the site, as well as vegetation along Highway 101. From these vantage points, the main warehouse building, storage areas, and residences are visible at the site.

Figure 2.6L View of the Project Site from the North along St. Louis Road

West

Views from the Project Site

Looking west from the project site, the background view is of the Arcata Bottom and the single-family residences in the Westwood Neighborhood. The foreground view is of the backyards of the single-family residences along Maple Lane.

Views of the Project Site

From the west, views of the project site are mostly restricted to views from the single-family residences along Maple Lane, with partial views from Stromberg Avenue, Madrone Way, and Hilfiker Drive. Views of the site are partially blocked by the residences and vegetation along Maple Lane as well as the vegetation on the western portion of the project site. From these vantage points views are primarily of the main warehouse building and the storage areas on the northern portion of the site.

Figure 2.6M View of the Project Site from the West along Madrone Way

South

Views from the Project Site

Looking south from the project site, the background view is of the Westwood and Sunset neighborhoods, the Highway 101 corridor, and Arcata Elementary School. Bordering the project site on the south are the residential properties along Eye Street, Todd Court, and Stromberg Avenue. Views of these areas are partially blocked by the structures and vegetation on these residential properties.

Views of the Project Site

From the south, the project site is most prominent from adjacent vantage points of Highway 101 and single-family homes and traffic on Eye Street, Todd Court, and Stromberg Avenue. Views of the site are partially blocked by the structures and vegetation on the residential properties to the south of the site. From these vantage points, the most prominent features are the two warehouse buildings in the southwestern portion of the site, and the storage areas and vacant areas in the southeastern portion of the site.

Figure 2.6N View of the Project Site from the South along Eye Street

Light and Glare

The project site is currently developed with the Craftsman's Mall and two residential units. The site contains outdoor security lighting in several locations, which is visible from the surrounding area at night. The project site does not contain any structures that generate noticeable sources of glare. Indirect nighttime illumination of the site is also generated by traffic on Highway 101 and adjacent residential and industrial uses (e.g. lights from residences to the north, west, and south, or from Mad River Lumber to the north); however, these potential light sources are not strong enough to illuminate the project site. The amount of glare experienced in the surrounding vicinity is typical for an urban residential/industrial setting.

REGULATORY FRAMEWORK

State of California

California Scenic Highway Program

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. No State-designated scenic highways or scenic highway viewsheds are located in the project vicinity. Highways 101 and 299 are both Eligible State Scenic Highways though not officially designated (Caltrans, 2016).

City of Arcata

Arcata General Plan

The City of Arcata General Plan addresses aesthetic resources and community design in their Design Element. The General Plan design policies intend to protect and enhance the community character of Arcata by maintaining the Plaza as the focal point; requiring new building designs to harmonize with the existing surrounding character; preserving natural landscape elements; and beautifying existing structures and areas. A goal of the General Plan is to preserve Arcata's small-town, human-scale atmosphere by maintaining the small scale of buildings and diversity of uses and building types. Table 2.6-1 below contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 2.6-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
D-1 Overall Community Design Character	Maintain a community with diversity and quality in the built environment; with small-scale structures that are harmonious with their neighborhood context; and with a sharp physical and visual distinction between the urban area and the surrounding open space lands.	D-1a, D-1c, D-1d, D-1f, and D-1g
D-3 Scenic Routes, Resources, and Landscape Features	Identify and protect scenic routes, resources, and landscape features. Retain natural features, coastal scenic resources, and scenic vistas as important aesthetic components of the built environment and visual and associative links to nature. Minimize impairment and obstructions of scenic views to the minimum necessary to allow reasonable development.	D-3a, D-3d, and D-3j
D-5 Residential Design	Create residential living environments which meet the needs of residents, are aesthetically pleasing, provide for personal safety and privacy, promote social interaction, maintain continuity with the community's past, and provide for leisure needs. Blend residential design objectives with neighborhood conservation area objectives expressed in the Historical Preservation Element.	D-5a
D-7 Landscape Design	Promote landscape designs which are appropriate for the climate zone and the specific site conditions, integrate harmoniously with the scale and architecture of buildings on the site, improve the overall aesthetic appearance of the city and its neighborhoods, and serve to protect the general safety and welfare.	D-7a through D-7d, and D-7f
LU-2 Residential Land Use	Allow for a mix of housing types and densities to meet the physical, social, and economic needs of residents, with new and converted housing designed to be compatible with the established neighborhood character.	LU-2d
LU 2.3 Implementation Measures	This section identifies specific measures for implementing the goals and policies of the Land Use Element, the party responsible for implementation, and the time frame for implementation.	LU-2

Arcata Land Use Code

Design Review Procedures

The City has a discretionary Design Review process intended to consider visual impacts of proposed new and remodeled structures. Section 9.72.040 of the Land Use Code contains the requirements for Design Review which describes the purpose as the following, "*Design Review is intended to ensure that the design of proposed development and new land uses assists in maintaining and enhancing the natural beauty, historic, and rural character of the community*."

The standards for Design Review are listed in Section 9.72.040(F) of the Land Use Code which includes the following:

- Providing architectural design, building height and massing, and scale appropriate to and compatible with other structures on the site and in the immediate vicinity of the site;
- Providing attractive and desirable site layout and design, including, but not limited to, building arrangement, exterior appearance and setbacks, drainage, fences and walls, grading, landscaping, lighting, signs, etc.;
- Providing efficient and safe public access, circulation, and parking;
- Providing appropriate open space and landscaping, including the use of water efficient landscaping;
- Showing consistency with the General Plan, Local Coastal Program, and any applicable specific plan;
- Complying with any applicable design guidelines or design review policies.

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

Aesthetics is by nature a subjective value. Other resources can be measured or estimated through quantifiable scientific inquiry. However, this is rarely possible or even desirable for aesthetics, which is analyzed qualitatively with the exception of lighting impacts. An impact is considered to be significant if it meets any of the following criteria.

If the project would:

- Have a substantial adverse effect on a scenic vista**.**
- Substantially damage scenic resources, including, but not limited to: trees, rock outcroppings, and historic buildings within a state scenic highway**.**
- Substantially degrade the existing visual character or quality of the site and its surroundings**.**
- Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Proposed Project

Finding 2.6.1: Have a Substantial Adverse Effect on a Scenic Vista.

Discussion:
The project site is located along St. Louis Road, which is a two-lane road that provides access to a limited number of properties containing residential and industrial uses, and dead ends at the project site. The majority of the project site is currently an underutilized industrial site that has little aesthetic value with the presence of two remaining warehouse buildings from the former mill (Arcata Manufacturing Company), two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. This project would replace existing views of the site (underutilized industrial site) with views of a four-story modern student housing development.

The proposed project would potentially affect the following views: 1) views from the residential properties to the north, west, and south; 2) views from adjacent public streets; and 3) views from Highway 101. With the exception of Highway 101 and LK Wood Blvd, these views are not designated by the City of Arcata as a scenic vista. Due to the surrounding topography, existing development, and existing vegetation, the project site is not visible from most areas designated by the City or County as a scenic vista or view area such as the Arcata Bottom, Fickle Hill Ridge, Arcata Bay, or the Mad River.

Policy D-3a in the Arcata General Plan Design Element designates views from the Highway 101 corridor, from the southern city boundary to the Mad River, as a coastal scenic highway. This project will be visible to northbound and southbound traffic on Highway 101 when traveling to the south of the St. Louis Road Overcrossing. Policy D-3b in the Arcata General Plan Design Element designates views from L.K. Wood Blvd, from the St. Louis Road Overcrossing to 14th Street, as a non-coastal scenic highway. This project will be visible to northbound and southbound traffic on L.K. Wood Blvd when traveling to the north of Sunset Avenue and the south of the St. Louis Road Overcrossing.

Policy D-3c of the General Plan Design Element lists the standards applicable to developments that will affect scenic highways. This project is consistent with these standards for the following reasons: 1) no billboards or other off-premises signs are proposed as part of the project; 2) landscaping proposed for the project will screen views of the site but will not interrupt scenic views to the bay or across agricultural lands; and 3) the project proposes landscaping along the eastern boundary parallel to Highway 101, but does not propose any development within the industrial area of South “G” Street.

Therefore, the proposed project will not have a substantial adverse effect on a scenic vista.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.6.2: Substantially Damage Scenic Resources, including, but not limited to, Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway.

Discussion:
According to the California Scenic Highway Mapping System, there are no designated state scenic highways in the project vicinity (Caltrans, 2016). Highways 101 and 299 are listed as "Eligible State Scenic Highways-Not Officially Designated," but due to amount of existing development in this area of Arcata and the existing deteriorated condition of the project site, the proposed project will not affect the eligibility of Highway 101 for official designation as a State Scenic Highway. The project site does not contain any scenic resources such as landmark trees, rock outcroppings, or historic buildings that would be impacted by the project.

Therefore, the proposed project will not substantially damage scenic resources within a state scenic highway.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.6.3: Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings.

Discussion:
The existing visual character of the site and its surroundings primarily include an underutilized industrial site surrounded by residential neighborhoods, industrial uses, and Highway 101 (see Figure 2.6O below). As can be seen in the photos of the project site in the Environmental Setting (see Figure 2.6A – 2.6N), the site has little aesthetic value with the presence of two warehouse buildings, two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. The majority of the site contains compacted gravel surfaces and very little vegetation with the exception of the undeveloped western portion of the site.

Construction
During the proposed construction activities, views across the project site would be disrupted and construction equipment and debris, graded surfaces and stockpiles, staging areas, and truck traffic would be visible from surrounding residential and industrial uses, and Highway 101.

Figure 2.6O Aerial Photograph of the Village Project Site (Google Earth, 2017)

Construction is anticipated to occur over a 20-month period and will be a short-term impact consistent with other construction activity in the City. Considering that the site is currently used for industrial activity and the storage of vehicles, mobile homes, storage containers, and construction and scrap materials, the proposed construction activity is not anticipated to cause significant aesthetic impacts over the existing baseline condition at the project site.

Operation

This project would replace existing views of the site (underutilized industrial site) with views of a four-story modern student housing development. The proposed project would potentially affect the following views: 1) views from the residential properties to the north, west, and south; 2) views from adjacent public streets; and 3) views from Highway 101. A view shed analysis was completed by Architect Media (Appendix F) for the proposed project which includes photo-simulated views of the site from the following locations in which the site can be viewed (see Figure 2.6P – 2.6U below):

- LK Wood Boulevard/Highway 101 northbound in the vicinity of the project site;
- The Sunset Avenue northbound Highway 101 on-ramp; and
- At the intersection of Maple Lane and Madrone Way.

As can be seen in the existing and photo-simulated views of the site, the proposed project would provide an equal or greater land use and aesthetic compatibility with nearby residential development than the existing industrial uses on the project site (see Figures 2.6P – 2.6U). Because the site is currently in a blighted condition, the proposed development will ultimately improve the overall appearance of the site.

The project has been designed to provide the greatest compatibility with nearby residential development in the following ways: 1) the proposed residential buildings include a variety of architectural elements such as varied surfaces, rooflines, wall planes, and facades; 2) the proposed buildings will have setbacks between 60-240 feet from nearby residential property lines; and 3) the project proposes landscaping around the perimeter of the site and larger open space areas in the central and western portions of the site that will provide a vegetative buffer to screen views of the site as landscaping matures (see Figure 2.6V [Preliminary Landscape Plan]).

Although, the proposed development will provide a modern style of multi-family housing that is at least two-stories taller than existing residential development in the project area (50 foot tall residential structures), the development is consistent with the scale of similar student housing structures on the nearby Humboldt State University campus including: 1) College Creek Apartments (three-stories); 2) Campus Apartments (four-stories); 3) Sunset and Redwood Halls (three-stories); 4) Canyon Complex (three-stories); 5) Creekview Apartments (three-stories); and Cypress Hall (four-stories). Other non-housing structures at the HSU Campus that would be consistent with the scale of the proposed development include, but are not limited to: 1) Library; 2) Van Duzen Theatre; 3) University Center; 4) Jolly Giant Commons; 5) Student and Business Services; 6) Behavioral and Social Sciences; and 7) the athletics department structures surrounding Redwood Bowl. The Humboldt State University campus and surrounding areas contain one of the greatest concentrations of larger buildings in the County and this project will be consistent with the development in this area of Arcata. Because of the project objective of

Figure 2.6P Project Site with Existing Development from East Side of Highway 101

Figure 2.6Q Project Site with Proposed Development from East Side of Highway 101

Figure 2.6R Project Site with Existing Development from Sunset Avenue NB On-Ramp

Figure 2.6S Project Site with Proposed Development from Sunset Avenue NB On-Ramp

Figure 2.6T Project Site with Existing Development from Madrone Way and Maple Lane

Figure 2.6U Project Site with Proposed Development from Madrone Way and Maple Lane

providing clustered student housing for HSU, and its close proximity to HSU (~0.5 miles), this project's location and design can be found to be consistent with HSU's housing type and scale.

The existing designation and zoning is Industrial Limited (IL) for six of the seven parcels that make up the project site. This designation/zoning is a remnant from when the site operated as a mill and subsequent industrial uses. This site is described as underutilized in the EIR as it could be further developed with structures/uses allowed in the IL zone. The existing IL zone would generally allow development of a similar scale as is proposed for this project. The project proposes 50-foot tall residential structures with setbacks ranging from 60 to 240 feet from adjacent residential property lines. The IL zone would allow buildings that are 45 feet in height and have 20-foot setbacks from adjacent residential property lines. However, the manufacturing and commercial type uses allowed in the IL zone have a greater potential for impacts to residential uses surrounding the project site from incompatible building design, lighting spillover, dust generation, truck/equipment traffic, etc. As such, the proposed student housing will provide greater compatibility with nearby residential development than the manufacturing and commercial uses potentially allowed in the IL zone.

Therefore, the proposed project will not substantially degrade the existing visual character or quality of the site and its surroundings.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.6.4: Create a New Source of Substantial Light or Glare that would Adversely Affect Day or Nighttime Views in the Area.

Discussion:
The project site is currently developed with the Craftsman's Mall and several residential uses. The site contains outdoor security lighting in several locations which is visible from the surrounding area at night. Some of this lighting does not contain adequate shielding which causes spillover onto adjacent residential properties.

The proposed project would alter light sources in the locality; from primarily an underutilized industrial site with various types of outdoor lighting, to an illuminated student housing development with lighting that complies with the Arcata Land Use Code requirements. The proposed project includes various sources of new outdoor lighting (street, pedestrian-scale, security, and buildings). Once the project site is developed, increases in light sources and glare would potentially impact surrounding areas. Due to the proximity of residential neighborhoods to the north, west, and south of the project site, and the Janes Creek Meadows open space area to the north, care must be taken that lighting does not extend beyond the project site.

Figure 2.6V Preliminary Landscape Plan

The project proposes outdoor lighting consistent with the City's design guidelines, Section 9.30.070 (Outdoor Lighting) of the Arcata Land Use Code, and the recommendations of the International Dark-Sky Association (IDA), which includes standards for fixtures, shielding, wattage, placement, height, and illumination levels. To comply with these requirements, lighting for the project will be the minimum lumens necessary, directed downward, shielded, and pedestrian level when feasible. This will ensure lighting is contained within the site and does not cause significant lighting and glare impacts for surrounding land uses. Project related daytime glare would be unlikely to have significant visual impacts, as design guidelines specifying non-reflective building materials would address potential glare issues.

The proposed project could result in increased nighttime vehicle traffic and headlight glare. This would result in visual impacts, from light, within and outside the project site. Increased illumination from headlights would be likely to impact neighboring residential areas, and particularly, the single-family homes adjacent to the project along Eye Street and Todd Court, south of the project site. As required by Section 9.34.050 (Landscape Location Requirements), perimeter landscaping is required for all surface parking areas to provide screening for adjacent streets and properties. As shown on the Preliminary Landscape Plan prepared for the project by KLA Landscape Architecture (2016), trees and shrubs are proposed to be planted within and on the perimeter of the parking areas which will screen views from surrounding properties and minimize the impact of headlight glare (see Figure 2.6V [Preliminary Landscape Plan]).

Compliance with the City's design guidelines and Land Use Code standards will ensure the proposed project will not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Determination:
Less than significant impact.

Mitigation Measure:
None required.

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SECTION 2.7 AIR QUALITY

This section evaluates the potential impacts related to air quality during construction and operation of the project. To provide the basis for this evaluation, the Environmental Setting section describes existing air quality conditions in the project area and the Regulatory Framework section describes the regulatory background that applies to the project. The Impact Analysis section establishes the thresholds of significance, evaluates potential air quality impacts, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

Air Basin Characteristics

The project site is located within the North Coast Air Basin, which is comprised of Del Norte, Humboldt, Trinity, and Mendocino counties, as well as the northern and western portion of Sonoma County. The local climates, also known as sub-climates, within the Basin are affected by elevation and proximity to the Pacific Ocean.

Humboldt County, like the North Coast Air Basin, contains sub-climates that are created by local topography and proximity to the ocean. The City of Arcata and the project site are located in the Humboldt Bay area. Weather in the Humboldt Bay area is subject to cold upwelling of sea water to the ocean surface off the Humboldt Coast. This cold seawater in turn cools the surface air. During the summer, the air mass above the Pacific Ocean is drawn on shore by the difference in surface temperatures, resulting in daytime northwesterly winds. In winter, this temperature differential is less, and surface winds may blow from many directions depending on storm patterns or periods of calm. These periods of calm can amount to 30 percent of the year.

Wind helps disperse air pollution; whereas calm periods can allow it to build up to unhealthy levels. Temperature inversions, which occur when a layer of warm air traps cool air near the surface creating a lid, inhibit the vertical dispersion of pollutant emissions. Inversions occur most commonly in the Arcata area during winter months and trap emissions of all types near the surface. Dispersion usually occurs when a frontal system, sometimes bringing strong winds, passes over the area disturbing the temperature inversion, which allows pollutants to disperse vertically and horizontally.

Local Air Quality Conditions

Activities that presently occur within the project area that may contribute to existing levels of local air pollution are limited to nearby industrial uses, vehicle emissions from traffic on Highway 101, wood stoves/fire places in surrounding residential uses, and possible windblown dust. The industrial uses currently located within the project site also have the potential to generate dust and objectionable odors.

Criteria Air Pollutants

Air pollutant levels are typically described in terms of "*concentrations*," which refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). The federal and California Clean Air Acts (CAA) have established ambient air quality standards for different pollutants. National Ambient Air Quality Standards (NAAQS) were established by the federal CAA for six criteria pollutants including carbon monoxide (CO), ozone, nitrogen dioxide (NO2), small particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide, and lead. Pollutants regulated under the CAAct are similar to those regulated under the federal CAA. In many cases, the California Ambient Air Quality Standards (CAAQS) are more stringent than the corresponding federal standards.

Areas that do not violate ambient air quality standards are considered to be "*in attainment*" of federal and/or State standards. Areas that violate the ambient air quality standards are considered to be in "*nonattainment*." Violations of ambient air quality standards are based on air pollutant monitoring data and are judged for each air pollutant, using the most recent three years of monitoring data. Table 2.7-1 lists federal and state criteria pollutants and the status of these pollutants in the North Coast Air Basin.

Table 2.7-1 Status of Criteria Pollutants in the North Coast Air Basin

	North Coast Air Basin Status	
Criteria Pollutant	**Federal Standards**	**State Standards**
Sulfur Dioxide	Attainment	Attainment
Nitrogen Dioxide	Attainment	Attainment
Particulate PM_{10}	Attainment	Nonattainment
Particulate $PM_{2.5}$	Unclassified/Attainment	Attainment
Carbon Monoxide	Attainment	Attainment
Lead	Attainment	Attainment
Ozone	Unclassified/Attainment	Attainment
Sulfates	No Standard	Attainment
Hydrogen Sulfide	No Standard	Attainment
Vinyl Chloride	No Standard	Attainment

Criteria Pollutant	North Coast Air Basin Status	
	Federal Standards	State Standards
Visibility Reducing Particles	No Standard	Unclassified

Source: California Air Resources Board, Air Designations Maps/State and National, 2016.

As Table 2.7-1 indicates, the Air Basin as a whole does not meet State ambient air quality standards for PM_{10}. The Air Basin is considered in attainment or unclassified for all other criteria air pollutants. Unclassified typically means the region does not have concentrations of that pollutant that exceed ambient air quality standards.

Among the pollutants that may be generated by the proposed project, those of greatest concern are emitted by motor vehicles during construction and operation. These pollutants include small particulate matter, $PM_{2.5}$ and PM_{10}. Other pollutants that are less problematic to the Air Basin include Carbon Monoxide (CO), and ozone precursors such as nitrogen oxides (NO_X) and reactive organic gases (ROG). Criteria air pollutants with federal and State ambient air quality standards are described below.

Particulate Matter

Particulate matter is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, and dust. Particles 10 microns or less in diameter are defined as respirable particulate matter or PM_{10}. Particles 2.5 microns or less in diameter, or $PM_{2.5}$, are also respirable and can contribute significantly to regional haze and reduction of visibility. Inhalable particulates come from smoke, dust, aerosols, and metallic oxides. Although particulates are found naturally in the air, most particulate matter found in the project area is emitted either directly or indirectly by motor vehicles, industry, construction, agricultural activities, and wind erosion of disturbed areas. Most $PM_{2.5}$ is comprised of combustion products such as smoke. Extended exposure to PM can increase the risk of chronic respiratory disease (BAAQMD, 2011). PM exposure is also associated with increased risk of premature deaths, especially in the elderly and people with pre-existing cardiopulmonary disease.

Although PM levels are highest in winter due to meteorological conditions, PM levels are also high in summer months because auto traffic is about 20 percent higher than average, farm activities raise dust, and little rainfall occurs to wash pollutants out of the air. In the winter, temperature inversions trap emissions very close to the ground. Emissions from agricultural burning, wood stoves and fireplaces, and motor vehicles are all important sources that contribute to high levels of winter time PM. Table 2.7-2 shows the levels of PM_{10} concentration in the Humboldt Bay Area and the extent to which those levels meet or exceed air quality standards.

Table 2.7-2 PM_{10} Air Quality Data Summaries 2012-2015

Location	Year	PM_{10} Concentration in μg/m^3 Highest 24-Hr Average	# of Days Exceeding Standard (Estimate):	
			State	Federal
Eureka-Humboldt Hill	2012	28.8	0	0
	2013	45.8	0	0
	2014	--	--	--
	2015	--	--	--
Eureka-Jacobs	2012	46.3	0	0
	2013	66.7	11.8	0
	2014	--	--	--
	2015	--	--	--
North Coast Air Basin	2012	48.9	0	0
	2013	66.7	14.9	0
	2014	45.6	0	0
	2015	57.6	2.0	0

Source: California Air Resources Board, 2016

Almost all violations of the State PM_{10} standard (50 μg/m^3) occur in the six-month period from October through March (cool months). About eight percent of all days during the year exceed the standard; therefore about 16 percent (or one day in six violates the standard during the cool months. The most significant local source of PM_{10} emissions during the cool months is from residential wood burning for heating. These emissions occur primarily during the evening hours, and peak hourly levels may exceed the state daily standard by 400 percent (i.e. 200 μg/ m^3 on a day that reaches 50 μg/m^3 for 24 hours). However, with the mixing that occurs during the late evening and early part of the day, the average PM_{10} level is reduced significantly.

In July 1997, the EPA adopted new air quality standards for particulate matter. The EPA established annual and 24-hour standards for the fine fraction of particulates which are 2.5 microns or less in size. It revised the primary (health-based) PM standards by adding a new annual $PM_{2.5}$ standard set at 15μg/m^3 and a new 24-hour $PM_{2.5}$ standard set at 65 μg/ m^3. Based on a recommendation by CARB to the EPA, the North Coast Air Basin has been designated "*attainment*" for the federal $PM_{2.5}$ standard.

Ozone

Ground-level ozone is the principal component of smog. Ozone is not directly emitted into the atmosphere, but instead forms through a photochemical reaction of ROG and nitrogen oxides, which are known as ozone precursors. Ozone levels are highest from late spring through autumn when precursor emissions are high and meteorological conditions are warm and stagnant. Motor vehicles create the majority of ROG and NO_X emissions in California. Exposure to levels of ozone above current ambient air quality standards can lead to human health effects such as lung inflammation and tissue damage, and impaired lung functioning. Ozone exposure is also

associated with symptoms such as coughing, chest tightness, shortness of breath, and the worsening of asthma symptoms (BAAQMD, 2011). The greatest risk for harmful health effects belongs to outdoor workers, athletes, children, and others who spend greater amounts of time outdoors during periods of high ozone levels.

Ozone within the City of Arcata has not been measured by State or local agencies. However, the North Coast Unified Air Quality Management District (NCUAQMD) indicates that the local ozone air quality summary contained in Table 2.7-3 is representative of air quality along coastal Humboldt County, including the City of Arcata.

Table 2.7-3 Ozone Air Quality Data Summaries 2012-2015

Location	Year	Highest 1-Hr.	8-Hr. Average	# of Days Exceeding Standard: State 1-Hr.	Federal 8-Hr.
Eureka – Humboldt Hill	2012	0.053	0.048	0	0
	2013	0.055	0.049	0	0
	2014	0.049	0.043	0	0
	2015	0.060	0.052	0	0
Eureka-Jacobs	2012	0.055	0.048	0	0
	2013	0.051	0.049	0	0
	2014	0.060	0.050	0	0
	2015	0.054	0.045	0	0
North Coast Air Basin	2012	0.073	0.063	0	0
	2013	0.069	0.062	0	0
	2014	0.070	0.064	0	0
	2015	0.076	0.063	0	0

Source: California Air Resources Board, iADAM: Air Quality Data Statistics, 2016.

Carbon Monoxide

CO is a public health concern because it combines readily with hemoglobin in the bloodstream, reducing the amount of oxygen transported by blood. State and federal CO standards have been set for both 1-hour and 8-hour averaging times. The State 1-hour standard is 20 ppm by volume, and the federal 1-hour standard is 35 ppm. Both the State and federal standards are 9 ppm for the 8-hour averaging period. Motor vehicles are the dominant source of CO emissions in most areas. High CO levels develop primarily during winter, when light winds combine with ground-level temperature inversions (typically between evening and early morning). These conditions result in reduced dispersion of vehicle emissions. Also, motor vehicles emit CO at higher rates when air temperatures are low.

Nitrogen Dioxide

NO_2 is an essential ingredient in the formation of ground-level ozone pollution. NO_2 is one of the NO_X emitted from high-temperature combustion processes, such as those occurring in trucks, cars, and power plants. Home heaters and gas stoves also produce NO_2 in indoor settings.

Besides causing adverse health effects, NO_2 is responsible for the visibility reducing reddish-brown tinge seen in smoggy air in California. NO_2 is a reactive, oxidizing gas capable of damaging cells lining the respiratory tract. Studies suggest that NO_2 exposure can increase the risk of acute and chronic respiratory disease (BAAQMD, 2011). Due to potential health effects at or near the current air quality standard, the California Air Resources Board (CARB) recently revised the State ambient air quality standard for NO_2. The U.S. EPA recently adopted a new 1-hour NO_2 standard of 0.10 ppm.

Sulfur Dioxide

Sulfur dioxide is a colorless gas with a strong odor. It can damage materials through acid deposition. It is produced by the combustion of sulfur-containing fuels, such as oil and coal. Refineries, chemical plants, and pulp mills are the primary industrial sources of sulfur dioxide emissions. Adverse health effects associated with exposure to high levels of sulfur dioxide include irritation of lung tissue, as well as increased risk of acute and chronic respiratory illness (BAAQMD, 2011).

Lead

Lead occurs in the atmosphere as particulate matter. It is primarily emitted by gasoline-powered motor vehicles, although the use of lead in fuel has been virtually eliminated. As a result, levels throughout the State have dropped dramatically.

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer or serious illness) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, State, and federal level. The identification, regulation, and monitoring of TACs is relatively new compared to that for criteria air pollutants that have established ambient air quality standards. TACs are regulated or evaluated on the basis of risk to human health rather than comparison to an ambient air quality standard or emission-based threshold.

Diesel exhaust is the predominant TAC in urban air with the potential to cause cancer. It is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). According to the CARB, diesel exhaust is a complex mixture of gases, vapors, and fine particles. This complexity makes the evaluation of health effects of diesel exhaust a difficult scientific issue. Some of the chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the CARB, and are listed as carcinogens under the State's Proposition 65 or under the federal Hazardous Air Pollutants programs. California has

adopted a comprehensive diesel risk reduction program. The CARB recently adopted new regulations requiring the retrofit and/or replacement of construction equipment, on-highway diesel trucks, and diesel buses in order to lower $PM_{2.5}$ emissions and reduce statewide cancer risk from diesel exhaust.

Sensitive Receptors

Sensitive receptors (e.g. children, senior citizens, and acutely or chronically ill people) are more susceptible to the effect of air pollution than the general population. Land uses that are considered sensitive receptors typically include residences, schools, parks, childcare centers, hospitals, convalescent homes, and retirement homes. Sensitive receptors in the project area primarily include residential uses to the north, west, and south. Arcata Elementary School and Cahill Park are also located approximately 350 feet to the southwest of the project site.

Odors

Odors are generally regarded as a nuisance or annoyance rather than a health hazard, although individuals can have a strong physical response to specific odors. Odor intensity depends on the concentration of the substance in the air. The ability to detect odors varies considerably among the population. The detection of odors is subjective, where some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. Reactions to odors vary significantly as well.

REGULATORY FRAMEWORK

The federal Clean Air Act of 1977 (CAA) governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the federal level, the U.S. Environmental Protection Agency (EPA) administers the CAA. The California Clean Air Act is administered by the California Air Resources Board (CARB) and by the Air Quality Management District's (AQMDs) at the regional and local levels.

Two types of standards regulate air pollution: emission standards and ambient air quality standards. Emission standards establish the levels of air pollutants that a particular source is allowed to release into the air. Ambient air quality standards establish the maximum allowable concentration of air pollutants within an area, such as a city or county. The federal government currently sets ambient air quality standards for six pollutants and CARB sets ambient air quality standards for ten pollutants. Pollutants for which there are ambient air quality standards are known as criteria pollutants.

Federal

Clean Air Act

The U.S. EPA is responsible for enforcing the federal Clean Air Act (CAA). The U.S. EPA is also responsible for establishing the National Ambient Air Quality Standards (NAAQS). The NAAQS are required under the CAA and subsequent amendments. The U.S. EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The U.S. EPA has jurisdiction over emission sources outside State waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California (automobiles sold in California must meet the stricter emission standards established by the CARB).

State of California

California Clean Air Act

In California, the CARB, which is part of the California Environmental Protection Agency, is responsible for meeting the State requirements of the federal CAA, administering the California Clean Air Act, and establishing the California Ambient Air Quality Standards (CAAQS). The California Clean Air Act, as amended in 1992, requires all 35 air districts in the state to endeavor to achieve and maintain the CAAQS. The CARB regulates mobile air pollution sources, such as motor vehicles. It is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. The CARB established passenger vehicle fuel specifications, which became effective in March, 1996. It oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

Regional

North Coast Unified Air Quality Management District

The North Coast Unified Air Quality Management District (Air District), one of 35 air districts in California, has jurisdiction over Humboldt, Del Norte, and Trinity counties. The Air District's primary responsibility is for controlling air pollution from stationary sources and is committed to achieving and maintaining healthful air quality throughout the tri-county jurisdiction. The Air District has permit authority over most types of stationary emission sources and can require stationary sources to obtain permits, impose emission limits, set fuel or material specifications, or establish operational limits to reduce air emissions. The Air District monitors air quality, enforces local, State and federal air quality regulations for counties within its jurisdiction, inventories and assess the health risks of TACs, and adopts rules that limit pollution.

As noted previously, the Air District is listed as "*attainment*" or "*unclassified*" for all the federal and state ambient air quality standards except for the state 24-hour particulate (PM_{10}) standard. In 1995, the Air District provided a study to identify the contributors of PM_{10} which is summarized in the Particulate Matter PM_{10} Attainment Plan Draft Report (1995). The Air District's website cautions the reader when referencing the report as it "*is not a document that is required in order for the District to come into attainment for the state standard*" and that the Air District is planning to update the document.

For operational activities, Rule 110 - New Source Review (NSR) And Prevention of Significant Deterioration establishes the pre-construction review requirements for new and modified stationary sources of air pollution, and to provide mechanisms by which authorities to construct for such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.

City of Arcata

Arcata General Plan

The City of Arcata General Plan addresses air quality in its Air Quality Element. The City's Air Quality Element has specific Goals and related Policies that address reducing stationary and mobile sources of air pollutants. Table 2.7-4 below contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 2.7-4 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
AQ-1 Point and Area Sources	Improve air quality by reducing emissions from stationary point sources of air pollution (e.g. wood burning fireplaces and gas powered lawn mowers) which cumulatively emit large quantities of emissions.	AQ-1b and AQ-1d
AQ-2 Mobile Sources of Air Pollutants	Improve air quality by reducing emissions from transportation sources, particularly motor vehicles, and other mobile sources. Reduce vehicle miles of travel and encourage shifts to alternative modes of travel.	AQ-2b, AQ-2c, AQ-2d, and AQ-2f

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if the project would result in any of the following effects:

- Conflict with or obstruct implementation of applicable air quality plans.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Proposed Project

Finding 2.7.1: Conflict with or Obstruct Implementation of Applicable Air Quality Plans.

Discussion:
The project site is located within the North Coast Air Basin which encompasses approximately 7,767 square miles. Air quality in Del Norte, Humboldt, and Trinity counties is regulated by the North Coast Unified Air Quality Management District (NCUAQMD). The Air District's primary responsibility is to achieve and maintain federal and state air quality standards, subject to the powers and duties of the California Air Resources Board (CARB).

The Air District is currently listed as being in "*attainment*" or is "*unclassified*" for all federal health protective standards for air pollution (ambient air quality standards). However, under state ambient air quality standards, the Air District has been designated "*nonattainment*" for particulate matter less than ten microns in size (PM_{10}) (NCUAQMD Website, 2016). PM_{10} air emissions include chemical emissions and other inhalable particulate matter with an aerodynamic diameter of less than 10 microns. PM_{10} emissions include, but are not limited to, smoke from wood stoves, dust from traffic on unpaved roads, vehicular exhaust emissions, and airborne salts and other particulate matter naturally generated by ocean surf.

A potentially significant impact to air quality would occur if the project would conflict with or obstruct the implementation of the applicable air management or attainment quality plan. Although the proposed project would represent an incremental increase in air emissions in the Air District, of primary concern is that project-related impacts have been properly anticipated in the regional air quality planning process and reduced whenever feasible. Therefore, it is necessary to assess the project's consistency with the applicable district air quality management or attainment plan(s).

The California Clean Air Act (CCAA) requires the Air District to achieve and maintain state ambient air quality standards for PM_{10} by the earliest practicable date. The Air District prepared a Particulate Matter Attainment Plan, Draft Report, in May 1995. This report includes a description of the planning area (North Coast Unified Air District), an emissions inventory, general attainment goals, and a listing of cost-effective control strategies. The Air District's Attainment Plan established goals to reduce PM_{10} emissions and eliminate the number of days in which standards are exceeded. The plan includes three areas of recommended control strategies to meet these goals: transportation, land use, and burning. Control measures for these areas are included in the Attainment Plan and have also been incorporated as policies in the Arcata General Plan. The project design incorporates control measures identified in the PM_{10} Attainment Plan appropriate to this type of project, such as:

Transportation

The project proposes to pay a fair share contribution for the construction of the applicable traffic flow improvements recommended in the W-Trans Traffic Study (Appendix L), or as required by the City of Arcata, which will improve traffic flow conditions and minimize the amount of vehicular related exhaust emissions, including the emissions of particulate matter.

Land Use

The project site is located in the northern central portion of the City of Arcata adjacent to existing residential neighborhoods and within walking and biking distance of Humboldt State University (~0.5 miles) and the City of Arcata Plaza and Downtown area (~1 mile). The project is also within walking and biking distance from the Westwood neighborhood commercial center (~0.75 miles) to the west. With the proposed trail to Maple Lane, the distance from the project site to the Westwood neighborhood commercial center will be reduced to ~0.5 miles. The close proximity of the project site to existing educational and employment centers will encourage the use of alternative modes of transportation by future residents which will reduce vehicle miles traveled and the emissions of particulate matter.

Burning

The proposed residential buildings will use energy-efficient electric or gas heating instead of woodstoves or fireplaces, which will significantly reduce PM_{10} emissions generated from heating during long-term operation of the project.

The Air District's Regulation 1 prohibits nuisance dust generation, such as that generated by construction activity. The City's standard condition for controlling dust emissions during construction (General Plan Policy AQ-2f (1-10), Pg. 4-47) will be included as a condition of approval by the City of Arcata for the proposed project. Compliance with the requirements in General Plan Policy AQ-2f will minimize dust generation during construction activity and provide greater consistency with the Attainment Plan.

Therefore, the proposed project as designed would not conflict with or obstruct implementation of applicable air quality plans.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.7.2: Violate any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings on a former industrial site that is within the north central portion of the City of Arcata, directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus.

The project is located in North Coast Air Basin and is subject to the jurisdiction of the North Coast Unified Air Quality Management District (NCUAQMD). In determining whether a project has significant air quality impacts on the environment, planners typically apply their local air district's thresholds of significance to projects in the review process. However, the Air District has not formally adopted project-level significance thresholds. Since the North Coast Unified Air Quality Management District (NCUAQMD) has not adopted significance thresholds applicable to residential projects, the Air District recommends the use of thresholds adopted by other air districts in the State such as the South Coast Air Quality Management District (SCAQMD). The SCAQMD has developed significance thresholds for criteria pollutants which are shown below in Table 2.7-5. Any project with daily emissions that exceed any of the indicated significance thresholds would be considered to contribute to a projected air quality violation.

Table 2.7-5 SCAQMD Air Quality Significance Thresholds

Pollutant	Emissions (Construction) (pounds per day)	Emissions (Operational) (pounds per day)
NOx	100	55
VOC/ROG	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SOx	150	150
CO	550	550
Lead	3	3

Source: SCAQMD CEQA Air Quality Significance Thresholds

As with any new development project, the proposed project has the potential to generate pollutant concentrations during both construction activities and long-term operation. The following provides an analysis based on the applicable significance thresholds established by the SCAQMD in order to meet federal and state Ambient Air Quality Standards.

Both construction and operational emissions for the proposed project were estimated using the California Emissions Estimator Model (CalEEMod) (Appendix G) which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model can be used for a variety of situations where an air quality analysis is necessary or desirable, such as California Environmental Quality Act (CEQA) documents, and is recommended for use by the NCUAQMD on their website under the section entitled "*Air Quality Planning & CEQA*" (www.ncuaqmd.org). The model applies inherent default values for various land uses, including trip generation rates based on the Institute of Transportation Engineers (ITE) Manual, vehicle mix, trip length, average speed, etc. However, where project-specific data is available, such data should be input into the model. Accordingly, based on project-specific information provided by the project applicant, the following assumptions were made for the proposed project's modeling:

- Construction was assumed to commence in January, 2018 and the project would be fully operational in August, 2019;
- All construction equipment would comply with U.S. Environmental Protection Agency Tier 1 engine standards or better. Tier 1 engines have reduced emissions, increased performance, and improved fuel efficiency compared to engines that do not meet these standards;
- Watering of exposed areas during construction activity will occur two times per day to reduce potential dust emissions;
- Construction equipment will not exceed a speed of 15 miles per hour to limit the generation of dust emissions;
- The proposed project's inherent site and design features, including increase in density compared to surrounding uses (21 residential units/acre vs. 8 residential units/acre),

improvement of destination accessibility (specifically to HSU), and improvement of the pedestrian/bicycle network;

- The project would not include any hearths, woodstoves, or fireplaces. The proposed buildings will use energy-efficient electric or gas heating;
- Low VOC paints would be used on the proposed structures;
- To reduce indoor water use it is proposed to install low flow plumbing fixtures in the residential buildings and club house;
- To reduce outdoor water use, it is proposed to install a low flow irrigation system in compliance with the City of Arcata's Water Efficient Landscape Ordinance (WELO);
- The development would include recycling services which is conservatively estimated to reduce solid waste generation by 20%; and
- Approximately 200 trees of various species would be planted throughout the project site.

The results of the proposed project's emissions estimations were compared to the thresholds of significance above in order to determine the associated level of impact. All CalEEMod modeling results are included as Appendix G of the EIR.

Construction
Construction activities associated with the proposed project will result in emissions of ROG, NOx, CO, SOx, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Demolition
- Grading
- Building Construction
- Paving
- Architectural Coatings (Painting)

The assumptions for equipment use and duration used to estimate air quality emissions are shown in Table 2.7-6.

Table 2.7-6 Construction Equipment by Phase

Phase	Days	Equipment
Demolition	15 days	1 concrete/industrial saw (8 hrs/day) 3 excavators (8 hrs/day) 2 rubber tire dozer (8 hrs\day)
Grading	20 days	2 excavators (8 hrs/day) 1 grader (8 hrs/day) 1 rubber tire dozer (8 hrs/day) 2 scrapers (8 hrs/day) 2 tractor/loader/backhoes (8 hrs/day)
Building Construction	280 days	1 crane (7 hrs/day)

Phase	Days	Equipment
		3 forklifts (8 hrs/day) 1 generator set (8 hrs/day) 3 tractor/loader/backhoes (7 hrs/day) 1 welder (8 hrs/day)
Paving	5 days	2 pavers (8 hrs/day) 2 paving equipment (8 hrs/day) 2 rollers (8 hrs/day)
Architectural Coatings	45 days	1 air compressor (6 hrs/day)

Source: California Emissions Estimator Model (Appendix G) and project plans

Table 2.7-7 shows the SCAQMD significance thresholds for construction emissions compared to the proposed project's daily emissions.

Table 2.7-7 Daily Construction Emissions

Criteria Pollutants	Emission (pounds per day)					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Daily Emissions	28.1	36.5	50.8	0.05	4.0	2.65
Significance Threshold	75	100	550	150	150	55
Exceeds Significance Threshold?	No	No	No	No	No	No

Source: SCAQMD, California Emissions Estimator Model (Appendix G), and Project Plans

As shown in Table 2.7-7, construction related emissions would not exceed any of the SCAQMD construction significance thresholds. As such, the proposed project would not emit substantial concentrations of these pollutants during construction activities and would not contribute to an existing or projected air quality violation, on a direct or cumulative basis.

During the proposed construction activity, there is the potential for dust to be generated that could impact nearby residential uses. The NCUAQMD's Regulation 1 prohibits nuisance dust generation, such as that generated by construction activity. The City's standard condition for controlling dust emissions during construction (General Plan Policy AQ-2f (1-10), Pg. 4-47) will be included by the City of Arcata as a condition of approval for the proposed project. The construction contractor shall be required to adhere to the following control measures from General Plan Policy AQ-2f to reduce dust emissions:

1) Water all active construction areas twice per day and use erosion control measures to prevent water runoff containing silt and debris from entering the storm drain system.
2) Cover trucks hauling soil, sand, and other loose material.
3) Pave, water, or apply non-toxic soil stabilizers on unpaved access roads and parking areas.
4) Sweep paved access roads and parking areas daily.
5) Sweep streets daily if visible material is carried onto adjacent public streets.
6) Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.

7) Enclose, cover, water, or apply non-toxic soil binders to open materials stockpiles.
8) Limit traffic speeds to 15 mph on unpaved access roads.
9) Install erosion control measures to prevent silt runoff onto public roadways.
10) Replant vegetation in disturbed areas within 30 days after project completion.

Compliance with the requirements in General Plan Policy AQ-2f will minimize dust generation during construction activity and ensure that the project does not violate the Air District's and City's regulations concerning nuisance dust generation.

Operation
The proposed project would be operated as a student housing community with a variety of unit types including studios to 4 bedroom/4 bath units. Typical operation of a student housing community would include residents, employees, and visitors traveling to and from the proposed residences and general maintenance activities. Table 2.7-8 shows the SCAQMD significance thresholds for operations emissions compared to the proposed project's daily emissions.

Table 2.7-8 Daily Operational Emissions

Criteria Pollutants	Emission (pounds per day)					
	ROG	NOx	CO	SOx	PM_{10}	$PM_{2.5}$
Daily Emissions	20.8	26.6	122.1	0.15	10.9	3.21
Significance Threshold	55	55	550	150	150	55
Exceeds Significance Threshold?	No	No	No	No	No	No

Source: SCAQMD, California Emissions Estimator Model (Appendix G), and Project Plans

As shown in Table 2.7-8, operational related emissions would not exceed SCAQMD operational significance thresholds. As such, the proposed project would not emit substantial concentrations of these pollutants during long-term operation and would not contribute to an existing or projected air quality violation, on a direct or cumulative basis.

Carbon monoxide (CO) hot spots are typically associated with idling vehicles at extremely busy intersections (i.e. intersection with an excess of 100,000 vehicle trips per day). There are no intersections in the City of Arcata or general project area which exceed the 100,000 vehicle per day threshold typically associated with CO hot spots. In addition, the North Coast Air Basin is currently in attainment for carbon monoxide (CO). As such, project related vehicular emissions would not create a hot spot and would not substantially contribute to an existing or projected CO hot spot.

With the proposed conditions of approval, the project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.7.3: 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 (Including Releasing Emissions Which Exceed Quantitative Thresholds for Ozone Precursors).

Discussion:
The North Coast Unified Air District is currently listed as being in "*attainment*" or is "*unclassified*" for all federal health protective standards for air pollution (ambient air quality standards). However, under State ambient air quality standards, the Air District has been designated "*nonattainment*" for particulate matter less than ten microns in size (PM_{10}) (NCUAQMD Website, 2016). Any project with daily emissions that exceeds the threshold of significance for PM_{10} should be considered as having an individually and cumulatively significant air quality impact. Conversely, projects that are below the threshold of significance for PM_{10} would have a less than significant impact on both a direct and cumulative basis. As indicated by the air quality impact analysis in this section under Finding 2.7.2, short-term construction activities and long-term operation of the proposed project would not exceed the threshold of significance for PM_{10}.

Therefore, the proposed project will not result in a cumulatively considerable net increase of any criteria pollutant for which the North Coast Unified Air District is non-attainment under an applicable federal or State ambient air quality standard.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.7.4: Expose Sensitive Receptors to Substantial Pollutant Concentrations.

Discussion:
Sensitive receptors (e.g. children, senior citizens, and acutely or chronically ill people) are more susceptible to the effects of air pollution than the general population. Land uses that are considered sensitive receptors typically include residences, schools, parks, childcare centers, hospitals, convalescent homes, and retirement homes. Sensitive receptors in the project area primarily include residential uses to the north, west, and south. Arcata Elementary School and Cahill Park are also located approximately 350 feet to the southwest of the project site.

As indicated by the air quality impact analysis in this section under Finding 2.7.2, the proposed project would not exceed any of the thresholds of significance for criteria pollutants during short-term construction activities or long term operation. In addition, the proposed project would not create a carbon monoxide (CO) hot spot.

Therefore, the proposed project will not expose sensitive receptors to substantial pollutant concentrations.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.7.5: Create Objectionable Odors Affecting a Substantial Number of People.

Discussion:
The proposed project is a residential development which includes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings.

Construction
During construction, there is the potential for the generation of objectionable odors in the form of diesel exhaust and volatile organic compounds (from architectural coatings and paint) in the immediate vicinity of the project site. However, these emissions will rapidly dissipate and be diluted by the atmosphere downwind of the site.

Operation
The proposed multi-family residential development is not a type of land use that would generate objectionable odors during long-term operation. In addition, the project site is not located within close proximity (< 0.5 miles) to any land uses generating significant odors such as a wastewater treatment plant, landfill, feedlot, asphalt batch plant, fish processing plant, or rendering plant.

Therefore, the proposed project will not create objectionable odors affecting a substantial number of people.

Determination:
Less than significant impact.

Mitigation:
None required.

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SECTION 2.8 GREENHOUSE GAS EMISSIONS

This section evaluates the potential impacts related to greenhouse gas (GHG) emissions during construction and operation of the project. To provide the basis for this evaluation, the Environmental Setting section describes the existing setting with regard to GHG emissions for the project area and the Regulatory Framework section describes the regulatory background that applies to the project. The Impact Analysis section establishes the thresholds of significance, evaluates GHG impacts, and identifies the significance of impacts. Where appropriate, mitigations are presented to reduce impacts to less than significant.

ENVIRONMENTAL SETTING

Gases that trap heat in the atmosphere are referred to as greenhouse gases because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse. The accumulation of GHGs has been implicated as the driving force for global climate change. The primary GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), and water vapor (H_2O).

While GHGs in the atmosphere are naturally occurring, the emission rate of CO_2, CH_4 and N_2 has been accelerated by human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with such activities as agricultural practices and landfills. Other GHGs include hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, which are generated during certain industrial processes. GHGs are typically reported in "carbon-dioxide-equivalent" measures (CO_2e).

There is international scientific consensus that human-caused increases in GHGs have contributed, and will continue to contribute, to climate change. Potential climate change impacts in California may include, but are not limited to, a decrease in snowpack, sea level rise, and a greater number of extreme heat days per year, high ozone days, large forest fires, and drought years. Secondary effects are likely to include impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity.

The EPA reports U.S. GHG emissions for 2011 as 6,702 million metric tons (MMT) of CO_2e. Electricity production accounts for 33 percent, followed by the transportation sector at 28 percent and the industrial sector at 20 percent. Commercial and residential fuel use and the agricultural sector accounted for the remaining 19 percent (U.S. EPA, 2013).

The CARB estimated that in 2011 California produced about 448 MMT CO_2e. The transportation sector was the highest source at 38 percent of the State's total GHGs, followed by the industrial sector at 22 percent, and electricity generation (both in-state and out-of-state) at 19 percent. Commercial and residential fuel use, recycling and waste, high global warming

potential, and agricultural sectors accounted for the remaining 21 percent of the State's total GHGs (CARB, 2013).

Greenhouse Gas Emissions of Concern

According to the amended CEQA Guidelines Section 15364.5, greenhouse gas includes but is not limited to: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Carbon Dioxide (CO_2): Carbon dioxide enters through the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and also as result of other chemical reactions (e.g. manufacturing of cement). Carbon dioxide is also removed from the atmosphere (or "sequestered") when it is absorbed by plants as part of the biological carbon cycle.

Methane (CH_4): Methane is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices, and by the decay of organic waste in municipal solid waste landfills.

Nitrous Oxide (N_2O): Nitrous oxide is emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

Hydrofluorocarbons, Perfluorocarbons, and Sulfure Hexafluoride: These are referred to as "Fluorinated Gases" and are synthetic, power greenhouse gasses that are emitted from a variety of industrial processes. These gases are typically emitted in smaller quantities, but because they are potent greenhouse gases, they are sometimes referred to as High Global Warming Potential gases.

REGULATORY FRAMEWORK

State of California

Assembly Bill 1493

Assembly Bill (AB) 1493, approved in 2002, required CARB to develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks and other vehicles determined by the CARB to be vehicles whose primary use is noncommercial personal transportation in the state."

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, then-Governor Arnold Schwarzenegger established Executive Order S-3-05. This order sets forth target dates by which statewide GHG emissions would be reduced. These include: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

Senate Bill 97

Senate Bill (SB) 97, signed in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency, guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by 2009, and directed the Natural Resources Agency to certify or adopt those guidelines by January 2010. On December 30, 2009, the Natural Resources Agency adopted amendments to the State CEQA Guidelines, as required by SB 97. These State CEQA Guideline amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective March 18, 2010.

California Environmental Quality Act

As a result of revisions to the CEQA Guidelines that became effective in March 2010, lead agencies are obligated to determine whether a project's GHG emissions significantly affect the environment and to impose feasible mitigation to eliminate or substantially lessen any such significant effect (NCUAQMD, 2017).

Assembly Bill 32 and the California Climate Change Scoping Plan

Assembly Bill 32 Requirements

In 2006, the California legislature passed AB32 (California Health and Safety Code Division 25.5, Sections 38500, et seq.), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emissions limits, regulations, and other measures, such that statewide GHG emissions are reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions). AB 32 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments (municipal and community-wide) and notes that successful implementation of the plan relies on local governments' land use planning and urban growth decisions.

Scoping Plan Provisions

Pursuant to AB 32, the CARB adopted a Climate Change Scoping Plan in December 2008 (re-approved by CARB on August 24, 2011) outlining measures to meet the 2020 GHG reduction goals. In order to meet these goals, California must reduce its GHG emissions by 30 percent

below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures that are worth studying further, and that the State of California may implement, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO2e (about 191 million U.S. tons) from transportation, energy, agriculture, forestry, and other sources could be achieved should the state implement all of the measures in the Scoping Plan. The Scoping Plan relies on the requirements of SB 375 (discussed below) to implement the carbon emission reductions anticipated from land use decisions.

The First Update to the Climate Change Scoping Plan describes progress made to meet near-term emissions goals of AB 32, defines California's climate change priorities and activities for the next few years, and describes the issues facing the State as it establishes a framework for achieving air quality and climate goals beyond the year 2020. In regards to achieving the 2050 GHG reduction goal, "progressing toward California's long-term climate goals will require that GHG reduction rates be significantly accelerated. Emissions from 2020 to 2050 will have to decline at more than twice the rate of that which is needed to reach the 2020 statewide emissions limit" (CARB, 2014b).

Cap-and-Trade Program

The Scoping Plan identifies cap-and-trade as a key strategy for helping California reduce its GHG emissions (CARB, 2008). A cap-and-trade program sets the total amount of GHG emissions allowable for facilities under the cap and allows covered sources, including producers and consumers of energy, to determine the least expensive strategies to comply. AB 32 required CARB to adopt the cap-and-trade regulation by January 1, 2011, and the program began in November, 2012.

Carbon offset credits are created through the development of projects, such as renewable energy generation or carbon sequestration projects, that achieve the reduction of emissions from activities not otherwise regulated, covered under an emissions cap, or resulting from government incentives. Offsets are verified reductions of emissions whose ownership can be transferred to others. As required by AB 32, any reduction of GHG emissions used for compliance purposes must be real, permanent, quantifiable, verifiable, enforceable, and additional. Offsets used to meet regulatory requirements must be quantified according to the CARB-adopted methodologies, and CARB must adopt a regulation to verify and enforce the reductions. The criteria developed will ensure that the reductions are quantified accurately and are not double-counted within the system (CARB, 2008). Offsets used for CEQA mitigation do not have to be quantified according to CARB-adopted methodologies.

Executive Order S-1-07

Executive Order S-1-07, signed by then-Governor Arnold Schwarzenegger in 2007, proclaimed that the transportation sector is the main source of GHG emissions in California, at over 40 percent of statewide emissions. The order established a goal of reducing the carbon intensity of transportation fuels sold in California by a minimum of 10 percent by 2020. It also directed CARB to determine whether this Low Carbon Fuel Standard could be adopted as a discrete, early-action measure after meeting the mandates in AB 32. CARB adopted the Low Carbon Fuel Standard on April 23, 2009.

Senate Bills 1078 and 107 and Executive Orders S-14-08 and S-21-09

SB 1078 (Chapter 516, Statutes of 2002) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the CARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020.

The 33 percent-by-2020 goal was codified in April, 2011 with Senate Bill X1-2, which was signed by Governor Edmund G. Brown, Jr. This new Renewable Portfolio Standard (RPS) preempts the CARB 33 percent Renewable Electricity Standard, and applies to all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities must adopt the new RPS goals of 20 percent of retail sales from renewables by the end of 2013 and 25 percent by the end of 2016, with the 33 percent requirement being met by the end of 2020.

Senate Bill 1368

SB 1368, a companion bill to AB 32, was approved in 2006. It requires the California Public Utilities Commission (CPUC) to establish a GHG emission performance standard for baseload generation from investor-owned utilities by February 1, 2007. The California Energy Commission (CEC) was also required to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

Senate Bill 375

SB 375, approved in 2008, encourages housing and transportation planning on a regional scale, in a manner designed to reduce vehicle use and associated GHG emissions. As required under this law, CARB has assigned regional GHG reduction targets for the automobile and light-truck sector for 2020 and 2035. The targets apply to the regions in the State covered by the 18 Metropolitan Planning Organizations (MPOs), including the Association of Bay Area Governments (ABAG) in the Bay Area. If MPOs do not meet GHG reduction targets, transportation projects will not be eligible for funding programmed after 2012. CARB adopted regional reduction targets in 2010. For the Bay Area, the adopted reduction targets call for a 10 percent reduction by 2020 and a 16 percent reduction by 2035.

SB 375 also requires each MPO to include a Sustainable Communities Strategy (SCS) in their Regional Transportation Plan. The SCS must set forth a vision for growth for the region while taking into account transportation, housing, environmental, and economic needs. The SCS will be the blueprint by which the region will meet its GHG emissions reduction target if there is a feasible way to do so.

Executive Order B-30-15

In April 2015, Governor Edmund G. Brown, Jr. signed Executive Order B-30-15 in order to establish an interim GHG reduction goal for California of 40 percent below 1990 levels by 2030. This target GHG reduction by 2030 would make it possible for California to reach the ultimate goal of reducing GHG emissions by 80 percent under 1990 levels by the year 2050.

Senate Bill 350

In October 2015, Governor Brown signed SB 350, which requires that that 50 percent of the annual electricity generated and sold to California retail customers be from eligible renewable energy resources by December 31, 2030. Under the legislation, the State Energy Resources Conservation and Development Commission will establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas final end uses of retail customers by January 1, 2030. The bill also requires the California Public Utilities Commission to establish efficiency targets for electrical and gas corporations and requires local publicly owned electric utilities to establish annual targets for energy efficiency savings and demand reduction.

California Building Standards

Green Building Standards Code
On January 12, 2010, the California Building Standards Commission adopted the 2010 California Green Building Standards Code, otherwise known as CALGreen. (CALGreen took effect in January 2014.) CALGreen is contained within Part 11 of the California Building Standards Code, otherwise known as the state Building Code, Title 24 of the California Code of Regulations. The list below identifies the most substantive CALGreen requirements. In addition, CALGreen encourages local governments to adopt voluntary provisions, known as Tier 1 and Tier 2 provisions, to reduce air pollutant emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. CALGreen includes the following provisions:

- A 20 percent mandatory reduction in indoor water use, along with fixture-specific restrictions on water flow
- Separate indoor and outdoor water meters to measure nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects
- Diversion of 50 percent of construction waste from landfills

- Mandatory periodic inspections of energy systems (i.e., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies
- Mandatory use of low-pollutant-emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.

Building Energy Efficiency Standards
The State of California also regulates building energy consumption under the state Building Code. The Building Energy Efficiency Standards, contained within Part 1 (Administrative Code) and Part 6 (Energy Code) of the Building Code, were developed by the CEC and apply to energy consumed for heating, cooling, ventilation, water heating, and lighting in new residential and non-residential buildings. The CEC updates these standards periodically, with the most recent update in 2016.

Regional

North Coast Unified Air Quality Management District (NCUAQMD)

The NCUAQMD is a regional environmental regulatory agency with jurisdiction over the North Coast Unified Air District, including Humboldt County. The NCUAQMD enforces local, state, and federal air quality regulations and air quality permits. In determining whether a project has significant air quality impacts on the environment, the local air district's thresholds of significance are typically applied to projects in the review process. However, the NCUAQMD has not adopted a numerical threshold for determining the significance of greenhouse gas (GHG) emissions. However, NCUAQMD Rule 111 (Federal Permitting Requirements for Sources of Greenhouse Gases) was adopted in 2011 to regulate GHG emissions from stationary sources. A new stationary source subject to this rule must be permitted and must implement Best Available Control Technology for greenhouse gas emissions (NCUAQMD, 2017).

The North Coast Air District is listed as "*attainment*" or "*unclassified*" for all the federal and state ambient air quality standards except for the state 24-hour particulate (PM_{10}) standard. The California Clean Air Act (CCAA) requires the NCUAQMD to achieve and maintain state ambient air quality standards for PM_{10} by the earliest practicable date. The NCUAQMD prepared a Particulate Matter Attainment Plan, Draft Report, in May 1995. This report includes a description of the planning area (North Coast Unified Air District), an emissions inventory, general attainment goals, and a listing of cost-effective control strategies. The NCUAQMD's Attainment Plan established goals to reduce PM_{10} emissions and eliminate the number of days in which standards are exceeded. The Plan includes three areas of recommended control strategies to meet these goals: transportation, land use, and burning. Control measures for these areas are included in the Attainment Plan and have also been incorporated as policies in the Arcata General Plan. Compliance with the control measures in the Particulate Matter Attainment Plan would not only result in a reduction in PM_{10} emissions, but would also result in a reduction of GHG emissions. Control strategies focused on reducing transportation emissions, more efficient

land-use patterns, and reducing emissions from burning activities would also reduce the amount of GHG emissions.

City of Arcata

The City of Arcata developed a Community Greenhouse Gas Reduction Plan in 2006 which set a greenhouse gas (GHG) emissions target of 20% below 2000 GHG levels by 2010. The Plan was developed in part by analyzing an inventory of community-wide greenhouse gas emissions that was conducted in 2000. The plan focuses on six action areas:

1) Energy efficiency
2) Renewable energy
3) Sustainable transportation
4) Waste and consumption reduction
5) Sequestration and other methods
6) Cross-cutting approaches

In addition to reducing greenhouse gas emissions it is expected that the implementation of this Plan will offer many other community benefits. These include: energy cost savings with subsequent benefits to the local economy, cleaner air, less reliance on fossil fuels and imported energy sources, and a move toward a more sustainable energy economy.

Based on an updated community-wide GHG emissions inventory conducted in 2007, City of Arcata staff estimates that the City's GHG reduction target has not been achieved within the residential, commercial, and industrial sectors.

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if the project would result in any of the following effects:

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

Proposed Project

Finding 2.8.1: Generate Greenhouse Gas Emissions, Either Directly or Indirectly, that May Have a Significant Impact on the Environment.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings on a former industrial site that is within the north central portion of the City of Arcata, directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus.

There are several unique challenges to analyzing greenhouse gas (GHG) emissions and climate change largely because of the global nature of climate change. Most environmental analyses examine the "*project specific*" impacts that a particular project is likely to generate. With regard to global warming, however, it is generally accepted that while the magnitude of global warming effects is substantial, the contribution of an individual project is so small that direct project specific impacts are highly unlikely.

However, the emissions generated by a project may be "*cumulatively considerable*," meaning the incremental effects of an individual project when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. The CEQA Guidelines add that a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program (including, but not limited to, water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, plans or regulations for the reduction of greenhouse gas emissions) that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area in which the project is located.

Project construction activities would result in a temporary increase in GHG emissions, including exhaust emissions from on-road haul trucks, worker commute vehicles, and off-road heavy duty equipment. The proposed project would be under various stages of construction for approximately 20 months but the construction-related greenhouse gas emissions would be short-term. Operation of the proposed project would result in an increase in GHG emissions from the utilities serving the residential development (e.g., water, gas, and electricity) and vehicle traffic from residents, visitors, and employees.

The City of Arcata and the North Coast Unified Air Quality Management District (NCUAQMD) have not adopted numerical thresholds for determining the significance of greenhouse gas emissions. Since the City of Arcata and NCUAQMD have not adopted significance thresholds, the district recommends the use of thresholds adopted by other air districts in the State such as the Bay Area Air Quality Management District (BAAQMD). The BAAQMD (2011) has developed a project-level efficiency target of 4.6 metric tons of carbon dioxide equivalent (MTCO2e) per service population (residents + employees).

"Service population" is a term used to express the total population plus employment of proposed projects. Projects that accommodate only employment and no residences would estimate the level of employment accommodated at buildout and use this figure to represent the service population. Projects that would accommodate only residences would estimate the population accommodated by the project when fully operated. The project proposes a student housing community which will provide housing for 800 students and employ approximately 6 persons as on-site managers, maintenance staff, etc. As such, the service population will be 806 persons for the proposed project.

Table 2.8-1 below provides a summary of the proposed project's projected annual greenhouse gas emissions as determined by the California Emissions Estimator Model (CalEEMod) (Appendix G).

Table 2.8-1 Total Project Greenhouse Gas Emissions (Annual Metric Tons Per Year)

Emission Source	GHG Emissions MT/yr.			
	CO2	CH4	N2O	Total CO2e
Annual construction-related emissions amortized Over 50 years	15.6	0.002	--	15.6
Area Source Emissions	2.9	2.8e3	--	2.9
Energy	332.4	0.014	3.61e3	333.8
Mobile Sources	1,845.2	0.088	--	1,847.1
Waste	22.4	1.32	--	50.2
Water Usage	39.6	0.51	0.012	54.2
Service Population	**806**			
MTCO2e/SP/Yr	**2.85**			
Threshold MTCO2e/SP/Yr	**4.6**			
Significant?	**No**			

Note: Total obtained from CalEEMod™ and may not total 100% due to rounding.

Note: Table results include scientific notation. E is used to represent times ten raised to the power of (which would be written as x10b11) and is followed by the value of the exponent.

Source: BAAQMD, California Emission Estimator Model (Appendix G), and Project Plans

As shown in Table 2.8-1, the proposed project is estimated to emit approximately 2.42 MTCO2e which is below the BAAQMD threshold (4.6 metric tons of carbon dioxide equivalent [MTCO2e] per service population) used to determine if greenhouse gas emissions are significant.

Therefore, the proposed project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.8.2: Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings on a former industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus. For the purposes of this analysis, the proposed project was evaluated against the following applicable plans, policies, and regulations:

1) AB 32 Climate Change Scoping Plan

2) NCUAQMD Particulate Matter Attainment Plan

3) City of Arcata Community Greenhouse Gas Reduction Plan

At present, there are no other applicable local or regional plans, policies, or regulations (e.g. Climate Action Plan) pertaining to greenhouse gas emissions that apply to the proposed project.

AB 32 Climate Change Scoping Plan
The Climate Change Scoping Plan identifies emission reduction measures to achieve the greenhouse gas emissions goal as set forth in the plan. Thus, projects that are consistent with or don't interfere with implementation of the measures contained in the plan are consistent with the plan's mandate to reduce greenhouse gas emissions.

The project is proposing the following measures consistent with the plan:

Energy Efficiency

a) The proposed project seeks a Leadership in Energy and Environmental Design (LEED) Silver rating which would include energy-efficient design for windows, walls, HVAC, and lighting. Other aspects of the project that will contribute towards achieving a LEED Silver rating include: 1) infill development project away from sensitive habitats and in close proximity to mass transit; 2) on-site pedestrian/bicycle improvements; 3) bicycle storage in excess of the City's Land Use Code standards; 4) preferred off-street parking for clean fuel vehicles; 5) electric vehicle charging stations; 6) use of low flow plumbing fixtures; 7) water efficient landscaping; and 8) diversion of construction waste (see additional discussion of these measures in this section and Chapter 5 [Energy Conservation] of the EIR).
b) The proposed project will install low flow plumbing fixtures that will reduce resident indoor water use.

c) The project proposes water efficient landscaping and a low-flow irrigation system that will reduce irrigation water use.

d) All buildings will have Solar Reflectance Index (SRI) compliant roofing.

In addition, electricity service for the City of Arcata was transitioned to the Redwood Coast Energy Authority (RCEA) Community Choice Energy (CCE) program in May 2017. The CCE program allows city and county governments to pool (or aggregate) the electricity demands of their communities in order to increase local control over electric rates, purchase power with higher renewable content, reduce greenhouse gas emissions, and reinvest in local energy infrastructure. The electricity continues to be distributed and delivered over the existing power lines by the incumbent utility, which is Pacific Gas & Electric (PG&E) in Humboldt County. The CCE program procures approximately 40% of its power from renewable and carbon-free sources, which is approximately 5% more renewable energy than the power sources previously provided by PG&E (RCEA, 2017). In addition, customers can choose to opt up to a premium service called Repower+, which is 100% renewable energy at only $0.01 more per kilowatt hour (kWh). The proposed project will be automatically enrolled in the RCEA CCE program and will contribute towards increasing the amount of renewable power placed on California's grid, which has the effect of reducing greenhouse gas emissions and stimulating new renewable development in our region and State.

NCUAQMD Particulate Matter Attainment Plan

The NCUAQMD prepared a Particulate Matter Attainment Plan, Draft Report, in May 1995 with the goal of achieving and maintaining state ambient air quality standards for PM_{10}. This report includes a description of the planning area (North Coast Unified Air District), an emissions inventory, general attainment goals, and a listing of cost-effective control strategies. The NCUAQMD's Attainment Plan established goals to reduce PM_{10} emissions and eliminate the number of days in which standards are exceeded. The Plan includes three areas of recommended control strategies to meet these goals: transportation, land use, and burning. Control measures for these areas are included in the Attainment Plan and have also been incorporated as policies in the Arcata General Plan. Compliance with the control measures in the Particulate Matter Attainment Plan would not only result in a reduction in PM_{10} emissions, but would also result in a reduction of GHG emissions. Control strategies focused on reducing transportation emissions, more efficient land-use patterns, and reducing emissions from burning activities would also reduce the amount of GHG emissions. The project is proposing the following measures consistent with the plan:

<u>Transportation</u>

The project proposes to pay a fair share contribution for the construction of the applicable traffic flow improvements recommended in the W-Trans Traffic Study (Appendix L), or as required by the City of Arcata, which will improve traffic flow conditions and minimize the amount of vehicular related exhaust emissions, including GHG emissions

Land Use

The project site is located in the northern central portion of the City of Arcata adjacent to existing residential neighborhoods and within walking and biking distance of Humboldt State University (~0.5 miles) and the City of Arcata Plaza and Downtown area (~1 mile). The project is also within walking and biking distance from the Westwood neighborhood commercial center (~0.75 miles) to the west. With the proposed trail to Maple Lane, the distance from the project site to the Westwood neighborhood commercial center will be reduced to ~0.5 miles. The close proximity of the project site to existing educational and employment centers will encourage the use of alternative modes of transportation by future residents which will reduce vehicle miles traveled and associated GHG emissions.

Burning

The proposed residential buildings will use energy-efficient electric or gas heating instead of woodstoves or fireplaces, which will reduce GHG emissions generated from heating during long-term operation of the project.

Arcata Community Greenhouse Gas Reduction Plan

The City of Arcata developed a Community Greenhouse Gas Reduction Plan in 2006 which set a greenhouse gas (GHG) emissions target of 20% below 2000 GHG levels by 2010. The plan was developed in part by analyzing an inventory of community-wide greenhouse gas emissions that was conducted in 2000. The plan focuses on six action areas:

- Energy efficiency
- Renewable energy
- Sustainable transportation
- Waste and consumption reduction
- Sequestration and other methods
- Cross-cutting approaches

In addition to reducing greenhouse gas emissions it is expected that the implementation of this Plan will offer many other community benefits. These include: energy cost savings with subsequent benefits to the local economy, cleaner air, less reliance on fossil fuels and imported energy sources, and a move toward a more sustainable energy economy.

Based on an updated community-wide GHG emissions inventory conducted in 2007, City of Arcata staff estimates that the City's GHG reduction target has not been achieved within the residential, commercial, and industrial sectors.

The proposed project is consistent with the following strategies in the Arcata Community Greenhouse Gas Reduction Plan including:

Encourage Energy Efficient Buildings, Building Construction, and Retrofit

The proposed project seeks a Leadership in Energy and Environmental Design (LEED) Silver rating which would include energy-efficient design for windows, walls, HVAC, and lighting. Other aspects of the project that will contribute towards achieving a LEED Silver rating include: 1) infill development project away from sensitive habitats and in close proximity to mass transit; 2) on-site pedestrian/bicycle improvements; 3) bicycle storage in excess of the City's Land Use Code standards; 4) preferred off-street parking for clean fuel vehicles; 5) electric vehicle charging stations; 6) use of low flow plumbing fixtures; 7) water efficient landscaping; and 8) diversion of construction waste (see additional discussion of these measures in this section and Chapter 5 [Energy Conservation] of the EIR).

Improve Pedestrian/Bicycle Infrastructure

The project site is located within biking distance (approximately seven minute ride) from Humboldt State University. Bike lanes near the project site include the following: 1) St. Louis Road from St. Louis O.C. to the Spear Avenue roundabout, which continues north on West End Road and west on Spear Avenue (Class II); 2) LK Wood Boulevard from the St. Louis O.C. to 14th Street (Class II); 3) Sunset Avenue from LK Wood Boulevard to Foster Avenue (Class III); and 4) Foster Avenue from Alliance Road to Sunset Avenue (Class II). There is also a new Class I multi-use trail that provides access along Foster Avenue from Shay Park to Sunset Avenue. The closest bus stop to the project site (~0.25 mile walking distance) is on the Gold and Red Routes near the intersection of LK Wood Boulevard/Ridge Road, with connection to the rest of Arcata and the County.

To comply with the City's General Plan policies and Community Greenhouse Reduction Plan, the proposed project will construct new on-site pedestrian/bicycle improvements to serve the development, which are identified in the Arcata Pedestrian and Bicycle Master Plan (2010) and W-Trans Traffic Study (Appendix L), including the following:

a) An approximate 675-foot section of the Arcata Rail with Trail along the eastern edge of the project site from the northeast corner of the site to the southeast corner.

b) An approximate 500-foot section of trail along the north property line of the project site from the northeast corner of the site to the northern central portion of the site. This trail will connect to the City-owned Janes Creek Meadows Open Space Area and ultimately provide access to Maple Lane.

c) Sidewalk and pedestrian trails throughout the project site as illustrated on the Preliminary Landscape Plan prepared by KLA Landscape Architecture (see Figure 1F in Chapter 1 [Introduction]).

The applicant will also work with the City to develop off-site improvements that will improve bicycle/pedestrian access including the following:

a) An approximate 200-foot section of the Arcata Rail with Trail from the southeast corner of the site to the northern end of Todd Court. This section of the trail will be developed through parcels 505-042-003 and -022.

b) An approximate 700-foot section of sidewalk from the northeast corner of the site to the existing sidewalk at the St. Louis Road overcrossing.

These improvements would connect the project site to the existing pedestrian and bicycle trail systems in the project area and provide access to the St. Louis Road overcrossing to the north, Maple Lane to the west, and Todd Court to the south (see Figure 1H [Non-Vehicular Circulation] in Chapter 1 [Introduction]).

To encourage the use of bicycles and reduce vehicle miles traveled, the applicant is proposing to offer bike rentals and provide bicycle parking spaces as required by the Arcata Land Use Code. Each floor of the proposed four-story buildings will have 20 bicycle parking spaces. This will provide 80 spaces per building and 320 indoor bicycle parking spaces total. As shown on the Site Plan, the project also proposes to provide 185 outdoor bicycle parking spaces (see Figure 1E [Site Plan] in Chapter 1 [Introduction]). Per Section 9.36.060 (Bicycle Parking) of the Arcata Land Use Code, the minimum number of bicycle parking spaces required for the project is 120 (see Parking discussion in Chapter 1 [Introduction]). As such, the project proposes to provide 505 bicycle parking spaces, which is greater than four times the City's minimum requirement.

The proposed project will promote a balanced transportation system by providing convenient access to pedestrian, bicycle, and bus transit facilities. This will help to reduce vehicle miles traveled and associated vehicular emissions.

Smart Growth

The project site is located within the northern central portion of the City of Arcata on a former mill site that is adjacent to existing residential neighborhoods and approximately 0.5 miles from Humboldt State University. The project proposes a compact student housing development that will provide a variety of unit types from studios to 4 bedroom/4 bathroom units. The project proposes to develop on-site pedestrian/bicycle improvements that will connect the site to the nearby trail systems and adjacent neighborhoods and encourage alternative forms of transportation. As such, the project will be consistent with several "*smart growth*" development strategies including: 1) compact development pattern; 2) mixture of residential housing types; 3) close proximity to nearby commercial (~0.5 miles) and educational centers (~0.5 miles); 4) pedestrian/bicycle facilities to encourage alternative forms of transportation; and 5) redevelopment of a former mill site with a land use that provides greater compatibility with surrounding development.

Therefore, with the project features listed above, the proposed project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Determination:
Less than significant impact.

Mitigation:
None required.

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SECTION 2.9 NOISE

This section evaluates the potential impacts related to noise during construction and operation of the project. To provide the basis for this evaluation, the Environmental Setting section describes the fundamentals of acoustics and groundborne vibration, and the existing noise environment for the project area. The Regulatory Framework section describes the regulatory background that applies to the project with regard to noise and vibration. The Impact Analysis section establishes the thresholds of significance, evaluates potential noise and vibration impacts, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

Fundamentals of Acoustics

Noise is often defined as unwanted or annoying sound. The human response to objectionable sound, or noise, is a subjective reaction to characteristics of a physical phenomenon. The objectionable nature of sound could be caused by either the pitch or loudness of a tone. Pitch is the height or depth of a sound, depending on the relative rapidity (frequency) of the vibrations produced. Loudness is the intensity, or amplitude, of sound waves combined with the reception characteristics of the human ear.

There are several methods of characterizing sound. The standard unit of sound level measurement is the decibel, which is represented by dB. The decibel system of measuring sound gives a rough correlation of the intensity of sound and its perceived loudness to the human ear. Unlike linear measurement units such as inches or pounds, decibels are measured using a logarithmic scale. On a logarithmic scale, a ten dB increase is ten times more intense than a one dB increase, and an additional 20 dB increase would be 100 times more intense. Noise measurements are usually based on the range of sound frequencies, which most human ears can hear, called the "*A-weighted*" scale; as a result, most measurements are reported as "*dBA*." See Table 2.9-1 for examples of sound levels and a subjective description of the response to those sound levels.

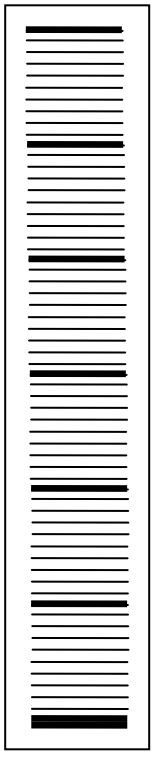
Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This energy equivalent sound/noise descriptor is called Leq. The most common averaging period is hourly, but Leq can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus one dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus one to two dBA.

Beyond the measurement of sound levels, a discussion of noise levels requires that a standard be identified. The most commonly used measures of noise levels are the Community Noise Equivalent Level (CNEL) and the Day/Night Noise Level (L_{dn}). These measures are used to account for the fact that people are more sensitive to unwanted sound occurring during evening and nighttime hours. The CNEL measure is an average of A-weighted noise over a 24-hour period, with an increment of 5 dBA added to the noise level between the hours 7:00 PM and 10:00 PM and 10 dBA added to noise levels between 10:00 PM and 7:00 AM. The L_{dn} measure uses the same methodology except that there is no artificial increment added to noise occurring within the hours between 7:00 PM and 10:00 PM. The City of Arcata uses both measures in its policies intended to reduce the exposure of noise-sensitive land uses to transportation noise.

Table 2.9-1 Examples of Sound Levels

Noise Source	Sound Level	Subjective Description
AMPLIFIED ROCK 'N ROLL →	120 dBA	
JET TAKEOFF @ 200 ft. →		DEAFENING
	100 dBA	
BUSY URBAN STREET →		VERY LOUD
	80 dBA	
JET SKI / FREEWAY TRAFFIC @ 5 ft →		LOUD
CONVERSATION @ 6 ft. →	60 dBA	
TYPICAL OFFICE INTERIOR →		MODERATE
SOFT RADIO MUSIC →	40 dBA	
RESIDENTIAL INTERIOR →		FAINT
WHISPER @ 6 ft. →	20 dBA	
		VERY FAINT
HUMAN BREATHING →	0 dBA	



Fundamentals of Ground Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several methods are typically used to quantify the amplitude of vibration including Peak Particle Velocity (PPV) and Root Mean Square (RMS) velocity. PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. RMS velocity is defined as the average of the squared amplitude of the signal, usually measured in decibels referenced to one micro-inches per second (in/sec) and reported in VdB. PPV and VdB vibration velocity amplitudes are used in this analysis to evaluate the effect on buildings and human response to vibration.

Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage. This rattling phenomenon may also be produced by loud airborne environmental noise causing induced vibration in exterior doors and windows. In urban environments, sources of groundborne vibration include construction activities, light and heavy rail transit, and heavy trucks and buses.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile-driving and vibratory compaction equipment typically generates the highest construction-related groundborne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 in/sec PPV. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level.

Existing Noise Environment

Project Site

The project site is located in the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus. The project site was used as a lumber mill in the past, but has not been used for this purpose since the 1960s. Most of the project site is currently home to the Craftsman's Mall – a collection of

artisan and light industrial rental spaces within wood-framed warehouse buildings. Two single-family residences also exist on the project site on parcels 507-372-003 and 505-022-012.

An Exterior Noise Analysis was prepared by BridgeNet International (Appendix H) to assess the existing noise levels at the project site and the future noise levels that will impact the proposed residential development. As indicated in the report, noise at the project site is dominated by traffic noise on Highway 101, and there are no significant stationary noise sources in the project area. According to the report, noise levels at the project site range from 68.5 Average Leq (dBA) on the southeastern portion of the site adjacent to Highway 101, to 60.4 Average Leq (dBA) on the western edge of the site above the single-family residences along Maple Lane.

According to the Arcata General Plan, the only other potential significant source of transportation noise near the project site is the Northwestern Pacific Railroad (NWPRR). The NWPRR at one time served the Arcata Manufacturing Company mill formerly located on the project site. The NWPRR is not actively used, and there are no plans to restore railroad use on this rail bed at this time. According to the Arcata Pedestrian & Bicycle Master Plan (2010), there is support for developing this section of railroad as the Arcata Rail with Trail.

Surrounding the Project Site

The following land uses surround the project site: residential and industrial uses (Mad River Lumber) to the north (along St. Louis Road); residential uses to the west (along Maple Lane, Hilfiker Drive, and Madrone Way); residential uses to the south (along Eye Street, Todd Court, and Strombeck Avenue); and St. Louis Road, a section of the NWPRR railbed, and Highway 101 to the east.

According to the Exterior Noise Analysis prepared by BridgeNet International (Appendix H), noise at the project site is dominated by traffic noise on Highway 101. The surrounding residential uses are not considered significant noise generators and noise generated by the industrial use (Mad River Lumber) to the north of the project site was not audible during the noise measurements conducted by BridgeNet. As stated on page 8 of the BridgeNet report, “No noise was audible from the commercial property to the north, although the Lumber Mill was active.”

Noise-Sensitive Land Uses

Certain land uses, such as residences, schools, childcare centers, churches, hospitals, and nursing homes, etc. are generally more sensitive to noise impacts. The sensitive noise receptors in the project area are residential neighborhoods to the north, west, and south, and Arcata Elementary School to the southwest.

REGULATORY FRAMEWORK

City of Arcata

Arcata General Plan and Land Use Code

The City of Arcata General Plan addresses noise in the Noise Element. The Noise Element contains Goals and related Policies that address reducing noise impacts for sensitive land uses, promoting design techniques that provide sound attenuation, and compliance with the City's noise guidelines. The Noise Element advances the ethic that a low noise-level environment is a common resource that can be enjoyed by all, and that noise generated by some has the potential to negatively affect others. The Noise Element also contains a map that projects future noise contours associated with Highway 101, major local roadways, and railroad tracks. The Arcata General Plan identifies loud noise as a health issue and lists the following noise-sensitive land uses:

- Residential;
- Transient Lodging;
- Hospitals/Nursing Homes;
- Theaters/Auditoriums/Music Halls;
- Churches/Meeting Halls;
- Office Buildings;
- Schools/Libraries/Museums; and,
- Playgrounds/Neighborhood Parks.

The City of Arcata noise standards are contained in the General Plan Noise Element and Section 9.30.050 (*Noise Standards*) of the Land Use Code. Table 3-2 (*Maximum Allowable Noise Level by Receiving Land Use*) in Section 9.30.050 of the Arcata Land Use Code sets forth the maximum allowable exterior and interior residential noise levels from stationary noise sources. The maximum allowable exterior residential noise levels are 55 dB Leq between 7am to 7pm, 50 dB Leq from 7pm to 10pm, and 45 dB Leq from 10pm to 7am. The maximum allowable interior residential noise levels are 45 dB Leq between 7am to 7pm, 40 dB Leq from 7pm to 10pm, and 35 dB Leq from 10pm to 7am. Table 3-3 (*Maximum Allowable Transportation Noise Exposure*) in Section 9.30.050 of the Arcata Land Use Code, sets forth the maximum acceptable noise levels for outdoor activity areas and interior spaces from transportation noise sources. The maximum allowable outdoor activity area noise level for residential uses is 60 dB Ldn/CNEL, and the maximum allowable interior space noise level for residential uses is 45 dB Ldn/CNEL.

Table 2.9-2 below contains a list of policies from the Arcata General Plan and requirements from the Arcata Land Use Code that are applicable to the proposed project.

Table 2.9-2 Applicable General Plan Policies and Land Use Code Requirements

Policy	Objective	Applicable Sub-Policies
ARCATA GENERAL PLAN		
N-2 Stationary Noise Sources and Levels	Establish acceptable noise levels for land uses and activities that will protect community residents from the harmful effects of excessive noise exposure from stationary noise generators.	N-2a through N-2d
N-3 Transportation Noise Sources and levels	Establish acceptable noise levels for land uses and activities that will protect community residents from the harmful effects of excessive noise exposure due to transportation noise sources.	N-3a and N-3c
N-5 Intrusive & Intermittent Noise	Protect community residents from the effects of excessive, intrusive, and intermittent noise.	N-5a, N-5b, N-5d, N-5e
ARCATA LAND USE CODE		
Section 9.30.050 (Noise Standards)	Implements the policies of the Noise Element of the General Plan, and provides standards for noise mitigation that are intended to protect the community health, safety, and general welfare by limiting exposure to the unhealthful effects of noise.	9.30.050(D)

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if the project would result in any of the following effects:

- Exposure of persons to, or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Exposure of persons to, or generation of, excessive groundbourne vibration or groundbourne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

- 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 expose people residing or working in the project area to excessive noise levels.
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

Proposed Project

Finding 2.9.1: Exposure of Persons to, or Generation of, Noise Levels in Excess of Standards Established in the Local General Plan or Noise Ordinance, or Applicable Standards of Other Agencies.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings on a former industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus.

An Exterior Noise Analysis was prepared by BridgeNet International (Appendix H) to assess the existing noise levels at the project site and the future noise levels that will impact the proposed residential development. As indicated in the report, noise at the project site is dominated by traffic noise on Highway 101 and there are no significant stationary noise sources in the project area. Noise generated by the industrial use (Mad River Lumber) to the north of the project site was not audible during the noise measurements taken by BridgeNet. As stated on page 8 of the BridgeNet report, "No noise was audible from the commercial property to the north, although the Lumber Mill was active." Since the noise environment in the project area is elevated due to the proximity of Highway 101, and the project proposes multi-family residential development, the noise analysis primarily focused on transportation noise impacts to the proposed project. Figure 2.9A (Noise Measurement Locations) below shows the locations that noise measurements were taken at the project site to determine the baseline noise environment (Appendix H, Pg. 7).

Development of the project site as a student housing community has the potential to expose persons to or result in elevated noise levels during both short-term construction activities and long-term operation. The noise standards applicable to the proposed project are contained in the Arcata General Plan Noise Element and Section 9.30.050 (*Noise Standards*) of the Arcata Land Use Code.

Table 3-2 (*Maximum Allowable Noise Level by Receiving Land Use*) in Section 9.30.050 of the Arcata Land Use Code sets forth the maximum allowable exterior and interior residential noise levels from stationary noise sources. The maximum allowable exterior residential noise levels are 55 dB Leq between 7am to 7pm, 50 dB Leq from 7pm to 10pm, and 45 dB Leq from 10pm to 7am. The maximum allowable interior residential noise levels are 45 dB Leq between 7am to 7pm, 40 dB Leq from 7pm to 10pm, and 35 dB Leq from 10pm to7am.

Table 3-3 (*Maximum Allowable Transportation Noise Exposure*) in Section 9.30.050 of the Arcata Land Use Code, sets forth the maximum acceptable noise levels for outdoor activity areas and interior spaces from transportation noise sources. The maximum allowable outdoor activity area noise level for residential uses is 60 dB Ldn/CNEL, and the maximum allowable interior space noise level for residential uses is 45 dB Ldn/CNEL.

Figure 2.9A Noise Measurement Locations

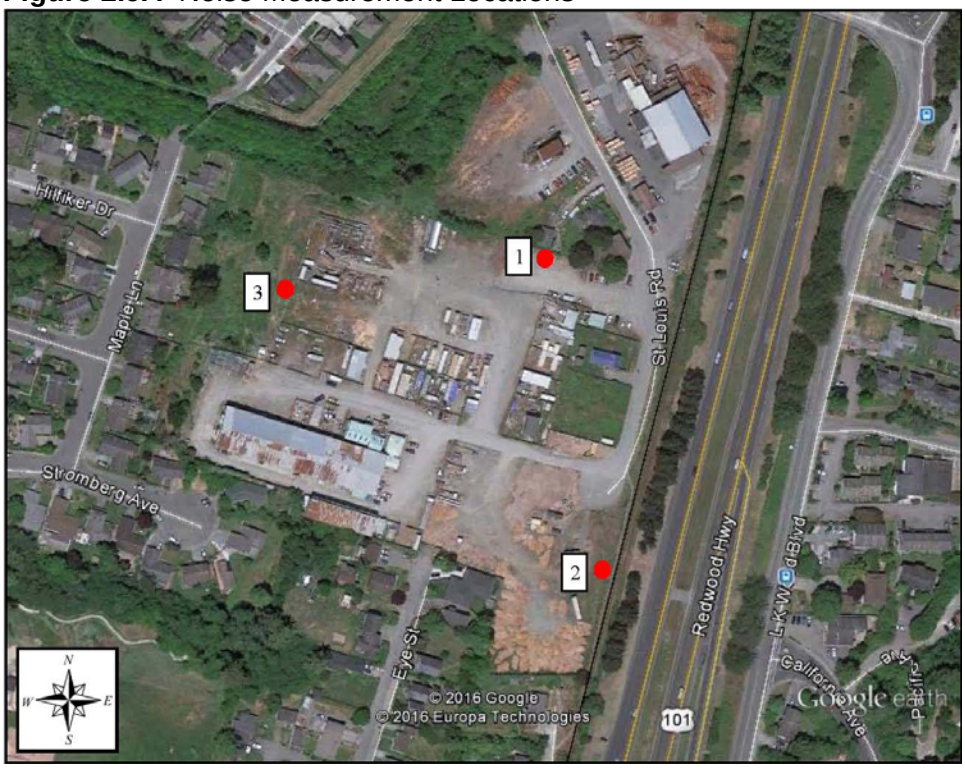


Table 2.9-3 below shows the results of the noise measurements taken at the project site by BridgeNet International (Appendix H).

Table 2.9-3 Baseline Noise Levels at the Project Site

Location of Measurement	Primary Noise Source	Daily Average Leq (dBA)
Location 1	Highway 101	62.1
Location 2	Highway 101	68.5
Location 3	Highway 101	60.4

Noise from Construction Activities

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in Table 2.9-4, ranging from 85 to 87 dB at a distance of 50 feet.

Table 2.9-4 Construction Equipment Noise

Type of Equipment	Maximum Level, dB at 50 feet
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

Source: Cunniff, 1977

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the project site. This noise increase would be of short duration, and would occur during daytime hours. Compliance with the requirements contained in the Arcata General Plan Noise Element (Policies N-5d and N-5e) and the Arcata Land Use Code (Section 9.30.050[D][2]), will minimize potential noise impacts from short-term construction activities. These requirements place limitations on the days and hours of construction activities, as shown in Table 2.9-5 below, to allow construction schedules to take advantage of the weather and normal daylight hours, and to ensure that nearby residents as well as nonresidential activities are not disturbed by the early morning or late night activities. It is also required for all stationary and construction equipment to be maintained in good working order and fitted with factory approved muffler systems. The Arcata General Plan PEIR (Pg. 5-54) concludes that implementation of Noise Element Policies N-5d (Construction site tool or equipment noise) and N-5e (Stationary and construction equipment noise), will reduce potential construction noise impacts to a less than significant level. The requirements of Arcata General Plan Noise Element (Policies N-5d and N-5e) and the Arcata Land Use Code (Section 9.30.050[D][2]) related to construction noise, will be included as a condition of approval by the City of Arcata for the proposed project.

Table 2.9-5 Allowable Hours of Construction (Arcata Land Use Code Table 3-4)

Day	Allowable Hours
Monday through Friday	8:00 a.m. to 7:00 p.m.
Saturday	9:00 a.m. to 7:00 p.m.
Sunday, Holidays	No heavy equipment-related construction activities allowed

Noise Impacts from the Project

Potential noise sources generated during long-term operation of the proposed student housing community include noise produced by the residents (e.g., conversation, music, etc.) within and outside of the proposed structures, traffic noise, stationary equipment noise (e.g. HVAC units), and mobile equipment noise (e.g., lawn mowers). Residential development is typically considered to be a noise-sensitive land use, as opposed to a land use that generates significant noise levels.

As indicated by the noise measurements taken as part of the BridgeNet Exterior Noise Analysis (Appendix H), existing residential uses surrounding the project site already exist in an elevated noise environment due to the close proximity of Highway 101. Based on the existing elevated noise environment and the type of land use proposed by the project (residential), it is not anticipated that the proposed project will significantly increase existing noise levels or exceed Arcata General Plan and Land Use Code noise standards.

In addition, the Operations and Management Plan for the Village Student Housing project contains a variety of measures that will be effective in reducing potential noise impacts to surrounding residential neighborhoods from the future residents (Appendix C). Some of the proposed measures include the following:

- "Resident Assistants" will reside on each floor of the proposed buildings who will be responsible for supporting, counseling, and mentoring their fellow students.
- On-site management will be available 24 hours/day, 7 days/week, including property employees and resident assistants in each building.
- Leases will provide for community "quiet hours" which will be from 11:00 p.m. to 8:00 a.m. each day.

With implementation of the Operations and Management Plan, the potential for the proposed project to generate noise impacts will be minimized compared to typical multi-family units in the City that provide housing for HSU students.

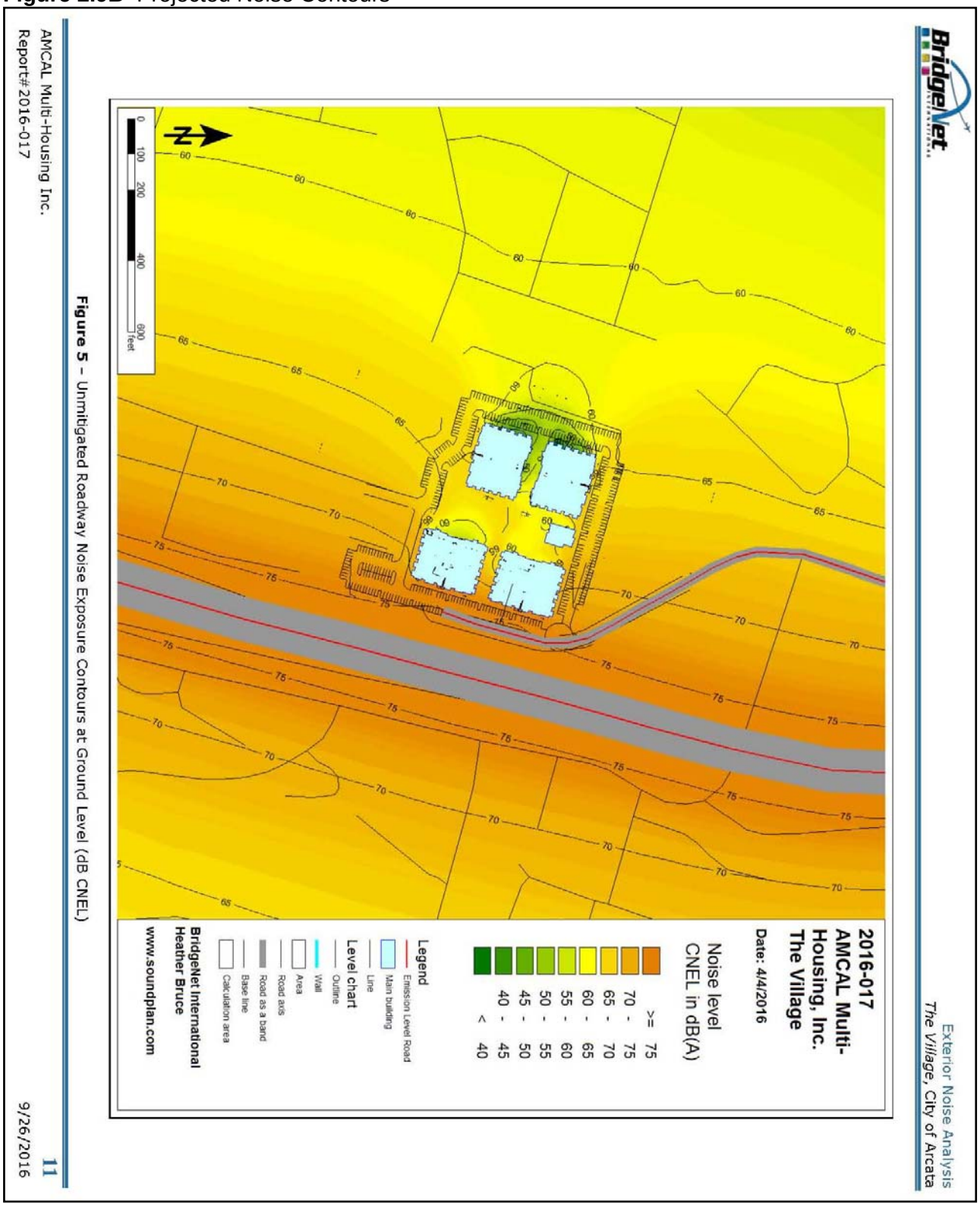
Noise Impacts to the Project

Pursuant to the California Supreme Court's decision in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, impacts of the environment on a project are generally not considered CEQA impacts and, therefore, analysis of such impacts in the EIR is not required. Although not required by CEQA, the following analysis of the existing noise environment on future users of the proposed project is provided for informational purposes only.

As indicated in the BridgeNet Exterior Noise Analysis (Appendix H), the predominant noise source that has the potential to impact the proposed project during long-term operation is traffic noise from Highway 101. Within the Noise Element of the General Plan (adopted October 2008), it specifies an exterior noise standard of 60 dB Ldn/CNEL and an interior noise standard of 45 dB Ldn/CNEL for multi-family residential. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use. Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with 45 dB Ldn/CNEL (Appendix H, Pg. 5).

Figure 2.9B (Projected Noise Contours) above, from the BridgeNet Exterior Noise Analysis (Appendix H, Pg. 11), shows the unmitigated roadway noise exposure contours at the project site

Figure 2.9B Projected Noise Contours



with the proposed development. As indicated in the noise analysis (Appendix H, Pg. 10), the worst-case unmitigated exterior noise levels at the outdoor activity areas in the central portion of the site were calculated to be less than 60 dB Ldn/CNEL. As such, no mitigation measures were recommended for the attenuating noise levels in the outdoor activity areas at the site.

As shown on Figure 2.9B (Projected Noise Contours), the proposed residential structures on the eastern half of the site will be subject to the greatest noise levels from traffic on Highway 101. The proposed residential structures are required to be constructed to meet Title 24 requirements which require additional insulation, double paned windows and other features which will provide sound attenuation and assist in complying with the City's maximum residential interior noise levels (45 dB Ldn/CNEL). As discussed in the BridgeNet Exterior Noise Analysis (Appendix H, Pg. 12), the proposed residential structures must provide sufficient exterior-to-interior noise attenuation to reduce the interior noise exposure to acceptable levels. As such, it is recommended in the report that an interior noise analysis be conducted for the project when the architectural plans are developed for the proposed residential structures.

To ensure that the City's interior noise standards are met, a design-level interior noise analysis report shall be prepared by an acoustical engineering consultant once complete civil and architectural plans for the project have been developed. The interior noise analysis report shall be submitted prior to issuance of a building permit, for review and approval by the City Community Development Department. The interior noise analysis report shall address compliance of the project with the City's interior noise standard of 45 dB Ldn/CNEL. The exterior-to-interior noise reduction of the proposed unit plans will be calculated based upon construction details specified in the architectural plans for the project. If necessary, sound attenuation measures to protect indoor living areas of the project will be developed for each plan type. Sound attenuation measures may include, but are not limited to, increasing the sound transmission class (STC) ratings of certain windows and doors. The mechanical and structural engineer for the project shall show that the ventilation system chosen complies with the California Building and Mechanical Code as well as the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). The ventilation system selected shall not compromise the exterior-to-interior sound attenuation of the structure. The requirement to conduct an interior noise analysis for the project when the architectural plans are developed will be included as a condition of approval by the City of Arcata for the proposed project.

Therefore, as conditioned and in compliance with the Arcata Land Use Code, the proposed project will not expose persons to, or result in the generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standard of other agencies.

Determination:
Less than significant.

Mitigation:
None required.

Finding 2.9.2: Exposure of Persons to, or Generation of, Excessive Groundborne Vibration or Groundborne Noise Levels.

Discussion:
Under the existing conditions, there are no known sources of significant ground-borne vibration or noise that affect the project site such as an active railroad line or truck routes. As such, the project would not expose future on-site residents to substantial ground-borne vibration.

Project construction may expose people in the surrounding residential uses to groundborne vibration. Construction activities can generate varying degrees of ground vibration, depending on the construction procedures, types of equipment used, and proximity to noise and vibration-sensitive land uses. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with increasing distance from the source. Vibration is typically noticed nearby when objects in a building generate noise from rattling windows or picture frames. Vibration is typically not perceptible outdoors, and therefore, impacts are based on distance to the nearest building.

Ground vibrations from construction activities do not often reach the levels that can damage structures. Pile-driving generates the highest levels of vibration; however, pile-driving will not occur during construction of the proposed project. Project-related construction vibration was evaluated for its potential to cause minor architectural damage based on the Federal Transit Administration's (FTA) structural damage criteria. According to guidelines from the FTA for assessing damage from vibration caused by construction equipment, the worst-case building threshold at which there is a risk of architectural damage is 0.12 peak particle velocity (PPV) in inches per second (in/sec). If the proposed construction activity will generate vibration levels in excess of 0.12 PPV, then potentially significant impacts could occur to structures adjacent to the project site.

The closest land uses potentially impacted from groundborne vibration and noise (primarily from the use of heavy equipment during construction activities) is the single-family residential units located to the north, west, and south of the project site. The closest residential units to the proposed construction activity will be on parcels 505-032-020 (1139 Stromberg Avenue), 505-022-009 (2585 Eye Street), and 505-022-006 (2590 Eye Street) which occur directly south of the site. Of these, the residential unit on parcel 505-022-006 will be the closest at approximately 25 feet.

Construction of the proposed project would include the following construction phases; demolition, grading, building construction, paving, and painting/architectural coating. Heavy construction equipment operating at the project site would include bulldozers, backhoes, crane, and augers, which could be as close as 25 feet from the residential structures to the south during construction of the interior access roads and parking areas on the southern edge of the site.

Table 2.9-6 below presents typical vibration levels that could be expected from construction equipment at the reference distance of 25 feet (FTA, 2006). Vibration levels would vary depending on soil conditions, construction methods, and equipment used.

Table 2.9-6 Vibration Source Levels for Project Construction Equipment

Equipment	PPV at 25' (in/sec)	Approximate Lv At 25' (VdB)
Hoe Ram	0.089	87
Large Bulldozer	0.089	87
Caisson Drilling	0.089	87
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

At the nearest residential structures to the south of the site (~25 feet from nearest construction activity), the vibration level could be as high as 0.089 PPV in/sec. This value is below the FTA's criteria for vibration induced structure damage of 0.12 PPV in/sec.

Therefore, the proposed project will not expose persons to, or generate, excessive groundborne vibration or groundborne noise levels.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.9.3: A Substantial Permanent Increase in Ambient Noise Levels in the Project Vicinity Above Levels Existing Without the Project.

Discussion:
The proposed project is not expected to result in a significant increase in permanent ambient noise levels given the type of use (i.e. residential), size of the project (i.e. 240 residential units), and existing elevated noise environment due to the close proximity to Highway 101. Construction activities will result in short-term (from a few days to several months depending on the specific activity) increases in ambient noise levels due to the use of heavy equipment which is addressed under Findings 2.9.1 and 2.9.4 of this section.

Therefore, the proposed project will not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.9.4: A Substantial Temporary or Periodic Increase in Ambient Noise Levels in the Project Vicinity Above Levels Existing Without the Project.

Discussion:
The proposed project is not expected to result in a significant temporary or periodic increase in ambient noise levels given the type of use (i.e. residential), size of the project (i.e. 240 residential units), and existing elevated noise environment due to the close proximity to Highway 101. Construction activities will result in short-term (from a few days to several months depending on the specific activity) increases in ambient noise levels due to the use of heavy equipment.

Compliance with the requirements contained in the Arcata General Plan Noise Element (Policies N-5d and N-5e) and the Arcata Land Use Code (Section 9.30.050[D][2]), will minimize potential noise impacts from short-term construction activities. The Arcata General Plan PEIR (Pg. 5-54) concludes that implementation of Noise Element Policies N-5d (Construction site tool or equipment noise) and N-5e (Stationary and construction equipment noise), will reduce potential construction noise impacts to a less than significant level. The requirements of Arcata General Plan Noise Element and the Arcata Land Use Code related to construction noise, will be included as a condition of approval by the City of Arcata for the proposed project. Also see discussion under Finding 2.9.1 above.

With the proposed conditions of approval, the project will not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.9.5: 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 Expose People Residing or Working in the Project Area to Excessive Noise Levels.

Discussion:
The project is not located within an airport land use plan or within two miles of a public airport or public use airport. The closest civilian airports to the project area occur approximately six miles to the south (Murray Field), approximately six miles to the north (California Redwood Coast – Humboldt County Airport) and approximately ten miles to the southwest (Samoa Field). The closest military airport is the United States Coast Guard Air Station, which is located adjacent to the California Redwood Coast – Humboldt County Airport, approximately six miles to the north of the project area.

Therefore, the project will not, 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, expose people residing or working in the project area to excessive noise levels.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.9.6: For a Project Within the Vicinity of a Private Airstrip, Would the Project Expose People Residing or Working in the Project Area to Excessive Noise Levels.

Discussion:
The project area is not within the vicinity of a private airstrip. The closest airports to the project area, in general, are the California Redwood Coast – Humboldt County Airport and Murray Field which occur approximately six miles to the north and south of the site respectively.

Therefore, the proposed project will not expose people residing or working in the project area to excessive noise levels.

Determination:
Less than significant impact.

Mitigation:
None required.

REFERENCES

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SECTION 2.10 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential impacts related to hazards and hazardous materials during construction and operation of the project. The Environmental Setting section describes the existing setting as it relates to hazards and hazardous materials. The Regulatory Framework section describes the applicable regulations at the federal, state, and local level. The Impact Analysis section establishes the thresholds of significance, evaluates potential hazards and hazardous materials impacts, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

The majority of the project site (2905 & 2920 St. Louis Road) is a former mill site (Arcata Manufacturing Company) in the northern central portion of the City of Arcata that has been subject to hazardous materials investigation and remediation. The remaining portion of the site (APNs 503-372-003, -004) historically contained residential uses and has no known contamination. The following discussion is based on the review of documents and other sources of information related to environmental assessment of the project site and its past uses. For this evaluation, we have reviewed the following documents related to investigation of the site:

- Phase I Environmental Site Assessment (ESA) by Blue Rock Environmental, Inc. (Appendix I)
- Phase II Investigation Report by Blue Rock Environmental, Inc. (Appendix J)
- Stockpile Sampling Report of Findings (SHN, 2000)

Surrounding land uses include single-family residential development to the north, west, and south, industrial uses to the north, and Highway 101 and St. Louis Road to the east. An inactive section of the Northwestern Pacific Railroad (NWPRR) also occurs on the east side of St. Louis Road. Schools within a quarter-mile of the site include Arcata Elementary School to the southwest. Fire protection services are provided to the project site by the Arcata Fire District (AFD). The closest public airport or private airstrip to the project site is the California Redwood Coast – Humboldt County Airport and Murray Field which are located six miles to the north and south of the site respectively.

Hazardous Materials

For purposes of the EIR, hazardous materials are defined as substances with certain chemical and physical properties that, if improperly handled, stored, disposed of, or otherwise managed, could pose a substantial present or future hazard to human health or the environment. If improperly handled, hazardous materials can result in public health hazards through human contact with contaminated soils or groundwater, or through airborne releases in vapors, fumes, or dust.

In the discussion below, italicized terms refer to specific definitions set forth in Section 3.2 of the American Society for Testing and Materials (ASTM) Standard. The purpose of the Phase I ESA prepared by Blue Rock Environmental, Inc. (Appendix I) was to identify, to the extent feasible, *recognized environmental conditions*, *historical recognized environmental conditions, or controlled recognized environmental conditions* in connection with the project site through the guidelines set forth in the ASTM E 1527-13. These terms are defined below (Appendix I, Pg. 3).

The term *recognized environmental condition* is defined as: The presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions.

The term *historical recognized environmental condition* is defined as: A past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority, or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). Before calling the past release a historical recognized environmental condition, the environmental professional must determine whether the past release is a recognized environmental condition at the time the Phase I Environmental Site Assessment is conducted (for example, if there has been a change in the regulatory criteria). If the environmental professional considers the past release to be a recognized environmental condition at the time the Phase I ESA is conducted, the condition shall be included in the conclusions section of the report as a recognized environmental condition.

The term *controlled recognized environmental condition* is defined as: A recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls). A condition considered by the environmental professional to be a controlled recognized environmental condition shall be listed in the findings section of the Phase I Environmental Site Assessment Report, and as a recognized environmental condition in the conclusions section of the Phase I Environmental Site Assessment Report.

Recorded Sites On or Near the Project Site

As part of the Phase I Environmental Site Assessment prepared by Blue Rock Environmental, Inc. (Appendix I), a records review was conducted through records obtained from Environmental Data Resources, Inc. (EDR). This information includes sites of known (recorded) soil or groundwater contamination, including sites already cleaned up or targeted for cleanup, locations of underground storage tanks, and sites where hazardous materials are generated, stored, handled, or treated. This information was reviewed to determine whether activities on, or near, the project site have the potential to create a *recognized environmental condition*, *historical recognized environmental condition*, or *controlled recognized environmental condition* at the site. The approximate minimum search distance for the site vicinity review is noted below under each database listed in each section below (Appendix I, Pgs. 9-10).

Database search to 1-mile

- National Priority List (NPL)
- Resource Conservation and Recovery Act (RCRA) Corrective Actions (CORRACTS) List
- State Equivalent Priority List (CalSites)

Databases searched to 1/2-mile

- Federal CERCLIS List
- RCRA non-CORRACTS Treatment, Storage, and Disposal (TSD) List
- State Equivalent CERCLIS List

Databases searched for Project Site and Adjoining Properties

- Federal CERCLIS NFRAP Site List
- Federal RCRA Generators List
- State Registered UST List

Databases searched for Project Site

- Federal ERNS List

The EDR search reported records for approximately six properties within a 1/4-mile radius of the project where (1) hazardous materials are, or have been, handled or generated, (2) underground storage tanks (USTs) are, or have been, present, (3) above-ground storage tanks (ASTs) are, or have been, present, (4) surface spills have been reported, and/or (5) where petroleum hydrocarbons have affected the subsurface (i.e. leaking underground storage tank [LUST] site. The most common way adjacent sites affect the subject property is by migration of dissolved phases plumes in groundwater. Therefore, LUST and SLIC (Spills, Leaks, Investigations, and Cleanup) cases were reviewed in detail to ascertain their potential threat to the project site (Appendix I, Pg. 11).

The Mission Fence aka Willis Property LUST site located at 2935 St. Louis Road, which is located approximately 200 feet north of the project site, was reviewed to assess its threat to the project site. This LUST site has experienced a significant level of investigation. The extent of fuel impact associated with the Mission Fence aka Willis Property source area has been defined

in the direction of the project site by numerous borings and monitoring wells (Appendix I, Pg. 11). Remediation occurred at the Mission Fence aka Willis Property in 2013 and 2014 which included Dual Phase Extraction (DPE) and Air Sparging (AS) (SWRCB, 2017). The case received a Remedial Action Completion Certification from the Humboldt County Division of Environmental Health (HCDEH) on September 17, 2015. Because this case has received a regulatory closure, it is not considered a threat to the project site.

The former Sunset School Bus Garage LUST site is located at 2400 Baldwin Street, which is located approximately 500 feet southwest of the project site. The case received a No Further Action required letter from the North Coast Regional Water Quality Control Board on April 14, 2011. Because this case has received regulatory closure, it is not considered a threat to the project site (Appendix I, Pg. 11).

The Snyder Residence located at 2533 Eye Street, located approximately 50 feet south of the project site, was a former SLIC site. The case received a No Further Action required regulatory case closure letter on June 7, 2002. Because this case has received regulatory closure, it is not considered a threat to the project site (Appendix I, Pg. 11).

Project Site History

The project site was formerly a lumber mill, which has largely been dismantled. Prior to construction of the mill facility, the site was undeveloped open space and was likely used for agricultural pasture. The mill was constructed in 1947 and was in full operation as the Arcata Manufacturing Company by 1948. Figure 2.10A is a 1948 photo from the HSU Schuster Collection which shows the mill in full operation.

Figure 2.10A Aerial Photo of Arcata Manufacturing Company Mill (Schuster, 1948)

The facility was reportedly used as a lumber planing and shipping facility, which was operated out of a main building and two long loading docks located in the eastern half of the property. Most of the remainder of the property was used as unpaved roadways and for wood/lumber storage. A "teepee" burner was located at the western edge of the property. Teepee burners were used to burn wood waste left over from the manufacturing process. In the mid-1950s, it appears that three other buildings were added to the project site: (1) an "L" shaped loading facility in the southeast corner of the site, (2) a smaller rectangular loading facility at the southern boundary, and (3) a larger rectangular building was built in the southern portion of the site, which was reportedly used as a loading facility. Sometime in the mid-1960s, it appears the original mill building, adjacent loading docks, and teepee burner were destroyed (Appendix I, Pg. 13). Figure 2.10A shows the mill in 1955 with several of the additional buildings discussed above. These buildings include the two warehouse structures which are still present at the site.

Figure 2.10B Aerial Photo of Arcata Manufacturing Company Mill (Schuster, 1955)

By 1968, the mill site was reportedly used for several businesses, including two shipping companies: Rochlitz Trucking and Double R Transport Trucking. During the mid-1970s and early-1980s, the site was used by Combs Logging and then by Mission Fence Supply, Inc. In 1982, the "L" shaped building in the southeastern portion of the Site was reportedly destroyed by fire. In 1986, Russell Kirkpatrick reportedly purchased the site. During the ensuing decade, numerous variations of "Cal-Kirk" businesses operated at the site, including Chain Link Fencing, Landscaping, Construction, and Erosion Control. Some form of these businesses operated until at least 2013. Reports by others indicate that two USTs were present at the time of purchase: (1) one 6,000-gallon diesel UST located off the eastern edge of the main building and (2) one 2,000-gallon UST located in the middle-north portion of the yard (see Figure 2.10C below). The 6,000-gallon diesel UST was removed on March 15, 1990, and the 2,000-gallon gasoline UST was removed on April 9, 1990. The UST cases received regulatory closure on January 17, 2001. By the late-1990s, welding and metal fabrication businesses also operated at the project site. The welding business remained until at least 2013 (Appendix I, Pg. 14).

The property is currently occupied by numerous businesses, many of which are horticulture services or horticulture support services. The businesses operate out of the two main warehouse buildings located on the southern portion of the site and numerous shipping containers that have been converted for light commercial/industrial use. Scrap-yard and salvage automobile storage areas are located in the northwestern portion of the site (Appendix I, Pg. 14).

Fuel Storage

As noted above, the project site formerly contained two underground storage tanks (USTs): one 6,000-gallon diesel UST located off the eastern end of the main building and one 2,000-galllon gasoline UST located in the north-central portion of the site. Figure 2.10A below is the Site Map from the Blue Rock Environmental, Inc. Phase I Environmental Site Assessment (ESA) (Appendix I, Figure 2B) which shows the former location of the two USTs at the site. The 6,000-gallon diesel UST was removed on March 15, 1990, and the 2,000-gallon gasoline UST was removed on April 9, 1990. The two UST cases received regulatory closure from the Humboldt County Division of Environmental Health (HCDEH) on January 17, 2001. Although the former USTs are considered *historical recognized environmental conditions*, they do not appear to represent *current recognized environmental conditions* because the case closure did not indicate land use restrictions and the regulatory environment has not changed significantly since the time the case was closed (Appendix I, Pg. 10).

Other minor environmental issues identified during the course of the leaking underground storage tank (LUST) case were also addressed at that time to the satisfaction of the HCDEH. In a letter dated November 16, 2000, SHN Consulting Engineers & Geologists, Inc. presented the characterization results for a 70-80 cubic yard soil pile remaining on-site from the LUST case, and recommended it be spread thin across the site, and that the sole monitoring well, PB-1/MW-1, be destroyed at the time case closure is obtained. This proposal was approved by the Humboldt County Division of Environmental Health (HCDEH) as part of closure of the LUST case in a letter dated January 17, 2001. The soil pile and monitoring well were observed by Blue Rock during their site inspections as part of the Phase I ESA and should be dealt with appropriately as part of site preparation for the proposed project.

Investigation of Site Contamination

The Phase I ESA prepared by Blue Rock Environmental, Inc. (Appendix I) identified four potential *recognized environmental conditions (RECs)* or environmental issues in connection with the project site. A list of the RECs and recommendations to address each issue is on Page 15 of the Phase I ESA and are as follows:

REC #1: Former Teepee Burner during Mill Operations
Recommendation: Assess chemical composition of any remaining surficial ash, or near surface soil/ash mixture, for presence of dioxins and other constituents known to be associated with the former operation of these facilities.

REC #2: Potential use of PCP as Wood Preservative during Mill Operations
Recommendation: Assess potential release to surface, or near surface, soils of PCP near area of former building (assumed area of application) and former lumber storage areas around the yard.

Environmental Issue #3: Remaining Soil Pile
Recommendation: Spread the pile thin across the site as proposed by previous consultant in a letter dated November 16, 2000 as part of case closure, which was granted by HCDEH in the letter dated January 17, 2001.

Environmental Issue #4: Remaining Monitoring Well PB-1/MW-1
Recommendation: Properly destroy the well as proposed by previous consultant in a letter dated November 16, 2000 as part of case closure, which was granted by HCDEH in the letter dated January 17, 2001.

Based on the results of the Phase I Environmental Site Assessment (Appendix I), a Phase II Investigation of the project site was conducted in September 2015 (Appendix J). The Phase II report presents the result of the subsurface investigation activities performed at the site to address RECs #1 and #2 and Environmental Issue #4. It is assumed that Environmental Issue #3 will be resolved during site preparation and grading activities as part of the proposed project.

To address REC #1, the scope of work included drilling one boring (B-4) at the former tepee burner location, and analyzing soil and groundwater contamination samples for dioxins. To address REC #2, the scope of work included drilling five borings (B-1 through B-5) in locations near the former building, former lumber storage areas, and former tepee burner, and analyzing soil and groundwater samples for Tetracholorophenol (TCP), Pentachlorophenol (PCP), Arsenic (As), Chromium (Cr), and Copper (Cu). To address Environmental Issue #4, the scope of work included destroying the remaining monitoring well by pressure-grout methods (Appendix J, Pg. 3).

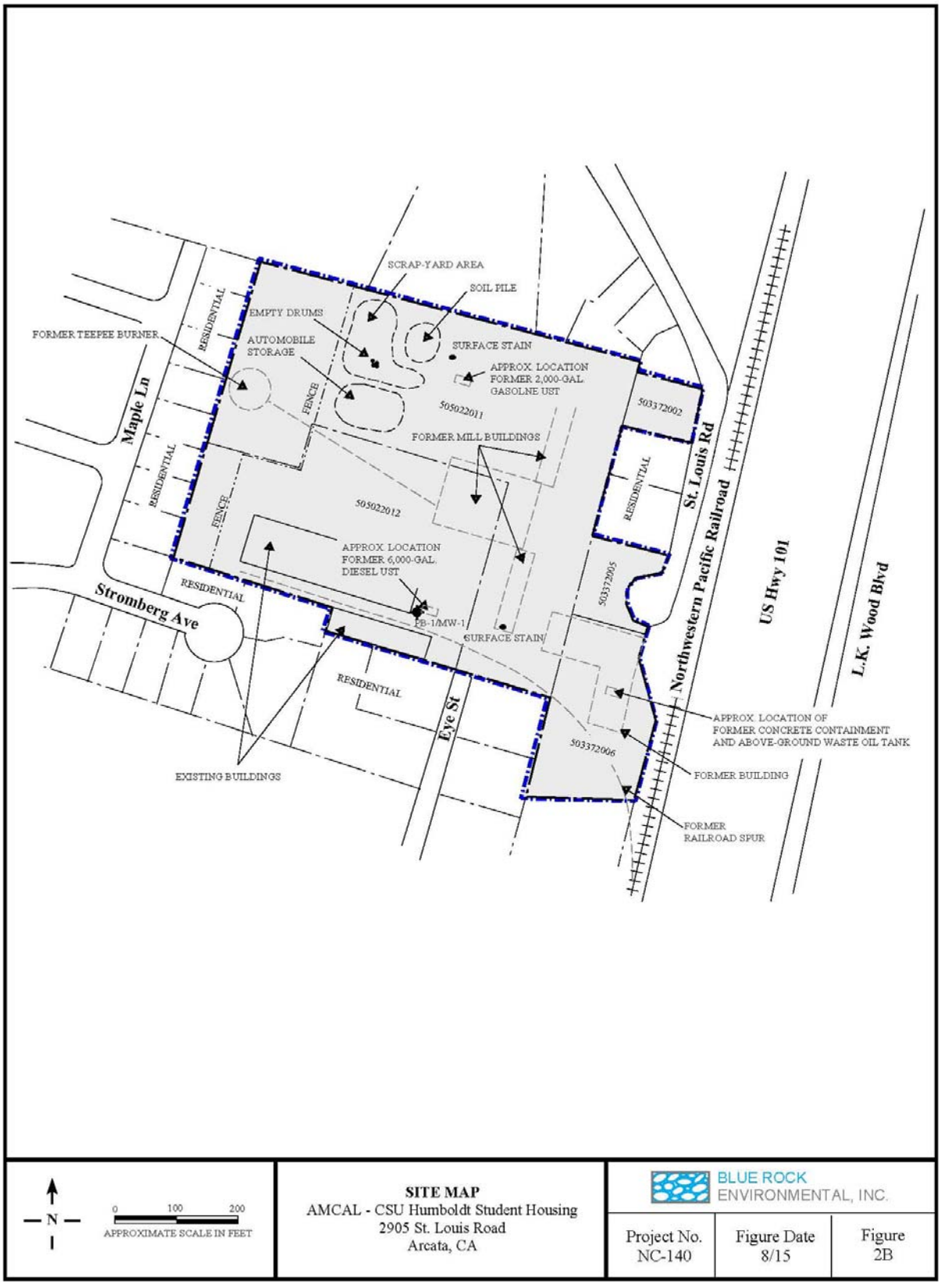
The results of the Phase II Investigation include the following:

REC #1: Former Teepee Burner during Mill Operation
Results: The three soil samples collected from boring B-4 contained low concentrations of up to three dioxin-like compounds, which were converted to 2005 WHO TEQ for 2,3,7,8-TCDD. The total 2005 WHO TEQs for the individual soil samples ranged from 0.00417 to 0.0366 picograms per grams (pg/g). For soil in a residential use scenario, the OEHHA CHHSL is 4.6 pg/g and the USEPA Region 9 RSL is 4.8 pg/g. Therefore, the dioxin levels in the soil in boring B-4 located at the former teepee burner appear to be below current screening levels. The groundwater sample collected from boring B-4 did not contain detectable dioxin concentrations. The calculated 2005 WHO TEQ was 0.00 picograms per liter (pg/L), which is below the California Drinking Water MCL of 30 pg/L and the California PHG of 0.05 pg/L (Appendix J, Pg. 6).

REC #2: Potential use of PCP as Wood Preservative during Mill Operations
Recommendation: No soil samples contained detectable levels of the wood preservatives TCP or PCP, and the detection limits were below applicable USEPA Region 9 Regional Screening Levels (RSLs) or the OEHHA California Human Health Screening Levels (CHHSLs) for soil in a residential use scenario. No groundwater samples contained detectable levels of the wood preservatives TCP or PCP, and detection limits were equal to or below the California Drinking Water Maximum Contaminant Level (MCL) of 1 µg/L (PCP) and the California Public Health Goal (PHG) of 0.03 µg/L (Appendix J, Pg. 6).

All soil samples contained detectable concentrations of chromium and copper, and six soil samples contained concentrations of arsenic slightly above the detection limit. In addition to possibly being associated with man-made industrial processes, these metals also occur naturally

Figure 2.10C Site Map from Phase I Environmental Site Assessment (Appendix I)



in soil. Based on a literature review, it was concluded that the metal concentrations appeared to be representative of background levels in near-surface soil for the Arcata area (Shacklette and Boerngen 1984). The metal concentrations detected at the site generally fall within the published background ranges, and none exceed the highest background concentration cited in the literature. Further, the concentrations of metals detected below the site do not vary greatly in magnitude and are evenly distributed across the site, which suggests they are background in nature. Therefore, although the actual metal concentrations may slightly exceed screening levels for residential use, particularly arsenic, their presence does not appear to be associated of past site industrial use (Appendix J, Pg. 7).

The groundwater sample from boring B-2 did not contain detectable concentrations of arsenic, chromium, or copper, and this sample experienced successful filtering in the field to remove sediment from the sample. The groundwater samples from borings B-3, B-4, and B-5 contained varying concentrations of either arsenic, chromium, and/or copper, some of which exceeded either the California Drinking Water Primary MCL or PHG. However, these samples experienced failure of the inline sediment filters in the field that resulted in turbid groundwater emplaced in nitric acid preserved sample containers. The low pH environment in the sample container has the potential to liberate metals from a solid to dissolved state. The presence of metals in groundwater samples B-3, B-4, and B-5 is therefore interpreted to be primarily an artifact of sampling and analysis processes and are unlikely to represent actual groundwater conditions. The sample from boring B-2, which experienced successful filtering, is interpreted to be representative of site conditions (Appendix J, Pg. 7).

Environmental Issue #4: Remaining Monitoring Well PB-1/MW-1
Results: On August 31, 2015, monitoring PB-1/MW-1 was destroyed by pressure grout methods. A Blue Rock scientist supervised Fisch Drilling, a C-57 licensed driller based in Hydesville, California, perform well-destruction activities. Prior to destruction, the well was measured to verify the depth to bottom of the casing. The two-inch diameter PVC well was found to be 32.8 feet deep with water present at a depth of approximately 18 ft bgs. The well box was removed and a neat cement grout was pumped into the well casing and held under pressure at 15 psi for a minimum of 10 minutes to ensure the cement penetrated the annular space. This process was repeated until the well casing was full. The location of the well was finished to match existing grade (Appendix J, Pg. 5).

REGULATORY FRAMEWORK

Federal

Numerous federal laws and regulations pertain, in some form, to hazards and hazardous materials, either as regulated substances used every day in households or hazardous wastes generated by industrial processes. These laws and regulations also outline requirements for handling, storage, transportation, and disposal of these wastes or waste by-products.

Environmental Protection Agency

The EPA is responsible for enforcing regulations at the federal level pertaining to hazardous substances and wastes, water quality, and other potentially hazardous substances. Pertinent federal authorities under EPA oversight and regulation related to hazardous materials include the following:

- Federal Water Pollution Control Act
- Clean Air Act
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)
- Resource Conservation and Recovery Act (RCRA)
- Superfund Amendment and Reauthorization Act (SARA)
- Federal Insecticide, Fungicide and Rodenticide Act

Department of Transportation

The US Department of Transportation (DOT) has the responsibility for management of the transportation of hazardous materials, including hazardous wastes, through the Hazardous Materials Transportation Act. The DOT sets standards for carriers (motor, rail, ship), including manifests, container labeling, reporting, and spill notifications.

Occupational Safety and Health Administration

The Occupational Safety and Health Administration (OSHA) have the responsibility for the administration of the Occupational Safety and Health Act. The Act requires specialized worker training who use hazardous materials, the appropriate placarding and notifications of locations of hazardous materials, labeling and storage of hazardous materials, and record keeping procedures related to these uses and activities.

State of California

Soil and Groundwater Contamination

The cleanup of sites contaminated by releases of hazardous substances is regulated primarily by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), which was amended by the Superfund Amendment and Reauthorization Act of 1986 (SARA), the Brownfields Amendments (2002) and by similar State laws. Under CERCLA, the EPA has authority to seek the parties responsible for releasing hazardous substances and to ensure their cooperation in site remediation. CERCLA provides a defense to CERCLA liability,

for those persons who could demonstrate, among other requirements, that they ‘‘did not know and had no reason to know’’ prior to purchasing a property that any hazardous substance that is the subject of a release or threatened release was disposed of on, in, or at the property. Such persons, to demonstrate that they had ‘‘no reason to know’’ must have undertaken, prior to, or on the date of acquisition of the property, ‘‘all appropriate inquiries’’ (AAI) into the previous ownership and uses of the property consistent with good commercial or customary standards and practices.

The State’s Hazardous Waste and Substances Sites List (Cortese List, Government Code Section 65962.5) identifies sites with leaking underground fuel tanks, hazardous waste facilities subject to corrective actions, solid waste disposal facilities from which there is a known migration of hazardous waste, and other sites where environmental releases have occurred. Before a local agency accepts an application as complete for any development project, the applicant must certify whether or not the project site is on the Cortese List. Databases that provide information regarding the facilities or sites identified as meeting Cortese List requirements are managed by the DTSC and SWRCB. At sites where contamination is suspected or known to have occurred, the site owner is required to perform a site investigation and conduct site remediation, if necessary. There are two clean-up standards; one for residential and the other for commercial/industrial land uses. Standards are set for soil, groundwater, soil gas, and vapor intrusion of contaminants into buildings.

Hazardous Materials Transportation

The State of California has adopted DOT regulations for the intrastate movement of hazardous materials. State regulations are contained in Title 26 of the CCR. In addition, the State of California regulates the transportation of hazardous waste originating in the State and passing through the State. Both regulatory programs apply in California. The two State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and Caltrans.

Occupational Safety

Worker health and safety is regulated at the federal level by the U.S. Department of Labor, Occupational Safety and Health Administration (Fed/OSHA). Under this jurisdiction, workers at hazardous waste sites (or workers coming into contact with hazardous wastes that might be encountered during excavation of contaminated soils) must receive specialized training and medical supervision according to the HAZWOPER regulations. Worker health and safety in California is regulated by Cal/OSHA, Fed/OSHA’s counterpart. California standards for workers dealing with hazardous materials (including hazardous wastes) are contained in CCR Title 8. DTSC and the State Department of Occupational Health and Safety are the agencies that are responsible for overseeing that appropriate measures are taken to protect workers from exposure to potential soiled groundwater contaminants. At sites known or suspected to have soil or groundwater contamination, a site health and safety plan must be prepared and generally require approval by the CUPA. The health and safety plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at a contaminated site.

Emergency Response

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local government, and private agencies. Responding to hazardous materials incidents is a part of this plan. The plan is administered by the State Office of Emergency Services (OES), which coordinates the responses of other agencies such as local fire and police agencies, emergency medical providers, CHP, the CDFW, and Caltrans.

Humboldt County has an adopted Humboldt County Operational Area Hazard Mitigation Plan as identified below. FEMA approved the Humboldt Operational Area Hazard Mitigation Plan in March 2014.

Risk of Fires

The California PRC sets forth fire safety regulations that include the following:

- Earthmoving and portable equipment with internal combustion engines must be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442)
- Appropriate fire suppression equipment must be maintained during the highest fire danger period – from April 1 to December 1 (PRC Section 4428)
- On days when a burning permit is required, flammable materials must be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (PRC Section 4427)
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines must not be used within 25 feet of any flammable materials (PRC Section 4431)

Regional

North Coast Regional Water Quality Control Board (NCRWQCB)

The NCRWQCB administers a Site Cleanup Program (SCP) that is designed to protect and restore water quality from spills, leaks, and similar discharges. The SCP program has several components at the NCRWQCB: 1) complaint response; 2) non-permitted discharge investigations; 3) site cleanups under the oversight of the Water Board; 4) site cleanups pursuant to methods analogous to procedures in the Resource Conservation and Recovery Act; and 5) cleanups performed by redevelopment agencies. Voluntary or directed cleanups may occur under Orders issued pursuant to Section 13304 of the California Water Code (CWC), or through technical reports required pursuant to CWC Section 13267. State Water Resources Control Board (SWRCB) Resolution 92-49 is the over-riding policy guiding the Regional Water Board's SLIC cleanup program (NCRWQCB, 2016).

Cleanup levels for soil are determined based on the threat to water quality. Such levels are determined on a case-by-case basis considering the nature of the contaminants, the type of soil, the depth to groundwater, distance to surface water, and other hydrogeologic characteristics. Cleanup levels for groundwaters and surface waters are determined based on application of existing laws, regulations, plans, and policies. In general, waters shall be cleaned up to: background, where feasible; to levels achievable through best available technology; and in all cases at least to water quality objectives. The water quality objective is determined based on the beneficial water use, and the most stringent water quality objective is selected for a given receiving water. Water quality objectives may be numerical (such as those based on Maximum Contaminant Levels or drinking water standards), or may be based in narrative standards, and converted to numerical limits (such as those associated with taste and odor) (NCRWQCB, 2016).

The SWRCB GeoTracker website lists all the sites where discharges to the environment have been identified. On the Geotracker website, the project site (2905 St. Louis Road) is classified as a LUST Cleanup Site (T0602300075) with a cleanup status listed as "*Completed – Case Closed as of 01/17/2001*" (SWRCB, 2017).

County of Humboldt

Humboldt County Division of Environmental Health (DEH)

Californians are protected from hazardous waste and materials by a Unified Program that ensures consistency throughout the State in regard to administrative requirements, permits, inspections, and enforcement. CalEPA oversees the program as a whole, and certifies 83 local government agencies known as Certified Unified Program Agencies (CUPA) to implement the hazardous waste and materials standards set by five different state agencies. The Humboldt County Division of Environmental Health (DEH) is the CUPA for Humboldt County which administers the Local Oversight Program (LOP). The CUPA regulates facilities that store hazardous materials or generate hazardous wastes. Permits are required for underground storage tank construction, removal, modification, and operation (Humboldt County DEH, 2016).

Humboldt County Operational Area Hazard Mitigation Plan

The 2014 Humboldt County Operational Area Hazard Mitigation Plan is the county's plan to identify and reduce hazards before any type of hazard event occurs. It aims to reduce losses from future disasters such as dam failure, drought, earthquake, fish losses, flooding, landslide, severe weather, tsunami, and wildfire. The plan also includes a vulnerability analysis and identifying mitigation initiatives and implementation.

Humboldt County Emergency Operations Plan

The Humboldt County Emergency Operations Plan (EOP) addresses the planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies in or affecting Humboldt County. The plan also addresses

integration and coordination with other governmental levels when required. The EOP accomplishes the following:

- Establishes the emergency management organization required to mitigate any significant emergency or disaster affecting Humboldt County;
- Identifies the policies, responsibilities, and procedures required to protect the health and safety of Humboldt County communities, public and private property, and the environmental effects of natural and technological emergencies and disasters;
- Establishes the operational concepts and procedures associated with field response to emergencies, County Emergency Operations Center (EOC) activities, and the recovery process.

City of Arcata

Arcata General Plan

The City of Arcata General Plan contains guidelines for hazards and hazardous materials within the Public Safety Element. Table 2.10-1 below contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 2.10-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
PS-1 Emergency Preparedness	Ensure that the City, its residents, businesses, agencies, and organizations are prepared for emergencies or disasters and have effective response and recovery plans in place.	PS-1e
PS-5 Fire Hazards	Minimize risk of personal injury and property damage resulting from structural (urban) and wildland fires.	PS-5d
PS-6 Hazardous Materials	Minimize the personal injury, property damage, and public health risks associated with the production, use, storage, disposal, and transporting of toxic substances or hazardous materials.	PS-6b and PS-6f

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if it meets any of the following criteria.

If the project would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.
- 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.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- 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.
- 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 for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Proposed Project

Finding 2.10.1: Create a Significant Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four-story buildings on a former industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus.

Construction Impacts
Construction of the proposed project would involve the use of materials that are generally regarded as hazardous, such as gasoline, diesel fuel, hydraulic fluids, paint, and other similar materials. The risks associated with the routine transport, use, and storage of these materials during construction are anticipated to be relatively small. With appropriate handling and disposal practices, there is relatively little potential for an accidental release of hazardous materials during construction, and the likelihood is small that workers and the public would be exposed to health hazards. Storage and handling of materials during construction would employ best management practices (BMPs) and would be subject to provisions of the project Storm Water Pollution Prevention Plan, which is described in greater detail in Section 4.2 (Hydrology and Water Quality) of the EIR. BMPs would include provisions for safely refueling equipment, and spill response and containment procedures.

Operation Impacts
The proposed residential development includes a student housing community with a variety of unit types ranging from studios to 4 bedroom/4 bathroom units. This type of residential land use is not typically associated with the routine transport, use, or disposal of hazardous materials. Although, residential uses may utilize cleaning products that contain toxic substances, which are usually in low concentration and small in amount and would not pose a significant risk to humans or the environment during transport to and from or use at the proposed residential development.

Therefore, the proposed project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.10.2: 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.

Discussion:
As described in the Environmental Setting, the majority of the project site is as a former lumber mill that was used as a lumber planing, manufacturing, and shipping facility. A Phase I Environmental Site Assessment was conducted on the project site by Blue Rock Environmental, Inc. (Appendix I) to assess existing conditions. In summary, the following "recognized environmental conditions" (RECs) exist on the project site:

- Former Teepee Burner during operation of the Arcata Manufacturing Company Mill
- Potential use of Wood Preservatives (PCP/TCP) during operation of the Arcata Manufacturing Company Mill

Because of the presence of the RECs described above, additional investigation was conducted through a Phase II Investigation prepared by Blue Rock Environmental, Inc. (Appendix J). The Phase II Investigation included soil and groundwater sampling, and laboratory testing. The results of the Phase I Environmental Site Assessment and Phase II Investigation Report determined the following:

- Concentrations of dioxins in soil and groundwater in the area of the former tepee burner are below the OEHHA CHHSL and USEPA Region 9 RSL screening levels for residential land use and the California Drinking Water MCL.
- Concentration of wood preservatives (PCP/TCP) in soil and groundwater at the site are below the OEHHA CHHSL and USEPA Region 9 RSL screening levels for residential land use and the California Drinking Water MCL and California Public Health Goal.
- Concentrations of chromium, copper, and arsenic were detected in the soil at the site and were determined to be representative of background levels in the near surface soil for the Arcata area. Groundwater sampling did not contain detectable concentrations of these metals at the site.

As described in the Environmental Setting above, the project site formerly contained two underground storage tanks (USTs): one 6,000-gallon diesel UST located off the eastern end of the main building and one 2,000-galllon gasoline UST located in the north-central portion of the site (see Figure 2.10C above). The 6,000-gallon diesel UST was removed on March 15, 1990, and the 2,000-gallon gasoline UST was removed on April 9, 1990. The two UST cases received regulatory closure from the Humboldt County Division of Environmental Health (HCDEH) on January 17, 2001. Although the former USTs are considered *historical recognized environmental conditions*, they do not appear to represent *current recognized environmental conditions* because the case closure did not indicate land use restrictions and the regulatory environment has not changed significantly since the time the case was closed (Appendix I, Pg. 10). On the SWRCB Geotracker website, the project site (2905 St. Louis Road) is classified as a

LUST Cleanup Site (T0602300075) with a cleanup status listed as "*Completed – Case Closed as of 01/17/2001*" (SWRCB, 2017).

As discussed in the Environmental Setting above, a soil pile remains on-site from the removal of the leaking underground storage tanks (LUST) in the 1990s. In a letter dated November 16, 2000, SHN Consulting Engineers & Geologists, Inc. (SHN) presented the characterization results for the 70-80 cubic yard soil pile and recommended that it be spread thin across the site. This proposal was approved by the Humboldt County Division of Environmental Health (HCDEH) as part of closure of the LUST case in a letter dated January 17, 2001. As such, the remaining soil pile is proposed to be spread thinly across the site during site preparation and grading activities for the proposed project.

Construction Impacts

Heavy construction equipment (e.g. bulldozers, excavators, heavy trucks) would be operated on the project site during construction of the proposed project. This heavy equipment would likely be fueled and maintained by petroleum-based substances such as diesel fuel, gasoline, oil, and hydraulic fluid, which is considered hazardous if improperly stored or handled. In addition, materials such as paints, adhesives, solvents, and other substances typically used in building construction would be located on the site during construction. Improper use, storage, or transportation of hazardous materials could result in accidental releases or spills, potentially posing health risks to workers, the public, and the environment. This is a standard risk on all construction sites, and there would be no greater risk for improper handling, transportation, or spills associated with the proposed project than would normally occur for any other similar construction site.

Construction contractors are required to comply with all applicable federal, State, and local laws and regulations regarding construction-related hazardous materials, including, but not limited to, requirements imposed by the Environmental Protection Agency, the California Department of Toxic Substances Control, the North Coast Unified Air Quality Management District, and the North Coast Regional Water Quality Control Board. As such, impacts from construction equipment related activities would be less than significant.

The project proposes to demolish the existing buildings at the project site which remain from past industrial and current residential use. This includes the removal of the two larger warehouse buildings on the site and several smaller structures including two residences. Demolition of structures can result in potential exposure of people to asbestos-containing materials and/or lead-based paint if asbestos-containing or lead-based materials are present within any structures on a site. Many of the existing structures on the project site were constructed prior to 1978. Accordingly, there is the potential for asbestos-containing materials and lead-based paint to be present in the structures that would be demolished as part of the project.

Prior to the issuance of demolition permits by the City of Arcata, an asbestos and limited lead-based paint survey shall be conducted by a qualified consultant to evaluate the presence of asbestos-containing materials and lead-based paint or lead-containing surface coatings in the various structures at the project site.

If it is determined that asbestos-containing materials are present within any structures at the site proposed for demolition, the City shall condition the demolition permits for the project to comply with the asbestos regulations from the National Emissions Standards for Hazardous Air Pollutants (NESHAP), which are administered by the North Coast Unified Air Quality Management District (NCUAQMD). These regulations require the following procedures:

- Survey by a California State Certified Asbestos Consultant (CAC) of the areas proposed for disturbance for asbestos containing material.
- Documentation of the asbestos survey results in a signed report from the CAC.
- Notification to the NCUAQMD at least 10 working days prior to any demolition.
- Employing the use of proper work practices outlined in the NESHAP asbestos regulations.
- Complying with CalOSHA worker safety requirements.

The construction contractor shall maintain all records of compliance with the NESHAP asbestos regulations and NCUAQMD rules including, but not limited to, the following: 1) evidence of notification to the NCUAQMD; 2) contact information for the asbestos abatement contractor and asbestos consultant; and 3) receipts (or other evidence) of off-site disposal of all asbestos-containing materials. These records shall be made available to the City upon request.

If it is determined that lead-based materials are present within any structures at the site proposed for demolition, the City shall condition the demolition permits for the project to comply with Title 17, California Code or Regulations Division 1, Chapter 8 (Lead Based Paint Regulations), which addresses requirements for the removal of components painted with lead-based paint during site clearing and demolition of existing structures. The construction contractor shall be required to comply with these provisions. The removal of all lead-based paint materials shall be conducted by a certified lead supervisor or certified lead worker, as defined by §35008 and §35009 of the Lead Based Paint Regulations.

These requirements will be included as conditions of approval for the project by the City of Arcata to reduce the risks associated with hazardous materials to less than significant levels, and would ensure that on-site hazardous materials do not pose a substantial risk to the public or environment.

Operational Impacts

The proposed residential development includes a student housing community with a variety of unit types ranging from studios to 4 bedroom/4 bathroom units. These types of land uses are not typically associated with the use, transport, or disposal of significant quantities of hazardous materials. Although, residential uses may utilize cleaning products that contain toxic substances, which are usually in low concentration and small in amount and would not pose a significant risk to humans or the environment from an accidental release.

Therefore, as conditioned and in compliance with existing regulatory requirements, the proposed project will not 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.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.10.3: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Waste within ¼ Mile of an Existing or Proposed School.

Discussion:
As discussed in the Environmental Setting, Arcata Elementary School is within one quarter-mile of the project site. As discussed under Finding 2.10.2, the project proposes to demolish the existing buildings at the project site which remain from past industrial and current residential use. This includes the removal of the two larger warehouse buildings on the site and several smaller structures including two residences. Demolition of structures can result in potential exposure of people to asbestos-containing materials and/or lead-based paint if asbestos-containing and lead-based materials are present within any structures on a site. Many of the existing structures on the project site were constructed prior to 1972. Accordingly, there is the potential for asbestos-containing materials and lead-based paint to be present in the structures that would be demolished as part of the project.

As discussed under Finding 2.10.2, conditions of approval will be included for the project which require surveys to be conducted by qualified consultants, prior to the issuance of demolition permits by the City of Arcata, to evaluate for the presence of asbestos-containing materials and lead-based paint or lead-containing surface coatings in the various structures at the project site. If it is determined that asbestos-containing materials or lead-based materials are present within any structures at the site proposed for demolition, the City shall condition the demolition permits for the project to comply with the federal, state, and local regulations for the removal, handling, and disposal of asbestos and lead-based materials. These requirements will reduce the risks associated with hazardous materials to less than significant levels, and would ensure that on-site hazardous materials do not pose a substantial risk to the school.

Therefore, as conditioned and in compliance with existing regulatory requirements, the proposed project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.10.4: Creation of a Significant Hazard to the Environment due to the Location on a Site Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5.

Discussion:
As described in the Environmental Setting, the majority of the project site is as a former lumber mill that was used as a lumber planing manufacturing, and shipping facility. On the SWRCB Geotracker website, the project site (2905 St. Louis Road) is classified as a LUST Cleanup Site (T0602300075) with a cleanup status listed as "*Completed – Case Closed as of 01/17/2001*" (SWRCB, 2017).

As described in the Environmental Setting above, the project site formerly contained two underground storage tanks (USTs): one 6,000-gallon diesel UST located off the eastern end of the main building and one 2,000-galllon gasoline UST located in the north-central portion of the site (see Figure 2.10C above). The 6,000-gallon diesel UST was removed on March 15, 1990, and the 2,000-gallon gasoline UST was removed on April 9, 1990. The two UST cases received regulatory closure from the Humboldt County Division of Environmental Health (HCDEH) on January 17, 2001.

As discussed in the Environmental Setting above, a soil pile remains on-site from the removal of the leaking underground storage tanks (LUST) in the 1990s. In a letter dated November 16, 2000, SHN Consulting Engineers & Geologists, Inc. (SHN) presented the characterization results for the 70-80 cubic yard soil pile and recommended that it be spread thin across the site. This proposal was approved by the Humboldt County Division of Environmental Health (HCDEH) as part of closure of the LUST case in a letter dated January 17, 2001. As such, the remaining soil pile is proposed to be spread thinly across the site during site preparation and grading activities for the proposed project.

A Phase I Environmental Site Assessment (ESA) was conducted on the project site by Blue Rock Environmental, Inc. (Appendix I) to assess existing conditions. The Phase I ESA concluded that further study of the site was needed for potential contamination from dioxin and wood preservatives.

Based on the results of the Phase I ESA, a Phase II Investigation was conducted by Blue Rock Environmental, Inc. (Appendix J) which included soil and groundwater sampling and laboratory analysis to determine if potential contamination from dioxin and wood preservatives is present at the site. The Phase II Investigation found that concentrations of dioxins and wood preservatives in the soil and groundwater at the site are below applicable regulatory screening levels for residential land use. The investigation also found that concentrations of chromium, copper, and arsenic were detected in the soil at the site and were determined to be representative of background levels in the near surface soil for the Arcata area. Groundwater sampling did not contain detectable concentrations of these metals at the site.

Therefore, the proposed project would not create a significant hazard to the public or the environment due to its location on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.10.5: Result in a Safety Hazard for People Residing or Working in the Project Area Due to Close Proximity to a Public Airport or Public Use Airport.

Discussion:
A review of the Humboldt County Web GIS system (gis.co.humboldt.ca.us) shows that the project site is not located within two miles of an airport or within an airport land use plan. The closest civilian airports to the project area occur approximately six miles to the south (Murray Field), approximately six miles to the north (California Redwood Coast – Humboldt County Airport) and approximately ten miles to the southwest (Samoa Field). The closest military airport is the United States Coast Guard Air Station which is located adjacent to the Arcata-Eureka Airport approximately six miles to the north of the project area.

Therefore, the proposed project will not, result in a safety hazard for people residing or working in the project area due to the close proximity to a public airport or public use airport.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.10.6: Result in a Safety Hazard for People Residing or Working in the Project Area Due to Close Proximity to a Private Airstrip.

Discussion:
A review of the Humboldt County Web GIS system (gis.co.humboldt.ca.us) shows that the project site is not located within two miles of a private airstrip. The closest airports, in general, to the project area occur approximately six miles to the south (Murray Field), approximately six miles to the north (California Redwood Coast – Humboldt County Airport) and approximately ten miles to the southwest (Samoa Field).

Therefore, the proposed project will not, result in a safety hazard for people residing or working in the project area due to the close proximity to a private airstrip.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.10.7: Impair Implementation of or Physically Interfere With An Adopted Emergency Response Plan or Emergency Evacuation Plan.

Discussion:
The Arcata Fire District (AFD) and City of Arcata Police Department have provided comments on emergency access and fire abatement requirements during the review of this project. City policy also requires projects to be consistent with General Plan Policy PS-1e (*Development & design standards for emergency response*) (Pg. 6-5). The site design has been developed to incorporate the requirements of the AFD and Police Department. Proposed street improvements will improve emergency access and circulation within the site and neighborhood.

As noted in the Operations and Management Plan prepared for the proposed project (Appendix C), a property-specific Emergency Preparedness and Disaster Recovery Plan will be prepared for the development, and each member of the property management team will be trained in how to respond in an emergency or disaster. This will include coordination with the Arcata Fire District and Police Department, and consistency with existing City emergency response plans.

Therefore, the proposed project will not impair the implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.10.8: Expose People or Structures to a Significant Risk of Loss, Injury or Death Involving Wildland Fires.

Discussion:
The project site is located in the northern central portion of the City and is surrounded by residential development, industrial uses, and Highway 101. The project site contains mostly compacted gravel surfaces and has very little vegetation except for the undeveloped western portion of the site. The site is shown on the Humboldt County Web GIS system (gis.co.humboldt.ca.us) as having a "Low" fire rating on the western portion of the site and a "High" fire rating on the eastern portion of the site. The portions of the Arcata Planning Area shown as having a "High" fire rating primarily include forested areas east of Highway 101. Policy PS-5d of the General Plan Public Safety Element addresses wildland fire hazards which states:

PS-5d Management of wildland fire hazards. *Wildland fires in forested areas of the City can cause property damage and threaten nearby structures. Buildings in forested areas shall use materials such as non-flammable perimeter vegetation and roofing material to prevent exposure to wildland fires. The City shall encourage the Arcata Fire Department to maintain its mutual aid agreement with the California Department of Forestry and Fire Prevention (CDF) to insure rapid response to wildland fires.*

There are no forested areas near the project site. The largest area of vegetation near the project site is the Janes Creek Meadows open space area which contains a section of Janes Creek and a tributary with associated riparian vegetation. As such, the project area is at a very low risk from wildland fires. The closest forest lands are approximately 0.5 miles from the project site on the east side of Highway 101. This proposed residential development project will not increase risks involving wildland fires.

Therefore, the project will not expose people or structures to a significant risk of loss, injury or death involving wildland fires.

Determination:
Less than significant impact.

Mitigation:
None required.

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SECTION 2.11 UTILITIES AND SERVICE SYSTEMS

This section evaluates the potential impacts related to utilities and service systems with construction and operation of the project. The Environmental Setting section describes the existing setting as it relates to utilities and service systems and the Regulatory Framework section describes the applicable regulations at the federal, state and local level. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to utilities and service systems, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

Public Facilities

Domestic Water Supply

The project site is located within the northern central portion of the City of Arcata and is currently connected to the City's municipal drinking water system. The City of Arcata provides water and wastewater service to residences, businesses, and public facilities for all areas of the city except several small neighborhoods near the city limits (those neighborhoods are served by private wells and on-site wastewater treatment). The City's water system has one primary water source, a secondary groundwater source, and distribution system interconnections designed to provide additional means of bringing water into the distribution system. The City of Arcata has an Urban Water Management Plan (as required by the California Water Code) that defines the current and future capacity of the system. The City last updated its Urban Water Management Plan in 2015. The Arcata General Plan requires that this plan be updated every five years.

Arcata's municipal water system currently delivers water to approximately 6,260 connections which includes supplying water to the Jacoby Creek Water District (Urban Water Management Plan, 2015, Pg. 7). The majority of the City's water supply is purchased from the Humboldt Bay Municipal Water District (HBMWD) and enters the City's water system at the Alliance Road Transfer Station, Aldergrove Intertie Station, and the Wymore Road Intertie. The City currently purchases an average of 1.8 million gallons per day (MGD) from the HBMWD. The HBMWD water is obtained from horizontal collection chambers buried approximately 100 feet below the bed of the Mad River between Blue Lake and Arcata. The HBMWD has appropriative water rights permits from the State Water Resources Control Board through the year 2029 for surface water storage and diversion. HBMWD's water rights permits allow it to store and divert a combined 75 MGD from the Mad River. Each municipal customer is designated a Peak Rate Allocation (PRA) which is the maximum daily use in any given calendar year and is reviewed

annually by HBMWD. The PRA for Arcata is 3.25 MGD or 9.97 acre-feet/day and accounts for approximately 4.3 percent of HBMWD's water rights. The City's PRA would allow the City to use 1.86 billion gallons of water annually (Urban Water Management Plan, 2010, Pgs. 16-17).

The City of Arcata also invested in a groundwater source, referred to as the Heindon Well, to diversify its water supply and better prepare its service area during emergencies. Pumping from the Heindon Well began in 1999 to augment the general water supply; although use of the groundwater well was very sporadic from 1999-2002. In July of 2002, the City began pumping continuously from the groundwater well at a rate of approximately 500,000 gallons per day. Since 2005, average pumping rates have decreased to approximately 350,000 gallons per day. Ultimately, the well is capable of producing approximately 183 million gallons of water per year. The Heindon Well will continue to be operated as an auxiliary water supply.

The following table contains past and projected data regarding water service connections by type of user and volume of water consumed per year.

Table 2.11-1 City of Arcata Water Service Data (Actual and Projected)

City of Arcata Water Service Connections

	2010		2015		2020		2025		2030	
	No.	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**	**No.**	**%**
Single Family	4,904	81.5	5,154	81	5,417	81	5,693	81.4	5,984	81.7
Multi Family	570	9	599	10	630	9.5	662	9.5	696	9.5
Commercial	503	8	509	7	516	7	522	7.5	529	7.2
Industrial	62	1	66	1	71	1	75	1.1	79	1.1
Instit/Govt.	37	0.05	37	1	38	0.05	38	0.5	39	0.5
Total	6,076	100	6,365	100	6,672	100	6,990	100	7,327	100

Source: City of Arcata Urban Water Management Plan, 2010.

City of Arcata Water Consumption

	2015[2]		2020[3]		2025[3]		2030[3]		2035[3]	
	Vol.[1]	**%**	**Vol.[1]**	**%**	**Vol.[1]**	**%**	**Vol.[1]**	**%**	**Vol.[1]**	**%**
Single Family	218	33	221	30.3	227	29	231	28.3	235	27.7
Multi Family	135	20.4	180	24.7	206	26.2	210	25.8	214	25.2
Commercial	110	16.6	121	16.6	133	17	147	18	162	19
Industrial	20	3	21	2.9	23	2.9	24	2.9	26	3.1
Instit/Govt.	55	8.3	58	7.9	62	7.9	66	8.1	71	8.4
Other	24	3.6	24	3.2	24	3	24	3	24	2.9
Losses	100	15.1	105	14.4	110	14	113	13.9	116	13.7
Total	662	100	730	100	785	100	815	100	848	100

[1]Vol. = Volume of water consumed, measured in millions of gallons per year.
[2] 2015 = Actual water consumed
[3]2020-2035 = Projected water consumption
Source: City of Arcata Urban Water Management Plan, 2015.

In 2015, the City used 660 million gallons or approximately 55 percent of its PRA. The change in water demand is anticipated to increase 28 percent between 2015 and 2035; an increase from 660 million gallons per year in 2015 up to 847 million gallons per year in 2035.

The City of Arcata Water System Evaluation Summary Report (SHN, 1998) provides a summary of the City's water system and a general evaluation of the systems facilities. The most common problem encountered was the need for more storage capacity. Ideally, a municipal water system should provide seven days of storage capacity. Arcata's water system currently provides only 48 hours of storage capacity. The ideal goal of seven days of storage is not often attained by municipal water systems. The City has established a more realistic goal of increasing the water systems storage capacity to 72 hours. To achieve this goal, an additional 1.5 million gallons of storage would be required.

The City's water system is composed of thirteen (13) service areas or zones. The largest service area (Zone 1, Central City) includes approximately 75 percent of the City's water customers. Facilities in Zone 1 represent the backbone of the City's water system. Much of the City's commercial and industrial zoned lands are located within Zone 1. Water in Zone 1 is supplied by the HBMWD, through the Alliance Road Transfer Station, and by the Heindon Well. City Staff reports no problems at the Alliance Road Transfer Station or Heindon Well that cannot be addressed by routine maintenance. Storage is provided by welded steel tanks at 16th and Union and Margaret Lane. The total combined storage capacity of Zone 1 is approximately 3 million gallons.

City staff indicates that the water supply distribution system is adequate to serve General Plan projected growth through 2020, and that existing storage capacity will allow most land owners to develop property within the City limits. Uses requiring large amounts of treated water may be required to construct on-site storage. Furthermore, intensive manufacturers, agriculture projects, or new major subdivisions/developments may be required to upgrade the City's storage systems. Developers are often required to construct mainline extensions from existing facilities and all required laterals to serve the proposed development.

The project site is located within City of Arcata water Zone 1. There is an existing waterline on St. Louis Road that serves the project site. Figure 2.11A (Public Facilities) below from the City of Arcata Web GIS System, shows the location of public facilities serving the project site. There is a water valve and fire hydrant located 180 feet north of the project site on St. Louis Road. The City has indicated that it can serve the proposed project with water (City of Arcata, 2016d). Public Utility Easements (PUEs) benefiting the City will be required for all onsite utility infrastructure.

Wastewater Collection & Disposal

The project site is located within the northern central portion of the City of Arcata and is currently connected to the City's municipal wastewater treatment system. Arcata's wastewater collection system consists of pipes, manholes, and lift stations. The collection system drains via gravity, to eight lift stations. Wastewater is pumped from the lift stations to the wastewater

treatment facility. There are numerous studies illustrating the degree of infiltration and inflow into the City's collection system. Infiltration and inflow is water flowing into the collection system from an outside source such as groundwater or surface drainage. This condition is especially prevalent during the peak wet weather season.

Based on a 12-month summary of water usage provided by the project applicant for a student housing community at Cal State Monterey Bay, the proposed project is estimated to produce 24,800 gallons or less per day of wastewater. Wastewater that would be generated by the project would flow to the western lift station before reaching the wastewater treatment system. There is an existing sewer line serving the site that enters the northeast corner of the site from St. Louis Road and traverses the eastern portion of the site and exits through Eye Street. Figure 2.11A (Public Facilities) below from the City of Arcata Web GIS System, shows the location of public facilities serving the project site. Public Utility Easements (PUEs) benefiting the City will be required for all onsite utility infrastructure.

Wastewater is treated by the City's wastewater treatment plant and marsh systems (see Figure 2.11B [Aerial Photo of the Arcata Wastewater Treatment System]). The wastewater treatment plant facilities include headworks, primary clarifiers, oxidation ponds, treatment wetlands, enhancement wetlands, and chlorine disinfection. Solids removed in the primary clarifiers are treated in anaerobic digesters and solids drying beds (City of Arcata, 2016c). The treatment plant is designed for an average dry weather flow of 2.3 million gallons per day, and a peak wet weather flow of 5.0 million gallons per day. The City is currently at approximately 70 percent of dry weather design flow as of the summer of 2005 (City of Arcata, 2016a). The City regulates wastewater disposal, including industrial pretreatment standards, according to Chapter 2, Title VII of the Arcata Municipal Code. Wastewater treatment at the Arcata plant includes the following steps:

- Primary treatment using clarifiers (settling tanks) to remove solids and organic matter;
- Secondary treatment using oxidation ponds to remove additional organic matter;
- Additional organic matter and nutrient removal using treatment marshes;
- Mixing with outflow from the marshes at the Arcata Marsh and Wildlife Sanctuary; and
- Chlorination to kill disease organisms, followed by removal of the chlorine (which is toxic to aquatic life).

Under normal conditions, treated wastewater is discharged to Arcata Bay after flowing through the Arcata Marsh. About half of the Arcata Marsh outflow is returned to the treatment plant for mixing, and the rest discharged into Arcata Bay.

Arcata's wastewater treatment system must comply with regulatory requirements established by its National Pollutant Discharge Elimination System (NPDES) permit issued by the California Regional Water Quality Control Board. As described in the City's Wastewater Treatment Facility Improvements Project Report (2016c), effluent monitoring data shows that there have been ongoing exceedances of discharge limits on total suspended solids (TSS), biochemical

Figure 2.11A Public Facilities

Figure 2.11B Aerial Photo of the Arcata Wastewater Treatment Plant (Google Earth, 2017)

oxygen demand (BOD, a measure of biodegradable organic matter), pH, dichlorobromomethane, chronic toxicity, chlorine, and fecal coliform since 2004.

In 2012, the City's wastewater treatment system began operating under a new NPDES permit that specifically addressed several long-term issues regarding disinfection, treatment units, and outfalls. The new permit enabled changes to be made to improve wastewater treatment, protect beneficial uses, increase energy efficiency, reduce chemical usage, and reduce the potential for permit violations. Improvements to the City's wastewater treatment system that are required as part of the 2012 NPDES permit includes the following:

1) Conversion of the flow configuration to a single pass disinfection system and discharge through a new outfall of 5.9 mgd. Piping, screening, pumps, and pump station modifications will be required to switch to single pass flow through the system.
2) Construction of a new UV disinfection system for the disinfection of secondary effluent up to 5.9 mgd. The UV process will eliminate the disinfection by-product formation and permit violations that are occurring with the use of chlorine.

In response to the new permit requirements, the City initiated a Facility Plan and plant improvement project (2016c) to address several issues including:

- Ongoing NPDES permit violation and regulatory compliance.
- Need to repair or rehabilitate (R&R) aging infrastructure and address deferred maintenance.
- Providing reliable capacity and treatment for both wet and dry weather flows now and into the future.
- Repairing conveyance infrastructure to reduce inflow and infiltration (I&I).

The facility plan provides overall direction for current permit compliance as well as a future Capital Improvements Program (CIP) needed to maintain the treatment facility assets, repair, and rehabilitate existing assets, and modernize the facility to meet current levels of service. As part of the facility plan, the wastewater treatment plant facilities were evaluated for their overall condition. The findings from the assessment indicate that a majority of the mechanical equipment has exceeded its expected life, and that major structures are also starting to approach the end of their useful life. Based on the conditions assessment and capacity evaluations conducted as part of the Facility Plan, numerous facilities will need to be improved in the next ten years based on their expected useful life and current condition. Facilities that will be improved as part of this plan include the headworks, primary clarifiers, anaerobic digesters, and sludge heating/mixing systems. Other improvements to the wastewater treatment system that are proposed in the Facility Plan include the following:

1) Removal of solids and vegetation from the oxidations ponds and treatment wetlands to improve treatment and hydraulic capacity.
2) Construction of a new treatment wetland to increase the capacity of the treatment wetlands from 1.8 mgd to 2.3 mgd.

3) Vegetation removal and the installation of new baffles and new inlet/outlet structures in the enhancement wetlands to improve treatment and hydraulic efficiency and capacity.
4) Replacement of aging pump stations to increase capacity.
5) Augmentation of secondary treatment capacity to address BOD ITSS capacity shortfalls with a 1.8 mgd oxidation ditch.

The proposed project, which includes upzoning the project site to Residential High Density (RH), will be required to pay standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, which will be used to fund some of the proposed improvements to the City's wastewater treatment system.

Stormwater Collection

The City of Arcata operates a stormwater drainage system that includes gutters and drop inlets associated with streets, as well as ditches, culverts, basins, creeks, and the Arcata Marsh. There are eight creeks traversing the Urban Area that accept stormwater runoff.

The City prepared a Drainage Master Plan (1997) to guide stormwater management which includes a hydrological analysis, drainage management alternatives, operational plan, needs assessment, and capital improvement program. The City of Arcata prepared a Storm Water Management Program (SWMP) in 2005 in response to the requirements of the State Water Resources Control Board (SWRCB). The program covers the eleven square-mile area of the City of Arcata. The goal of the SWMP is to protect the health of the recreational public and the environment, meet Clean Water Act mandates through compliance with Phase II NPDES Permit requirements and applicable regulations, and foster heightened public involvement and awareness.

The majority of the project site is an elevated terrace above the Arcata Bottom area and has a gentle slope towards the west. The western edge of the project site is an undeveloped area that is approximately 15-20 feet lower than the majority of the site. Along the western boundary of the project site is an approximately 350-foot long drainage ditch. The majority of this ditch is approximately 5 feet wide and mostly filled with sediment. There is a drainage inlet and culvert that drains surface runoff from the elevated developed portion of the site into the southern portion of this ditch. As shown on Figure 2.11A (Public Facilities), the ditch has two drainage inlets which direct the runoff to an 18-inch concrete pipe that heads west toward Maple Lane. Runoff from the ditch connects to the City of Arcata stormwater system and ultimately flows into Janes Creek and then to Arcata Bay. Consistent with requirements of the State Water Resources Control Board (SWRCB) and City of Arcata, the proposed project will be required to manage stormwater runoff on-site and not exceed pre-project runoff to the City of Arcata stormwater infrastructure.

Public Services

Solid Waste Collection

Residences within the City of Arcata can receive curbside solid waste collection services from the City's franchise contractor, Recology Arcata. Solid waste is transported to the Humboldt Waste Management Authority (HWMA) Solid Waste Transfer Station in Eureka. Large recyclable materials (scrap metal, wood, and concrete) and hazardous materials (washers, dryers, televisions, tires, etc.) are pulled from the waste stream at the Eureka facility, and the remaining solid waste is shipped to the Dry Creek Landfill, in Medford, Oregon, and the Anderson Landfill, in Anderson, California. There are also recycling drop off centers at Humboldt Sanitation in McKinleyville, Eel River Resource Recovery in Samoa, and HWMA in Eureka. HWMA, in partnership with the City of Arcata and Wes Green Landscaping, operates the Mad River Compost Facility on West End Road in Arcata, where greenwaste is processed into compost (HWMA, 2016). The City is in compliance with State waste reduction goals.

The Dry Creek Landfill is located in Jackson County, Oregon and receives approximately 900 tons of solid waste per day. The Dry Creek Landfill has a total capacity of 35,700,000 cubic yards and is projected to close in 2074 (Rogue Disposal & Recycling 2016). The Anderson Landfill is located in Shasta County, California and is currently permitted to receive 1,850 tons per day. The Anderson Landfill has a maximum permitted capacity of 16,840,000 cubic yards and is projected to close in 2093 (CalRecycle, 2016).

REGULATORY FRAMEWORK

Federal

Clean Water Act

The Clean Water Act establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. Under the Clean Water Act, the U.S. EPA has implemented pollution control programs such as setting wastewater standards for industry and water quality standards for all contaminants in surface waters. The Clean Water Act made it unlawful to discharge any pollutant from a point source (direct discharge) into navigable waters. The U.S. EPA's NPDES permit program controls direct and non-point discharges through the NCRWQCB.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976, as amended, addressed the nations increasing volumes of municipal and industrial solid waste. RCRA addressed both solid waste, and hazardous wastes and their disposal, and authorized the EPA to regulate waste

management activities across the country. RCRA also authorized states to develop their own regulations for the management and enforcement of waste management programs. RCRA was amended by the Hazardous and Solid Waste Amendments (HSWA) of 1984.

State of California

Porter-Cologne Water Quality Control Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the State's water resources. The act established the SWRCB and nine RWQCBs as the principal State agencies with the responsibility for controlling water quality in California. The SWRCB is responsible for implementing the Clean Water Act, issues NPDES permits to cities and counties through Regional Water Quality Control Boards, and implements and enforces the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit) (Order No. 2009-0009, as amended by Order No. 2010-0014). Order No. 2009-0009 took effect on July 1, 2010 and was amended on February 14, 2011. The Order applies to construction sites that include one or more acres of soil disturbance. Construction activities include clearing, grading, grubbing, excavation, stockpiling, and reconstruction of existing facilities involving removal or replacement.

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (Public Resources Code Division 30), enacted through Assembly Bill (AB) 939 and modified by subsequent legislation, required all California cities and counties to implement programs to divert waste from landfills (Public Resources Code Section 41780). Compliance with AB 939 is determined by the Department of Resources, Recycling, and Recovery (CalRecycle), formerly known as the California Integrated Waste Management Board (CIWMB). Each county is required to prepare and submit an Integrated Waste Management Plan for expected solid waste generation within the county to the CIWMB. The Act also requireD each city to prepare a Source Reduction and Recycling Element for achieving a solid waste diversion goal of 25 percent by January 1, 1995, and 50 percent by January 1, 2000. In 2015, the City of Arcata met or exceeded the waste diversion mandate of 50 percent set by the Integrated Waste Management Act of 1989 (City of Arcata, 2016b).

California Solid Waste Reuse and Recycling Access Act

The California Solid Waste Re-use and Recycling Access Act of 1991 was enacted to help government entities with the implementation of AB 939. As part of the Act, the California Integrated Waste Management Board (now CalRecycle) was directed to draft a "*model ordinance*" relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include "*adequate, accessible, and convenient areas for collecting and loading recyclable materials*."

SB 1018

Senate Bill 1018 requires businesses that generate four cubic yards or more of commercial solid waste per week, or is a multi-family residential dwelling of five units or more, shall arrange for recycling services.

Utility Notification Requirements

Title 8, Section 1541 of the California Code of Regulations requires excavators to determine the approximate locations of subsurface installations such as sewer, telephone, fuel, electric, and waterlines (or any other subsurface installations that may reasonably be encountered during excavation work) prior to opening an excavation. The California Government Code (Sections 4216 et seq.) requires owners and operators of underground utilities to become members of and participate in a regional notification center. According to Section 4216.1, operators of subsurface installations who are members of, participate in, and share in the costs of a regional notification center are in compliance with this section of the code. Underground Service Alert North (USA North) receives planned excavation reports from public and private excavators and transmits those reports to all participating members of USA North that may have underground facilities at the location of excavation. At this point, members of the regional notification center will mark or stake their facilities, provide information, or give clearance to dig (USA North 2014).

California Public Utilities Commission

The California Public Utilities Commission (PUC) regulates privately owned electric, natural gas, communications, water, sewer utilities, railroads, and passenger transportation companies in the State. Regulations are established that ensure the public safety and reasonable rates. The PUC does not regulate personal private utility systems (such as individual water wells, solar panels, private roads, etc.), or private utility associations (such as Community Service Districts).

City of Arcata

Arcata General Plan

The City of Arcata General Plan contains guidelines for utilities and service systems within the Public Facilities and Infrastructure Element. The General Plan has developed several specific Goals and related Policies that address these systems. Table 2.11-2 below contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 2.11-2 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
PF-2 Wastewater Collection, Treatment, & Disposal	Collect and treat wastewater to achieve safe water quality standards, utilizing the City's internationally renowned marsh treatment facility.	PF-2a
PF-3 Stormwater Management	Implement the City's Drainage Master Plan to utilize natural drainage systems; minimize increases in stormwater runoff, flooding, and erosion; maintain the integrity of stream hydrology; reduce pollutant loads; and acquire easements and properties for effective drainage management.	PF-3a, PF-3b, PF-3c, and PF-3e
PF-5 Public Facilities	Provide adequate facilities for services and programs administered by the City and other public service providers, including City administrative and meeting facilities (City Hall), police and fire departments, libraries, and community centers.	--
PF-6 Integrated Waste Management	Reduce solid waste generation at the source; maximize re-use and repair of appropriate items and material; promote composting and recycling; and properly transport non-recyclable solid waste to approved disposal sites.	PF-6a

Urban Water Management Plan

The City of Arcata has an Urban Water Management Plan (as required by the California Water Code) that defines the current and future capacity of the system. The evaluation of water demands includes an assessment of historical demands and a projection of future demands based on forecasted development of the remaining developable lands within the City's Urban Services Boundary. Projections were done in five-year increments, as estimated from the status and timing of currently approved development as well as probable future development within the context of the City General Plan. The City last updated its Urban Water Management Plan in 2015.

Drainage Master Plan

The City prepared a Drainage Master Plan (1997) to guide stormwater management which includes a hydrological analysis, drainage management alternatives, an operational plan, a needs assessment, and a capital improvement program. At the time that the Drainage Master Plan was completed, there were 900 acres of impervious surface Citywide (buildings and paved area), 40 percent of which is the public street system. The Master Plan projected that, at general plan buildout, there would be 1,582 acres of impervious surface Citywide.

Storm Water Management Program

The City of Arcata prepared a Storm Water Management Program (SWMP) in response to State Water Resources Control Board (SWRCB) Water Quality Draft Order No. 2003–0005–DWQ1 (GENERAL PERMIT NO. CAS000004) for National Pollutant Discharge Elimination System (NPDES) Phase II. The program covers the eleven square mile area of the City of Arcata. Although none of the small urban streams in or near the City have been identified as "impaired," by the 303(d) list, the Mad River is listed as impaired due to temperature, sediment, turbidity and siltation. Humboldt Bay, which receives Arcata runoff, is listed as "*impaired*" by the State of California for polychlorinated biphenyls (PCBs).

The City's stormwater quality program has been derived from ongoing City programs that have been enhanced to meet the requirements of the SWRCB. The goal of the SWMP is to protect the health of the recreational public and the environment, meet Clean Water Act mandates through compliance with Phase II NPDES Permit requirements and applicable regulations, and foster heightened public involvement and awareness. Water quality monitoring has identified bacteria, nutrients, and sediment as pollutants of concern. Storm drains typically flow into creeks that have already passed through a variety of land uses, including natural, agricultural, urban and industrial, and in some cases, through more than one permit jurisdiction. The City is faced with the challenge of requiring and implementing controls to reduce the discharge of pollutants in stormwater runoff to the technology-based standard of "*Maximum Extent Practicable*" (MEP) as required by § 402(p)(3)(B)(iii) of the Clean Water Act, 33 U.S.C. § 1342(p)(3)(B)(iii) (City of Arcata 2005, Pg. 6).

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact to utilities and service systems is considered to be significant if it meets any of the following criteria.

If the project would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;

- Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed;
- 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;
- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal, State, and local statutes and regulations related to solid waste.

Proposed Project

Finding 2.11.1: Exceed Wastewater Treatment Requirements of the Applicable Regional Water Quality Control Board.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four-story buildings on a former industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus. All wastewater generated by the development is expected to be domestic sewage and would not include industrial or agricultural effluent.

The proposed project will be served by the City of Arcata wastewater treatment plant which is an innovative system that combines conventional wastewater treatment with the natural processes of constructed wetlands. Arcata's wastewater treatment system must comply with regulatory requirements established by its National Pollutant Discharge Elimination System (NPDES) permit issued by the California Regional Water Quality Control Board. As described in the City's Wastewater Treatment Facility Improvements Project Report (2016c), effluent monitoring data shows that there have been ongoing exceedances of discharge limits on total suspended solids (TSS), biochemical oxygen demand (BOD, a measure of biodegradable organic matter), pH, dichlorobromomethane, chronic toxicity, chlorine, and fecal coliform since 2004.

In 2012, the City's wastewater treatment system began operating under a new NPDES permit that specifically addressed several long-term issues regarding disinfection, treatment units, and outfalls. The new permit enabled changes to be made to improve wastewater treatment, protect beneficial uses, increase energy efficiency, reduce chemical usage, and reduce the potential for permit violations. As described in the Environmental Setting, the City initiated a Facility Plan and plant improvement project (2016c) which proposes a variety of improvements to the wastewater treatment system to increase treatment capacity and prevent the exceedance of discharge limitations.

The City of Arcata prepared a memorandum (dated June 23, 2017) that analyzed the potential wastewater impacts of the approved/planned Sunset Area housing projects, which includes the Village Student Housing project (Appendix K). The projects, referred to as the Sunset Area

housing projects, are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. The memorandum contains an analysis that estimates the increase in population and residential units that will occur from buildout of available land in the City in combination with upzoning and annexation proposed by the Sunset Area housing projects (see Chapter 7 [Cumulative Impact Analysis] for a list of the Sunset Area housing projects). The analysis determined that there is sufficient wastewater treatment capacity for the existing feasible residential development potential in the City as well as the upzoning and annexation proposed by the Sunset Area housing projects. However, as described above, the wastewater treatment facilities must be improved to meet the demand of both current and future population. The proposed project, which includes upzoning the project site to Residential High Density (RH), will be required to pay standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, which will be used to fund some of the proposed improvements to the City's wastewater treatment system.

In addition, discharge/pre-treatment requirements for development projects are regulated by the City of Arcata subject to information submitted on the City's wastewater survey/questionnaire. This will be required as part of the review of the proposed residential development to describe pre-treatment/discharge equipment and system design so that discharges will not impact the City's wastewater system.

Any surface or stormwater runoff from the site is addressed in the responses to Findings 4.2.1, 4.2.3, 4.2.5, and 4.2.6 in Section 4.2 (Hydrology and Water Quality).

Therefore, the proposed project will not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.11.2: Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects.

Discussion:
The proposed project would result in the development of a 240-unit student housing community.

Water Facilities
The project site is already served by the City's public potable water system. Existing utility lines adjacent to the project site will be improved to serve the proposed project. Based on a 12-month summary of water usage provided by the applicant for a student housing community at Cal State Monterey Bay, it is estimated that the proposed project would generate a demand for approximately 24,800 gallons per day of water for domestic purposes. Based on the type and

scale of the proposed buildings, fire flow requirements for each four-story building will be 1,500 gallons per minute for a two hour period, or 180,000 gallons. For all four buildings this would be a total of 6,000 gallons per minute for a two hour period, or 720,000 gallons.

The proposed project would create an increase in demand for domestic water service from the City but would not result in the need for the construction of new water treatment facilities or the expansion of existing treatment facilities. The Arcata General Plan PEIR (Pg. 5-22) discusses the fact that the City's existing water rights are more than adequate to serve the projected growth (See discussion under Finding 2.11.4). The Public Works Department also provided input through the project referral process that there is adequate water capacity for the proposed residential development.

The project will require the expansion of water conveyance facilities including new looped onsite water lines and tie-ins to the existing water lines in St. Louis Road to serve the proposed residential structures. A total of five water meters will be installed for the project which includes one per residential building for domestic use and one for irrigation. Since these improvements will occur within an existing developed area (public right-of-way and project site with existing industrial and residential uses), it is not anticipated that significant environmental effects will occur from the extension of water lines to serve the project.

Wastewater Facilities

The project area is served by the City of Arcata wastewater treatment plant which is an innovative system that combines conventional wastewater treatment with the natural processes of constructed wetlands. Based on a 12-month summary of water usage provided by the project applicant for a student housing community at Cal State Monterey Bay, the proposed project is estimated to produce 24,800 gallons per day or less of wastewater.

The Arcata General Plan PEIR (Pg. 5-20) analyzed impacts to the City's wastewater treatment system resulting from "buildout" and found that the projected increases in wastewater production will bring the Arcata treatment plant close to its design capacity. The Arcata General Plan includes policies directing the City to monitor the system closely and plan and budget for future improvements (Pgs. 2-78 – 2-80).

As described in the General Plan PEIR (Pg. 2-1 to 2-3), an Urban Services Boundary was established for the City of Arcata as part of the last General Plan Update. Based on this, the General Plan PEIR assumes that there will be an increased use of undeveloped, underdeveloped, and vacant parcel in the Urban Services Boundary, as opposed to outward expansion. Therefore, underutilized properties such as the project parcels are assumed to be further developed with uses allowed in the designations/zones adopted as part of the General Plan Update. As described in Chapter 1 (Introduction) of the EIR, six of the seven project parcels are currently designated/zoned Industrial Limited (IL) and one is designated/zoned Residential Low Density (RL). As such, the General Plan PEIR assumes the project parcels will be developed with additional light industrial and residential uses. Besides light industrial uses, the IL Zone also allows certain types of residential uses (e.g., caretaker/employee unit, live/work unit, emergency shelter, and group quarters) at a density of 7.26 to 15 units per acre, where they are compatible

with the nature of industrial uses allowed within the zone. The Residential Low Density (RL) zone allows a density of 2 to 7.25 units per acres.

As described in the Environmental Setting, the City has initiated a Facility Plan and plant improvement project (2016c) which proposes a variety of improvements to the wastewater treatment system to increase treatment capacity and prevent the exceedance of discharge limitations. The City of Arcata also prepared a memorandum (dated June 23, 2017) that analyzed the potential wastewater impacts of the approved/planned Sunset Area housing projects, which includes the Village Student Housing project (Appendix K). The projects, referred to as the Sunset Area housing projects, are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. The memorandum contains an analysis that estimates the increase in population and residential units that will occur from buildout of available land in the City in combination with upzoning and annexation proposed by the Sunset Area housing projects. The analysis determined that there is sufficient wastewater treatment capacity for the existing feasible residential development potential in the City as well as the upzoning and annexation proposed by the Sunset Area housing projects. However, as described above, the wastewater treatment facilities must be improved to meet the demand of both current and future population. The proposed project, which includes upzoning the project site to Residential High Density (RH), will be required to pay standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, which will be used to fund some of the proposed improvements to the City's wastewater treatment system.

The potential impacts of these improvements to increase the City's wastewater treatment capacity are not analyzed in the EIR since they will be subject to subsequent CEQA analysis conducted by the City of Arcata.

Therefore, the proposed project will not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.11.3: Require or Result in the Construction of New Storm Water Drainage Facilities or Expansion of Existing Facilities, the Construction of Which Could Cause Significant Environmental Effects.

Discussion:
The surface water features on the project site include a drainage ditch and wetland area on the lower elevation western edge of the site. The project site generally drains to the west where it enters an approximately 350-foot long drainage ditch along the western boundary of the site.

There is a drainage inlet and culvert that drains surface runoff from the elevated developed portion of the site into the southern portion of this ditch. As shown on Figure 2.11A (Public Facilities), the ditch has two drainage inlets which direct the runoff to an 18" concrete pipe that heads west toward Maple Lane. Stormwater from the project site is directed to a tributary to Janes Creek, referred to as Sunset Creek, several hundred feet southwest of the site.

Currently the project site contains 1.208 acres of buildings and 0.098 acres of concrete. The majority of the project site (6.618 acres) is covered in compacted gravel fill, much of which is of moderate to low permeability (Manhard, 2017). Development of the project site will create impervious surfaces (e.g. buildings, pavement, etc.) and increase the amount of surface runoff. As described in the Preliminary Stormwater Management Report completed by Manhard Consulting (2017), approximately 6.27 acres of impervious surface will be developed throughout the entire 10.81 acre project site. This will include 2.2 acres of buildings, 2.75 acres of paved parking, and 1.32 acres of paved open space.

Stormwater drainage facilities for the development are required to be designed to meet both State and local stormwater regulations which are focused on maintaining or improving a site's pre-development runoff characteristics. As described in the Preliminary Stormwater Management Report (Appendix N), compliance with State and local stormwater regulations will be achieved by the on-site management of stormwater through low impact development (LID) site design measures including tree planting, soil quality improvement and maintenance, rain/rock gardens, native plantings, bioswales, impervious area disconnection, and an underground infiltration basin.

The installation of the on-site stormwater drainage facilities, as proposed by the project, would result in physical impacts to the surface and subsurface of the project site. These impacts are considered to be part of the project's construction phase and are evaluated in Sections 2.5 (Cultural Resources), 2.7 (Air Quality), 2.9 (Noise), 2.10 (Hazards and Hazardous Materials), 2.12 (Tribal Cultural Resources), 4.1 (Geology and Soils), 4.2 (Hydrology & Water Quality), and 4.3 (Biological Resources) of the EIR. In instances where significant impacts have been identified, mitigation measures are included to reduce these impacts to less than significant levels. No additional mitigation measures beyond those already identified would be required.

Therefore, with the proposed mitigation measures included in other sections of the EIR, the proposed project will not require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Determination:
Less than significant impact with incorporation of mitigation measures.

Mitigation:
Same as ***Mitigation Measure 4.3.1a***.

Finding 2.11.4: Have Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources, or are New or Expanded Entitlements Needed.

Discussion:
The proposed project would result in the development of a 240-unit student housing community. The proposed project would include the installation of a water distribution system, meters, and service lines to new residential units and for landscape irrigation. Domestic water would be provided by the City of Arcata. The majority of the City's water supply is purchased from the Humboldt Bay Municipal Water District (HBMWD) with a secondary source from the City owned Heindon Well.

The City of Arcata has an Urban Water Management Plan (as required by the California Water Code) that defines the current and future capacity of the system. The evaluation of water demands includes an assessment of historical demands and a projection of future demands based on forecasted development of the remaining developable lands within the City's Urban Services Boundary. Projections were done in five-year increments, as estimated from the status and timing of currently approved development as well as probable future development within the context of the City General Plan. The City last updated its Urban Water Management Plan in 2015.

As described in Chapter 1 (Introduction) of the EIR, the project proposes a General Plan Amendment and Zoning Reclassification to change the designation/zoning of the project site parcels to Residential High Density (RH). The RH designation and zone allows residential densities from 15.01 to 32 units per acre and the following types of multi-family residential development: mobile/manufactured homes, duplexes, townhouses, planned developments, group residential, and apartments (Arcata General Plan Table LU-2). This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four-story buildings. The gross density for the project is approximately 21 units per acre. The City's Urban Water Management Plan contains a discussion of the approved/planned Sunset Area housing projects, which are factored into the service area population in the plan (City of Arcata, 2015; Pg. 9 and 11). The plan anticipates that the project site will be developed with a 240-unit student housing facility.

Based on a 12-month summary of water usage provided by the applicant for a student housing community at Cal State Monterey Bay, it is estimated that the proposed project would generate a demand for approximately 24,800 gallons per day of water for domestic purposes. Based on the type and scale of the proposed buildings, fire flow requirements for each four-story building will be 1,500 gallons per minute for a two hour period, or 180,000 gallons. For all four buildings this would be a total of 6,000 gallons per minute for a two hour period, or 720,000 gallons.

Each HBMWD municipal customer is designated a Peak Rate Allocation (PRA) which is the maximum daily use in any given calendar year and is reviewed annually by HBMWD. The PRA for Arcata is currently 3.25 million gallons per day (MGD) or 9.97 acre-feet/day and accounts for approximately 4.3 percent of HBMWD's water rights. The City's PRA would allow the City to use 1.86 billion gallons of water annually. When the water from the Heindon Well is factored

in (183 million gallons per year), the City has 2.04 billion gallons of water available annually. In 2015, the City purchased and produced a total of 660 million gallons of potable water or an average of 1.8 million gallons per day (MGD). Change in potable water demand is anticipated to increase 34 percent between 2015 and 2040; an increase from 660 million gallons per year to 880 million gallons per year (Urban Water Management Plan 2010, Pgs. 12-15 and 29). The City of Arcata, with its present mix of water sources, possesses a significant surplus of capacity.

Therefore, the proposed project will have sufficient water supplies available to serve the project from existing entitlements and resources.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.11.5: 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.

Discussion:
The proposed project would result in the development of a 240-unit student housing community. Based on a 12-month summary of water usage provided by the project applicant for a student housing community at Cal State Monterey Bay, the proposed project is estimated to produce 24,800 gallons per day or less of wastewater.

The Arcata General Plan PEIR (Pg. 5-20) analyzed impacts to the City's wastewater treatment system resulting from "buildout" and found that the projected increases in wastewater production will bring the Arcata treatment plant close to its design capacity. The Arcata General Plan includes policies directing the City to monitor the system closely and plan and budget for future improvements (Pgs. 2-78 – 2-80).

As described in the General Plan PEIR (Pg. 2-1 to 2-3), an Urban Services Boundary was established for the City of Arcata as part of the last General Plan Update. Based on this, the General Plan PEIR assumes that there will be an increased use of undeveloped, underdeveloped, and vacant parcel in the Urban Services Boundary, as opposed to outward expansion. Therefore, underutilized properties such as the project parcels are assumed to be further developed with uses allowed in the designations/zones adopted as part of the General Plan Update. As described in Chapter 1 (Introduction) of the EIR, six of the seven project parcels are currently designated/zoned Industrial Limited (IL) and one is designated/zoned Residential Low Density (RL). As such, the General Plan PEIR assumes the project parcels will be developed with additional light industrial and residential uses. Besides light industrial uses, the IL Zone also allows certain types of residential uses (e.g., caretaker/employee unit, live/work unit, emergency shelter, and group quarters) at a density of 7.26 to 15 units per acre, where they are compatible with the nature of industrial uses allowed within the zone. The Residential Low Density (RL) zone allows a density of 2 to 7.25 units per acres.

As described in the Environmental Setting, the City has initiated a Facility Plan and plant improvement project (2016c) which proposes a variety of improvements to the wastewater treatment system to increase treatment capacity and prevent the exceedance of discharge limitations. The City of Arcata also prepared a memorandum (dated June 23, 2017) that analyzed the potential wastewater impacts of the approved/planned Sunset Area housing projects, which includes the Village Student Housing project (Appendix K). The projects, referred to as the Sunset Area housing projects, are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. The memorandum contains an analysis that estimates the increase in population and residential units that will occur from buildout of available land in the City in combination with upzoning and annexation proposed by the Sunset Area housing projects. The analysis determined that there is sufficient wastewater treatment capacity for the existing feasible residential development potential in the City as well as the upzoning and annexation proposed by the Sunset Area housing projects. However, as described above, the wastewater treatment facilities must be improved to meet the demand of both current and future population. The proposed project, which includes upzoning the project site to Residential High Density (RH), will be required to pay standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, which will be used to fund some of the proposed improvements to the City's wastewater treatment system.

Therefore, the wastewater treatment provider which serves or may serve the project has determined that there is adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.11.6: Be Served by a Landfill with Sufficient Permitted Capacity to Accommodate the Project's Solid Waste Disposal Needs.

Discussion:
The proposed development and subsequent increase in the City of Arcata's resident population would increase the amount of solid waste generated in the City. Based on the CalRecycle Per Capita Disposal Rates Trends for the City of Arcata (2014a), residents of Arcata generate on average approximately 2.24 pounds of waste per person per day (approximately 0.41 tons per year). Based on this average, the estimated 800 residents of the proposed residential development would generate approximately 1,792 pounds of solid waste per day (327 tons per year).

The Humboldt Waste Management Authority waste transfer facility was designed to accommodate the solid waste stream countywide, both current and anticipated, for the next 25

years. The increases in solid waste that would be generated by the proposed project, approximately 1,792 pounds per day (327 tons per year), could be accommodated by the HWMA transfer station, which is currently operating below capacity. The HWMA utilizes several landfills, all of which are located outside of Humboldt County. These primarily include the Anderson Landfill located at 18703 Cambridge Road, Anderson, CA and Dry Creek Landfill located at 6260 Dry Creek Road, Eagle Point, Oregon. The Anderson Landfill is located in Shasta County, California and is currently permitted to receive 1,850 tons per day. The Anderson Landfill has a maximum permitted capacity of 16,840,000 cubic yards and is projected to close in 2049 (CalRecycle, 2016). The Dry Creek Landfill is located in Jackson County, Oregon and receives approximately 900 tons of solid waste per day. The Dry Creek Landfill has a total capacity of 28,400,000 cubic yards and is projected to close in 2074 (Rogue Disposal & Recycling, 2016).

As such, the landfills that would serve the proposed project have adequate permitted capacity to accommodate the project's solid waste disposal needs. In addition, State law mandates recycling for this type of residential development, which will reduce the amount of solid waste entering the landfills serving the project and assist the City in meeting its waste diversion goals. See additional discussion under Finding 2.11.7.

Therefore, the proposed project will be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.11.7: Comply with Federal, State, and Local Statutes and Regulations Related to Solid Waste.

Discussion:
The proposed residential development project would generate solid waste during both construction and operation. State law requires the City to reduce its solid waste generation. For example, the California Integrated Waste Management Act of 1989 (AB 939) requires local jurisdictions to divert 50 percent of the total 1990 waste stream from landfill disposal by 2000 and beyond. AB 939 requires source reduction (waste prevention), recycling, and safe disposal. Arcata's AB 939 Source Reduction and Recycling Element (SRRE) contains programs and policies to accomplish the City's 50% landfill diversion goals (City of Arcata, 2017b). The City also implements these requirements through its General Plan Public Facilities & Infrastructure Element which includes source reduction (PF-6a, Pg. 2-80) and recycling policies (PF-6b, Pg. 2-80 – 2-81).

To implement the statutes and regulations related to the reduction of solid waste, the City contracts with Recology Arcata for waste disposal and recycling services. The City of Arcata

has also developed a universal curbside solid waste and recycling collection program to comply with State waste reduction mandates. Using 1990 baseline data, the City's 2015 landfill diversion was 68 percent (City of Arcata, 2017b).

State law (SB 1018) also mandates recycling for all businesses that generate four or more cubic yards of waste weekly, and all multi-family housing with five or more units. The proposed student housing community would be required to provide adequate areas for collecting and loading recyclable materials where solid waste is collected. The collection areas are required to be shown on construction drawings and installed before occupancy permits are issued by the building department.

Therefore, in compliance with State and City of Arcata regulations, the proposed project will not violate any federal, State, and local statutes and regulations related to solid waste.

Determination:
Less than significant impact.

Mitigation:
None required.

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SECTION 2.12 TRIBAL CULTURAL RESOURCES

This section evaluates the potential impacts related to tribal cultural resources during construction and operation of the project. To provide the basis for this evaluation, the Environmental Setting section describes the tribal cultural setting for the project area, and the Regulatory Framework section describes the applicable state and local regulations affecting the project area. Descriptions in this section are based on reviews of published information, reports, and plans regarding cultural resources. The Impact Analysis section establishes the thresholds of significance, evaluates potential cultural resource impacts, and identifies the significance of impacts. Where appropriate, mitigation measures are presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

Tribal Cultural Resources

Resources in the Vicinity

The first known inhabitants of the Humboldt Bay Region were Wiyot Indians, a member of the Algonquin linguistic group. The Wiyot population prior to 1850 is estimated to have been between 1,000 and 3,300 individuals (E. Taylor & J. Roscoe, October 1998). Wiyot settlements were located chiefly along the lower Mad River, and around Humboldt Bay and the lower Eel River. Village sites were located at the water's edge, ocean, bay, or creek, with trails leading to grassy openings and from one village to another. A small part of the population lived in an area from the Mad River to the northern portion of Humboldt Bay; they lived in settlements of one to three families. Within the Arcata planning area, they lived in semi-permanent settlements and often traveled seasonally for hunting and gathering. The estimated population for the Arcata planning area, in or about the year 1848, is 600 inhabitants (Arcata General Plan).

After the start of the California Gold Rush, from 1850 to 1860, Wiyot territory became the center of the largest concentrations of European settlers in California north of San Francisco. The settlers utilized Humboldt Bay as a major shipping point for supplies to the gold mines on the Trinity, Klamath, and Upper Sacramento Rivers. In addition, the establishment of the Redwood timber industry, and homesteading of the Eel River and Arcata Bottom for ranching and farming purposes, brought more people into the area. The influx of new settlers brought violence, including the Indian Island Massacre of February 26, 1860, which nearly destroyed the entire Wiyot population.

There are currently 32 recorded archeological sites in the Arcata planning area. Most sites are situated along the margins of Humboldt Bay, along the edges of marshes and sloughs, and in the

Arcata Bottom area. Sites also tend to be located at the base of hills and on mid-slope terraces near sources of water.

Data collected by L. L. Loud (1918) identified a number of Wiyot habitation and resource procurement sites in the general vicinity of the project site. One site is Camp Curtis, located on LK Wood Blvd., approximately one mile east of the project area (E. Taylor & J Roscoe, 1998). Taylor & Roscoe (1998) also state that there are reported locations of several other prehistoric village sites near Camp Curtis.

According to the Arcata General Plan, the most likely location for additional (unrecorded) archeological sites is a band approximately 1,000 meters wide along the Humboldt Bay shoreline and the Mad River. There is also the possibility of encountering archeological resources elsewhere in the Arcata planning area.

Resources at the Project Site

The Native American Heritage Commission (NAHC) performed a cultural resources record search for the project area, and responded stating that the search of the sacred land file failed to indicate the presence of Native American cultural resources in the immediate project area.

A complete records search for the project area was also conducted by the Northwest Information Center (Appendix E). According to the records on file at the NWIC, the project site had not been subject to previous cultural resource investigations and no recorded resources are known to occur at the project area or within a half-mile buffer. Within a half-mile radius, five previous investigations have been conducted for various residential development projects which resulted in negative findings for archaeological resources.

As per the Arcata General Plan, an archaeological survey by a professional archaeologist or other qualified expert is required if the project area is determined to have a high probability of archaeological resources (Policy H-7b). In compliance with this policy, a Cultural Resources Investigation of the project area was conducted by William Rich and Associates (WRA) in May 2016 (Appendix E). The investigation concluded that inadvertent discovery protocols for the discovery of cultural resources should be implemented during the project construction activities.

As required by AB 52 and SB 18, the City of Arcata sent requests for formal consultation to the Tribal Historic Preservation Officers (THPOs) for the Blue Lake Rancheria, Wiyot Tribe, and the Bear River Band of the Rohnerville Rancheria. As part of the consultation under AB 52 and SB 18, the THPOs requested for a Cultural Resources Investigation to be conducted, reviewed the WRA Cultural Resources Investigation that was completed, and concurred with the WRA recommended inadvertent discovery protocol. As stated in the July 06, 2016 e-mail from the Blue Lake Rancheria Tribal Historic Preservation Officer (THPO) "*I concur with the Inadvertent Discovery protocol as a project condition, and that no further SB18/AB52 consultation is necessary for this project*."

REGULATORY FRAMEWORK

State of California

California Register of Historical Resources

Assembly Bill 2881 (AB 2881) established the California Register of Historical Resources (CRHR). The CRHR is an authoritative guide in California used by state and local agencies, and private groups to identify the State's historical resources (similar to the NRHP for federal resources). The criteria for eligibility and listing on the CRHR are based on the requirements of the National Register. The California Office of Historic Preservation (OHP) has authority under federal and state law for historic preservation programs in the State, and the OHP can make determinations of eligibility for listing resources on both the National Register and the CRHR. Resources can be listed singly as a California Resource or on both the National and California Registers.

In California, in addition to meeting one or more of the listed criteria for inclusion on the CRHR, eligibility for the California Register requires that a resource retains sufficient integrity to convey a sense of its significance or importance. Seven elements are considered key in considering a property's integrity, which are (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association. Additionally, the OHP advocates that all historical resources over 45 years old be recorded for inclusion in the OHP filing system, although the use of professional judgment is urged in determining whether a resource warrants documentation.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) established definitions and criteria that are applicable to tribal cultural resource evaluations, with specific significance criteria and thresholds provided in the Impact Analysis portion of this section.

Assembly Bill 52

Assembly Bill 52 (AB 52) establishes a consultation process with California Native American Tribes that involves Tribes in the early coordination and development of projects under the jurisdiction of state and local agencies that have discretionary approval authority for projects. AB 52 recognizes that California Native American Tribes have unique expertise regarding their tribal history, culture, and land use practices, and that this information may be useful during the environmental analysis process. The intent of AB 52 is to establish an early consultation process that hopefully will minimize conflicts during the CEQA process and allow for the identification of Tribal Cultural Resources (TCR) that may exist or be affected by a project.

Senate Bill 18

Senate Bill 52 (SB 18) requires local governments to consult with California Native American Tribes, identified by the California Native American Heritage Commission (NAHC), prior to the adoption of amendment of a general plan or specific plan. The purpose of this consultation is to preserve or mitigate impacts to cultural places.

City of Arcata

Arcata General Plan

The Arcata General Plan contains guidelines for cultural resources within the Historic Preservation Element. The General Plan has developed specific Goals and related Policies that address cultural resources within the City. Table 2.12-1 below contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 2.12-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
H-7 Archaeological and Cultural Resources	Protect and preserve Native American and Euro-American archaeological sites and cultural resources within the City of Arcata.	H-7b-d, and f

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if it meets any of the following criteria.

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

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

Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Proposed Project

Finding 2.12.1: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource Listed or Eligible for Listing in the California Register of Historical Resources, or in a Local Register of Historical Resources as Defined in Public Resources Code Section 5020.1(k).

Discussion:
As per the Arcata General Plan, an archaeological survey by a professional archaeologist or other qualified expert is required if the project area is determined to have a high probability of archaeological resources (Policy H-7b). A Cultural Resources Investigation of the project area was conducted by William Rich and Associates (WRA) in May 2016, which included a field survey (Appendix E). The investigation resulted in negative findings for tribal cultural resources at the project site. Due to the potential to discover unknown tribal cultural resources during construction of the proposed project, the WRA investigation recommended an inadvertent discovery protocol which states the following:

> *"If archaeological resources are encountered during construction activities, all onsite work shall cease in the immediate area and with a 50-foot buffer of the discovery location. A qualified archaeologist will be retained to evaluate and assess the significance of the discovery, and develop and implement an avoidance or mitigation plan, as appropriate. For discoveries known or likely to be associated with Native American heritage (prehistoric sites and select historic period sites), the Tribal Historic Preservation Officers (THPOs) for the Bear River Band of Rohnerville Rancheria, Blue Lake Rancheria, and Wiyot Tribe are also to be contacted immediately to evaluate the discovery and, in consultation with the project proponent, and City of Arcata, and consulting archaeologist, develop a treatment plan in any instance where significant impacts cannot be avoided. Prehistoric materials which could be encountered include: obsidian and chert debitage or formal tools, grinding implements (e.g., pestles, handstones, bowl mortars, slabs), locally darkened midden, deposits of shell, faunal remains, and human burials. Historic archaeological discoveries may include 19th century building foundations, structural remains, or concentrations of artifacts made of glass, ceramics, metal, or other materials found in buried pits, old wells, or privies."*

The inadvertent discovery protocol recommended in the WRA investigation for the discovery of tribal cultural resources will be included as a condition of approval by the City of Arcata for the proposed project.

With the proposed conditions of approval, the project will not cause a substantial adverse change in the significance of a tribal cultural resource.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 2.12.2: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource Determined by the Lead Agency to be Significant Pursuant to Criteria Set Forth in Subdivision (c) of Public Resources Code Section 5024.1.

Discussion:
As required by AB 52 and SB 18, the City of Arcata sent requests for formal consultation to the Tribal Historic Preservation Officers (THPOs) for the Blue Lake Rancheria, Wiyot Tribe, and the Bear River Band of the Rohnerville Rancheria. As part of the consultation under AB 52 and SB 18, the THPOs requested for a Cultural Resources Investigation to be conducted, reviewed the WRA Cultural Resources Investigation that was completed, and concurred with the WRA recommended inadvertent discovery protocol (Appendix E). As stated in the July 06, 2016 e-mail from the Blue Lake Rancheria Tribal Historic Preservation Officer (THPO) "*I concur with the Inadvertent Discovery protocol as a project condition, and that no further SB18/AB52 consultation is necessary for this project*."

Upon review of the WRA report and the comments from the Wiyot area tribes, the City of Arcata determined that the proposed project will not cause a substantial adverse change in the significance of a known tribal cultural resource. However, due to the potential to uncover unknown tribal cultural resources during project construction activities, the inadvertent discovery protocol recommended in the WRA Cultural Resources Investigation will be included as a condition of approval by the City of Arcata for the proposed project.

With the proposed conditions of approval, the project will not cause a substantial adverse change in the significance of a tribal cultural resource.

Determination:
Less than significant impact.

Mitigation:
None required.

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CHAPTER 3.

TRANSPORTATION/TRAFFIC

The following Sections are included in this Chapter:

Environmental Setting
Regulatory Framework
Impact Analysis
References

CHAPTER 3 TRANSPORTATION/TRAFFIC

This section evaluates the potential impacts to transportation during construction and operation of the proposed project. To provide the basis for this evaluation, the Environmental Setting section describes the existing conditions related to transportation for the project area, and the Regulatory Framework section describes the regulatory background that applies to the project. The Impact Analysis section establishes thresholds of significance, evaluates potential transportation impacts, and identifies the significance of impacts. Where appropriate, mitigation measures are presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

Arcata's local transportation and circulation network are described as shown in the City's General Plan Transportation Element:

> ***Existing Roadway System.*** *Arcata's pattern of highways and streets is similar to many small and rural communities. The central business district has a traditional grid pattern of streets, with a one-way couplet system comprising the primary arterial. A non-grid series of arterial and collector streets surrounds the central business district and serves outlying residential subdivisions, neighborhood shopping centers, Humboldt State University, and industrial areas. On the outer edges of Arcata, the transportation system is comprised of rural roads and highways serving isolated farms and residences. Arcata is bisected by the State Route 101 freeway, the main state route serving the North Coast of California from San Francisco to Oregon.*

The proposed residential development will be located in the northern central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from Humboldt State University. The project site abuts the eastern border of the Westwood neighborhood and the northern border of the Sunset neighborhood.

Traffic conditions in the study area are heavily influenced by residential uses and schools including Humboldt State University, Arcata High School, and Arcata Elementary School. In the project area is northbound and southbound travel in the LK Wood Boulevard corridor, which is a main arterial for Humboldt State University. This corridor provides access to Humboldt State University, residential uses, downtown Arcata, and Highway 101.

The City of Arcata commissioned W-Trans to conduct a comprehensive traffic study (Appendix L) to address the cumulative impacts associated with the potential development of six sites located in central Arcata within three-quarter of a mile of one another. These projects, which include the Village Student Housing project, are referred to by the City of Arcata as the Sunset Area housing projects, and are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. The results of the traffic study are discussed throughout this chapter including estimated trip

generation and distribution, changes in Level of Service (LOS), and potential impact on alternative modes of transportation from the proposed project. The reader is referred to this report for the full context of analysis.

Roadway Segments and Intersections

Roadway segments that will receive the greatest use from the proposed project are described below and shown in Figure 3A (Roadway Segments and Intersections).

Each Segment is Described in the Following Format:

- Significance of roadway segment in the overall circulation of the immediate vicinity
- Number of lanes in each direction
- Pedestrian and bicycle facilities

St. Louis Road between the Project Site and LK Wood Boulevard
St. Louis Road provides the primary access from the project site to Spear Avenue and LK Wood Boulevard, Humboldt State University, and Highway 101. This segment is approximately 0.25 miles with two lanes of travel and an overcrossing over Highway 101 referred to as the St. Louis O.C. Sidewalks exist on the south side of the St. Louis O.C. and on the east side of St. Louis Road from the St. Louis O.C. north to the Spear Avenue roundabout. This segment contains striped bike lanes on the St. Louis O.C. bridge deck in both directions. There are crosswalks on the west side of the St. Louis O.C. and to the southeast on LK Wood Boulevard just past Ridge Road.

LK Wood Boulevard between St. Louis Road and 14th Street
LK Wood Boulevard is the main road segment that provides access to Humboldt State University (HSU). This segment is approximately one mile long with two lanes of travel, one lane in each direction. Sidewalks exist along this entire segment, on the eastern side, and there are three crosswalks near Ridge Road, Sunset Avenue, and 14th Street. There are striped bicycle lanes in both travel directions and extra wide sidewalks between Granite and 14th Street. LK Wood Boulevard ends at the intersection with 14th Street.

Sunset Avenue between Foster Avenue Roundabout and LK Wood Boulevard
Sunset Avenue is the eastern portion of the route connecting Alliance Road and Highway 101. Sunset Avenue has two lanes of travel with one in each direction. Sidewalks exist in some areas along this segment and there is only one crosswalk crossing Sunset Avenue. This crosswalk provides access to the skate park from the south side of Sunset Avenue. There is a short segment of bicycle lane along Sunset Avenue between G and H Street and LK Wood Boulevard. There are three intersections along this segment with the two eastern most intersections connecting to freeway access ramps.

Foster Avenue between Alliance Road and Sunset Avenue
This segment of Foster Avenue was recently extended from Eastern Avenue to the Sunset Avenue/Jay Street Roundabout. Previously Eastern and Western Avenues were used to connect Alliance Road and Highway 101. This segment is now approximately 0.33 miles long with two lanes of travel, one lane in each direction. There are striped bicycle lanes in both travel directions and a multi-use trail occurs parallel to Foster Avenue along this segment. Sidewalk also exists on the south side of this segment in the area of the bus stop. Foster Avenue ends at a roundabout at Sunset Avenue near the Arcata skate park.

Existing Conditions of the Studied Intersections:

Each studied intersection that was analyzed in the W-Trans traffic study is described below (Appendix L; Pgs. 5-6):

1. St Louis Rd/US 101 Overcrossing
This is a three-legged intersection, with stop controls on the northbound St. Louis Road and westbound approaches. There is a crosswalk across the overcrossing approach.

2. LK Wood Blvd/US 101 Overcrossing
This is a three-legged intersection, with the southbound LK Wood approach stop-controlled. There is a crosswalk to the southeast of this intersection just past Ridge Road.

3. Sunset Ave/LK Wood Blvd
This is an all-way stop-controlled tee intersection that is separated from the ramps at US 101 North by less than 150 feet. It has separate right-turn lanes on the eastbound approach for both Sunset Avenue and the US 101 North off-ramp that converge just as they enter LK Wood Boulevard. The only crosswalk at the intersection is across the south leg of the intersection, and it crosses the eastbound right-turn lane coming from Sunset Boulevard, but not the one from US 101 North.

4. Sunset Ave/US 101 N Ramps
This is a four-legged intersection with the off- and on-ramps forming the south and north legs of the intersection respectively. The off-ramp approach is stop-controlled and has a crosswalk connecting through to LK Wood Boulevard.

5. Sunset Ave/US 101 S Ramps-G/H Streets
This is a four-legged, all-way stop-controlled intersection with a crosswalk on the south leg only. G and H Streets form a one-way couplet, with G Street serving the northbound approach to the intersection and H Street carrying southbound traffic away from intersection.

6. Sunset Ave/Foster Ave-Jay St
This intersection was recently converted to roundabout control, with crosswalks on all four legs of the intersection.

7. Foster Ave/Alliance Rd
This a four-legged intersection with stop controls and crosswalks on all four approaches.

8. 17th St/Q St
This is a three-legged intersection, with *de facto* stop-control on the northbound Q Street. There is a yellow crosswalk (school crossing) on the south leg of the intersection.

9. 17th St/Alliance Rd
This is a three-legged intersection with stop control on the eastbound approach and a yellow crosswalk on the west leg. This intersection also contains the northern leg of the Arcata Rail with Trail.

10. 11th St/K St
This is a four-legged, all-way stop-controlled intersection with crosswalks on each leg.

11. 11th St/Janes Rd
This is a four-legged intersection with stop-control on eastbound and westbound 11th Street. There is a crosswalk on the west leg of the intersection.

12. Foster Ave/Janes Rd
This is a three-legged intersection with stop-control on the northbound Janes Road.

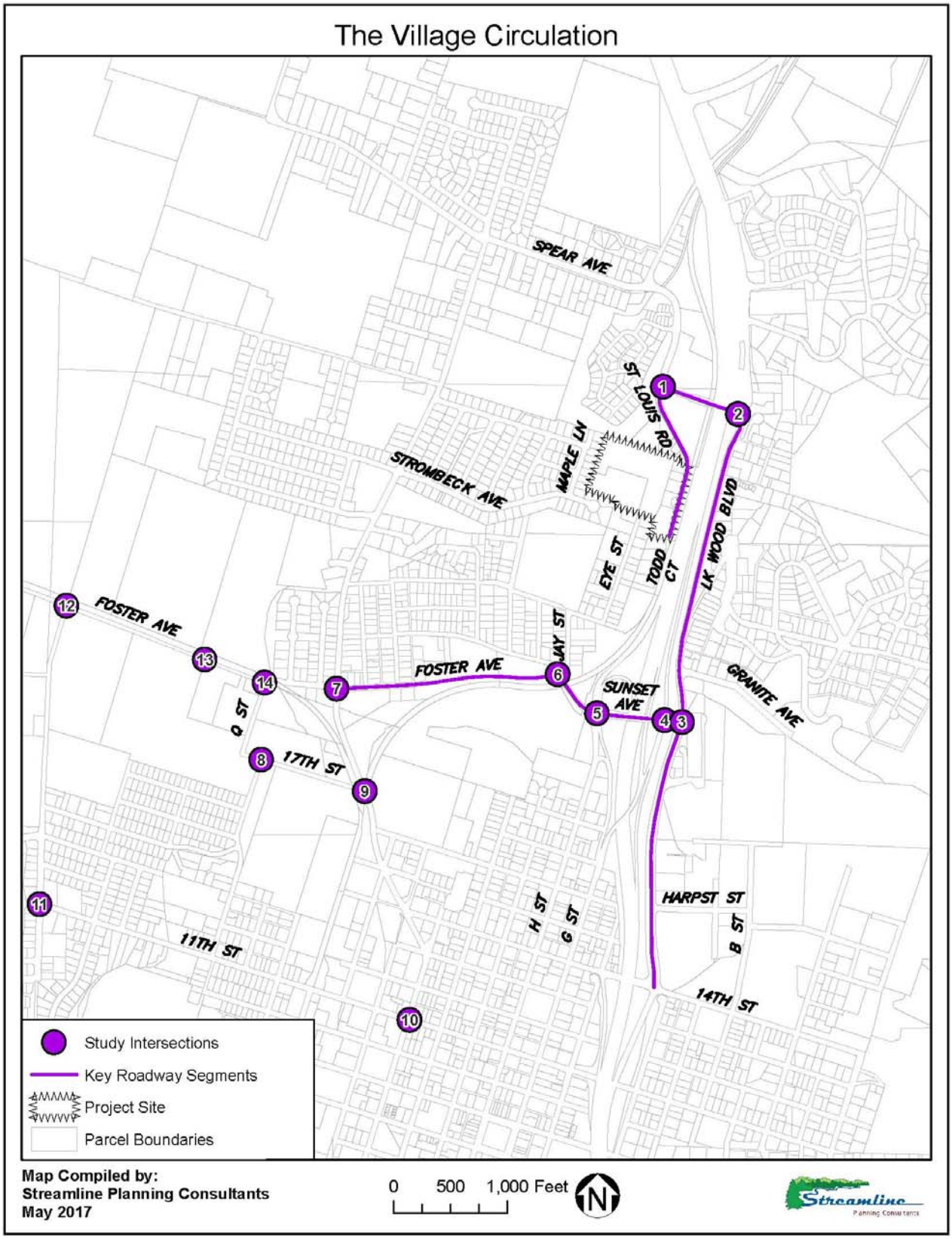
13. Foster Ave/Creekside Homes Project Site Entrance
Presently this location is not an intersection. Primary access to the Creek Side Homes project is proposed via a new street, which would intersect Foster Avenue at the Southwest corner of the project site. This entry street would intersect Foster Avenue along a straight two-lane section of Foster Avenue approximately 575 feet west of Q Street.

14. Q St./Foster Ave
Presently this location is not an intersection. There are currently no crosswalks at this location. There are two lanes, one in each direction and a solid yellow line separating the travel lanes. If Foster Avenue were extended eastward to connect to Alliance Road, this would become a three-legged intersection with Foster Avenue and Q Street. Three-way stop-sign control would be provided, with crosswalks.

Bicycle and Pedestrian Activity

This project is located within the vicinity of proposed bicycle and pedestrian routes. The City of Arcata's Pedestrian and Bicycle Master Plan (2010; Figure 5D) identifies the planned and existing facilities in the project area which are shown in Figure 3B (Planned and Existing Pedestrian Bicycle Facilities).

Figure 3A Roadway Segments and Intersections



Bicycle

There are no bike lanes along the St. Louis Road frontage of the project site. Bike lanes near the project site include the following: 1) St. Louis Road from St. Louis O.C. to the Spear Avenue roundabout which continues north on West End Road and west on Spear Avenue (Class II); 2) LK Wood Boulevard from the St. Louis O.C. to 14th Street (Class II); 3) Sunset Avenue from LK Wood Boulevard to Foster Avenue (Class III); and 4) Foster Avenue from Alliance Road to Sunset Avenue (Class II). There is also a new Class I multi-use trail that provides access along Foster Avenue from Shay Park to Sunset Avenue.

The Pedestrian and Bicycle Master Plan identifies three proposed shared-use paths within the project area (see Figure 3B [Planned and Existing Bicycle and Pedestrian Facilities]). One path would occur along the northern property line of the project site and connect St. Louis Road with Maple Lane and the Janes Creek Meadows open space area. Another path would connect this trail and the project site with Eye Street. The main shared-use path in the project area would occur along the Northwestern Pacific Railroad (NWPRR) and connect the project site with Sunset Avenue.

Pedestrian

There are no sidewalks along the St. Louis Road frontage of the project site. Sidewalks near the project site exist on St. Louis Road, West End Road, Spear Avenue, St. Louis O.C., LK Wood Boulevard, Sunset Avenue, J Street, and portions of Eye Street. The railroad tracks paralleling Highway 101 and crossing Sunset Avenue are also used as a foot path.

Transit

The "passenger transit mode" in Humboldt County is exclusively bus and van. There is no passenger rail, subway, or ferry service. The region provides public transportation via transit buses and complementary paratransit. Local public transit is augmented by social service organizations and non-profits that offer transportation services to eligible populations (HCAOG, 2014). Figure 3C (Arcata Transit Routes), which is from the Humboldt County Association of Governments (HCOAG) 20-Year Regional Transportation Plan (2014; Figure 5.1b), shows the location of transit routes in the Arcata area.

Regional

The regional transit bus routes in Humboldt County provide a level of connectivity at major transfer points. These locations include downtown Eureka, the Bayshore Mall in Eureka, and the Arcata Intermodal Transportation Facility (ITF). The Bayshore Mall, as well as the area of 3rd/4th/5th and H Street, provides connections between Redwood Transit System (RTS), South Humboldt Transit System (SHTS), and Eureka Transit System (ETS) buses. The Arcata ITF is a central transfer facility where, in addition to inter-regional buses, many local bus systems stop,

including RTS, Willow Creek Transit System, Arcata & Mad River Transit System (A&MRTS), Blue Lake Rancheria Transit System (BLRTS), and RCT of Del Norte County (HCAOG, 2014).

The Humboldt Transit Authority (HTA) is a joint powers authority (JPA), established in 1975 by a joint powers agreement signed by Humboldt County and the cities of Arcata, Eureka, Fortuna, Rio Dell, and Trinidad. HTA is funded primarily through fares and Transportation Development Act (TDA) funds from the JPA members. HTA operates and maintains the Redwood Transit System (RTS), the Willow Creek Transit Service, and the Southern Humboldt Transit Systems. Also, under contract, HTA operates and maintains the Eureka Transit System, and provides paratransit (Dial-A-Ride and Dial-A-Lift) administrative services for the region (HCAOG, 2014).

HTA operates Redwood Transit System (RTS), which is the primary intercity public transit system in the county. The RTS line is a fixed-route commuter service, along the U.S. 101 corridor, between the cities of Scotia and Trinidad. Key trip origins and destinations include HSU, the Intermodal Transit Facility in Arcata, Downtown Eureka, the Bayshore Mall, and College of the Redwoods. RTS runs seven days a week (HCAOG, 2014).

HTA also operates the fixed-route Willow Creek Transit System along State Route 299, between Willow Creek and the Arcata Intermodal Transit Facility. This bus runs weekdays and Saturdays (HCAOG, 2014).

Local

The Arcata City Council initiated Arcata & Mad River Transit System (A&MRTS) in 1975, and operates it through the Public Works Department. A&MRTS provides fixed-route transit service within the Arcata city limits; service runs weekdays and Saturdays. Its hub is the Arcata Intermodal Transit Facility (HCAOG, 2014).

AMRTS provides transit service along the Red, Gold, and Orange routes for the City of Arcata. The Red and Gold Routes operate Monday through Friday with approximately one hour headways between 7:00 a.m. and 10:00 p.m. The Orange Route provides Saturday service with approximately one hour headways between 7:00 a.m. and 7:00 p.m. The closest bus stop to the project site (~0.25 mile walking distance) is on the Gold and Red Routes near the intersection of LK Wood Boulevard/Ridge Road. The next closest bus stops to the site include the following: 1) at the intersection of Spear Avenue/West End Road (~0.35 mile walking distance) on the Gold Route; 2) near the intersection of LK Wood Boulevard/Diamond Drive (~0.4 mile walking distance) on the Red and Gold Routes; and 3) near the intersection of LK Wood Boulevard/California Avenue (~0.45 mile walking distance) on the Red and Gold Routes (AMRTS, 2017).

Dial-a-Ride, also known as paratransit, or curb-to-curb service, is available for those who are unable to independently use the transit system due to a physical or mental disability. Arcata Dial-A-Ride service is designed to serve the needs of individuals with disabilities within the City of Arcata and the greater City of Arcata area (Appendix L; Pg. 11).

Figure 3B Planned and Existing Bicycle and Pedestrian Facilities (Arcata, 2010; Figure 5d)

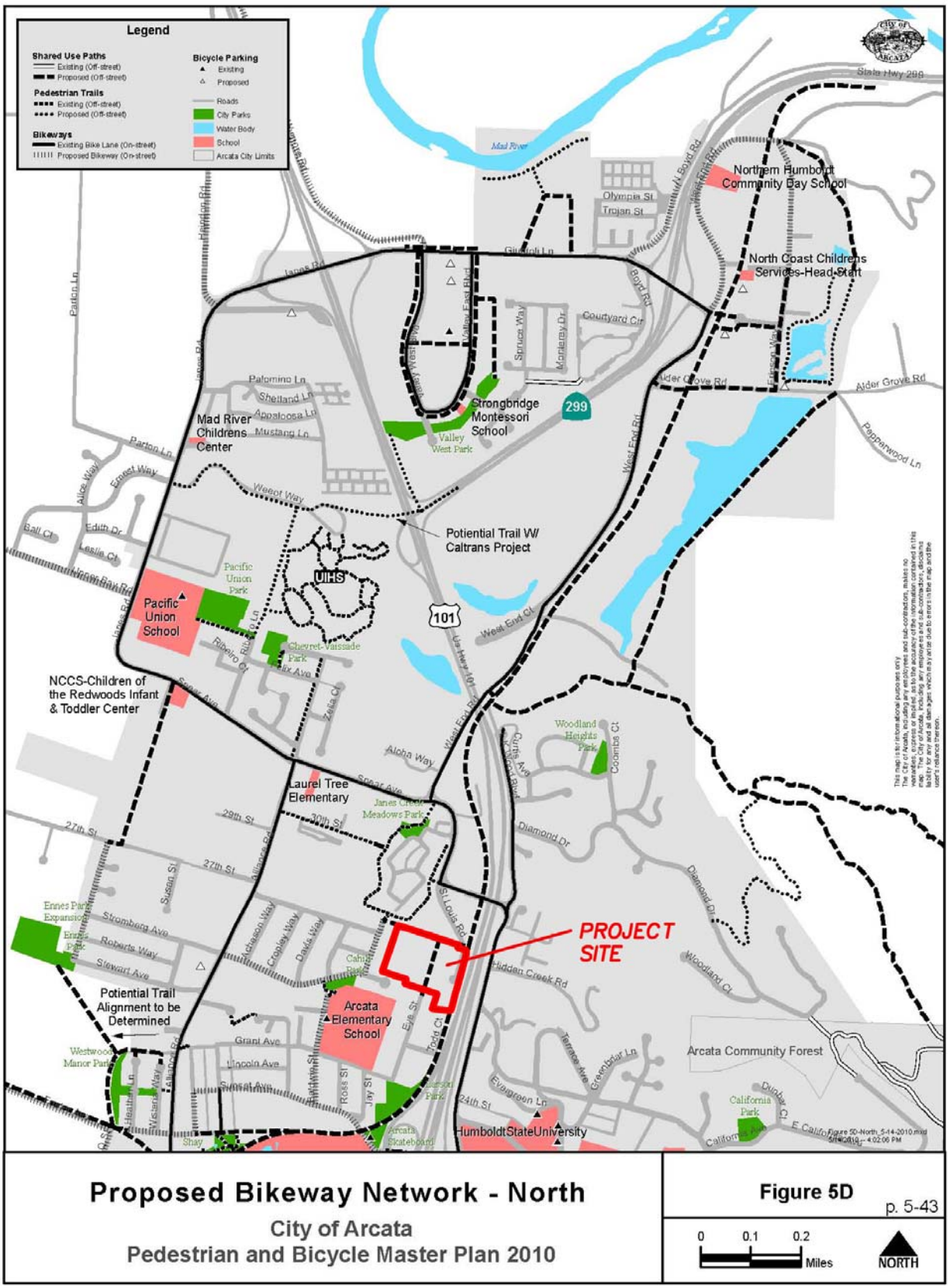
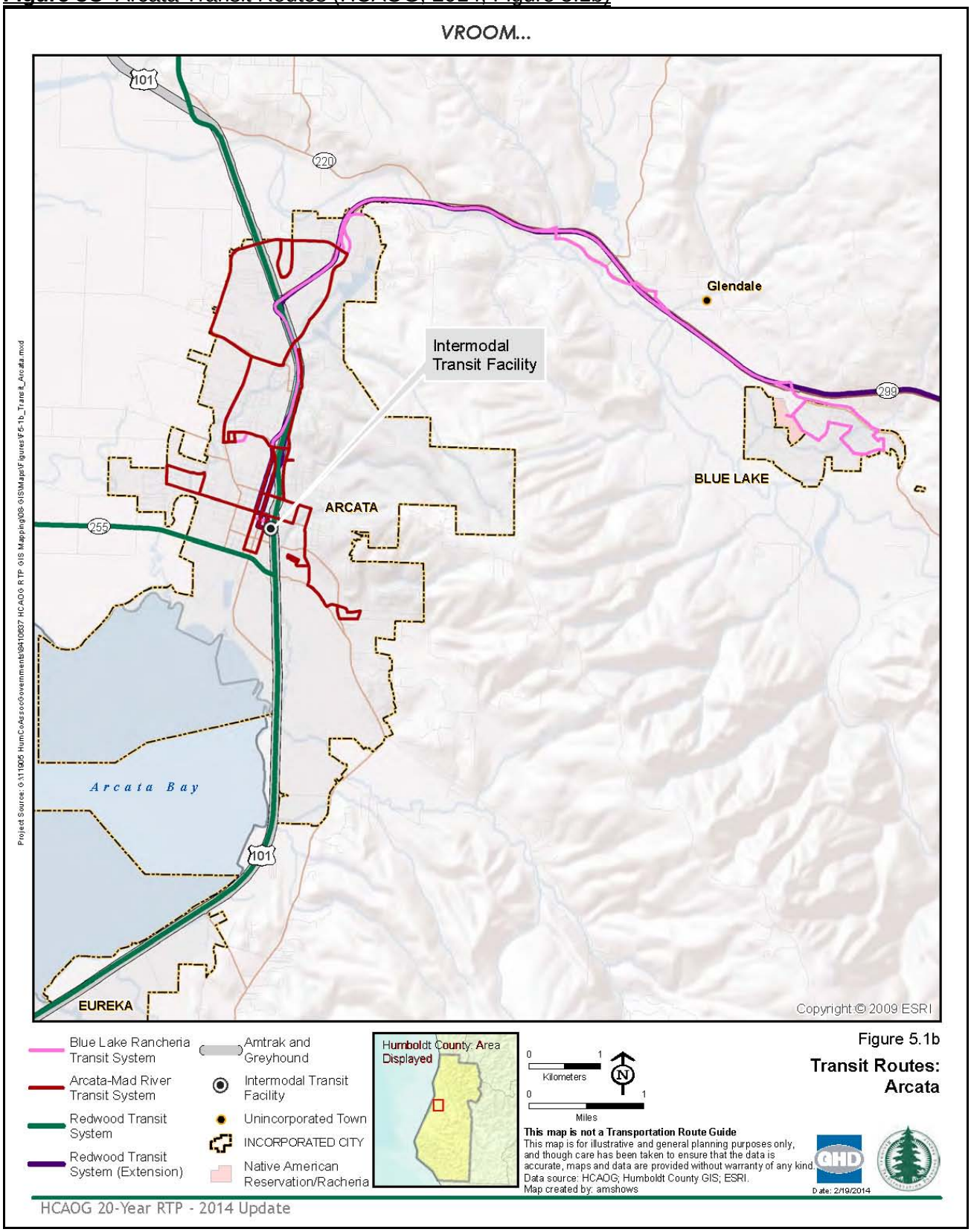


Figure 3C Arcata Transit Routes (HCAOG, 2014; Figure 5.1b)



The Blue Lake Rancheria Transit System (BLRTS) began operating in 2002; it is operated by the Blue Lake Rancheria, a federally recognized tribe in Humboldt County. The service is offered in partnership with the City of Blue Lake, which provides partial funding through its TDA fund allocation. The BLRTS has deviated fixed-route service, on weekdays, between Blue Lake/Glendale and the Arcata Intermodal Transit Facility. The fixed-route service provides over 1,300 trips per month. BLRTS also operates a Dial-a-Ride system three days per week and once a month on Saturday (HCAOG, 2014).

Air Traffic

The California Redwood Coast – Humboldt County Airport is located approximately six miles north of the project site and is the County's regional airport offering commercial air service to a three county area including Humboldt, Del Norte, and Mendocino counties. Other smaller County airports near the City of Arcata include Murray Field, which is approximately six miles to the south of the project site, and Samoa Field which is approximately ten miles southwest of the project site.

Rail

The Northwestern Pacific Railroad (NWPRR) occurs on the eastern boundary of the project site on the east side of St. Louis Road. The NWPRR track is under ownership of the North Coast Railroad Authority (NCRA) and is currently inactive. No future operations are anticipated for the NWPRR at this time. Currently there are plans for developing a Class I trail along the NWPRR line in the City, which is referred to as the Arcata Rail with Trail project, that will provide access to the northern and southern parts of the City as well as to regional trails in the Humboldt Bay area including the Annie and Mary Trail and the Humboldt Bay Trail: Arcata to Eureka segment (HCAOG, 2010; Pgs. 41-42). The section of the Arcata Rail with Trail from the north side of Samoa Blvd to Sunset Avenue has already been constructed. The section of the Humboldt Bay Trail from the south side of Samoa Blvd to Bracut is currently under construction.

REGULATORY FRAMEWORK

State of California

Caltrans

The California Department of Transportation (Caltrans) is responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as that portion of the Interstate Highway System within the state's boundaries. State Highways in the

City of Arcata for which Caltrans has responsibility include Highways 101, 255, and 299. Caltrans authority includes programs for improved efficiencies, safety and intersection improvements, signalization, signage, and other transportation related actions.

County of Humboldt

Humboldt County Association of Governments (HCAOG)

The HCAOG is a joint powers authority comprising the County of Humboldt and the seven incorporated cities, each with a seat on the Board of Directors. Under its authority as the Regional Transportation Planning Agency (RTPA) for Humboldt County, HCAOG adopts and submits an updated Regional Transportation Plan to the California Transportation Commission and Caltrans every five years. The Regional Transportation Plan is a long-range (20-year) transportation planning document for Humboldt County. The most recent five-year update of the RTP was adopted in 2014.

City of Arcata

Arcata General Plan

The City of Arcata General Plan contains guidelines for transportation and traffic within the Transportation Element. The General Plan has developed several specific Goals and related Policies that address transportation in the City. The Goals within the Element relate to items such as developing a safe and efficient transportation system, providing a balanced transportation system with a choice of travel modes, encouraging residents to use alternative forms of transportation, and using traffic-calming measures to reduce traffic in residential neighborhoods. Table 3-1 below contains a list of policies from the General Plan Transportation Element that are applicable to the proposed project.

Table 3-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
T-2 Travel Demand Management	Reduce the percentage of automobiles and reduce the annual vehicle-miles of travel.	T-2a
T-3 Bus Transit Policy	Maintain a bus transit system which connects and serves major commercial and employment areas within Arcata, Humboldt State University, public schools, and higher density residential areas. Increase average citywide transit mode share of daily person trips to 5% from the 1998 level of 1%.	T-3g
T-4 Streets and Highways Plan and	Plan an internal street system consistent with Arcata's small-town, non-metropolitan character.	T-4c and T-4d

Policy	Objective	Applicable Sub-Policies
Policy		
T-5 Bicycle and Pedestrian Facilities	Create a complete, interconnected bicycle and pedestrian circulation system. Increase the percentage of person-trips via walking and bicycling. Provide a pedestrian and bicycle system which serves commuter as well as recreational travel.	T-5a through T-5h

Arcata Pedestrian and Bicycle Master Plan (April 2010):

This document provides an inventory of existing and proposed bicycle lanes (on-street) and shared use (off-street) trail alignments. The project site is located on Figure 5D (Proposed Bikeway Network – North) of the Master Plan Update (see Figure 3B [Planned and Existing Pedestrian and Bicycle Facilities] above), which shows the existing and proposed pedestrian/bicycle pathways within the project area.

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact to transportation is considered to be significant if it meets any of the following criteria.

If the project would:

- Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel, and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);

- Result in inadequate emergency access;
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Proposed Project

Finding 3.1: Conflict with an Applicable Plan, Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the Circulation System, Taking into Account all Modes of Transportation Including Mass Transit and Non-Motorized Travel, and Relevant Components of the Circulation System, Including but not Limited to Intersections, Streets, Highways and Freeways, Pedestrian and Bicycle Paths, and Mass Transit.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four-story buildings on an underutilized industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus.

Vehicular access to the project site is provided from St. Louis Road. There are currently two gated access roads to the site off of St. Louis Road. The portion of St. Louis Road on the eastern boundary of the project site is proposed to be vacated and incorporated into the site design as access, parking, and landscaping. This will include development of a traffic circle in the northeast corner of the project site. As shown on the Site Plan, the proposed residential structures will be located in the central portion of the site with vehicular access and parking located around the perimeter of the structures. Other vehicular access improvements proposed as part of the project include a gated emergency access to Eye Street that will also allow pedestrian/bicycle access.

The City of Arcata commissioned W-Trans to conduct an areawide traffic study to address the cumulative impacts associated with the potential development of six sites located in central Arcata within three-quarter of a mile of one another (Appendix L). These projects, which include the Village Student Housing project, are referred to by the City of Arcata as the Sunset Area housing projects, and are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. The results of the traffic study are discussed in this section including estimated trip generation and distribution, changes in Level of Service (LOS), and potential impact on alternative modes of transportation from the proposed project.

When the W-Trans traffic study was conducted, the Foster Avenue connection was analyzed as an alternative access for the Creek Side Homes project in the study. However, since that time the Foster Avenue connection has been included as part of the Creek Side Homes project and the analysis in this chapter is written to reflect that change.

Construction
Construction traffic for the proposed project would result in a short-term increase in construction-related vehicle trips on St. Louis Road, LK Wood Boulevard, and other local roadways and Highways in the City and County. Construction would result in vehicle trips by construction workers and haul-truck trips for delivery and disposal of construction materials and spoils to and from construction areas. Construction of utilities and traffic improvements to serve the proposed development would also require temporary encroachments within the City right-of-way on St. Louis Road and other nearby roadways.

An encroachment permit would be required for any work completed within the City road right-of-way. The encroachment permit applications for the City of Arcata requires preparation of traffic control plans for work that would block the public right-of-way, and plans for re-routing of vehicles, bicycles, and pedestrians, as needed. Implementation of traffic controls would be required in accordance with City standards, and contractors would be required to comply with the general conditions of the encroachment permits, including restoration of any damage to right-of-way improvements. Through compliance with City requirements, construction activities would not result in substantial adverse effects or conflicts with the local roadway system.

Operation
The peak hour trip volumes for the proposed project are shown in Table 3-2. As shown below, the proposed project would be expected to have a combined total daily trip generation of 1,578 trips which includes 121 trips during the a.m. peak hour and 150 trips during the p.m. peak hour (Appendix L; Pg. 70).

Table 3-2 Project Trip Generation (Appendix L; Pg. 23)

Land Use	Units	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trip	In	Out	Rate	Trip	In	Out
Apartments	240 du	6.57	1,578	0.51	121	24	97	0.62	150	97	53

In the W-Trans Traffic Study, the pattern used to allocate new project trips to the street network was based on data from the 2000 Census for home-to-work or work-to-home trips as well as approach volumes at the various study intersections (Appendix L, Pg. 24). Data from the 2000 Census was used in the Traffic Study since commuting data was not obtained as part of the 2010 Census. For the proposed student housing community, it was assumed that the significant majority of trips would be routed to and from Humboldt State, with the remaining trips being distributed to nearby commercial destination centers such as Downtown Arcata (via Alliance Road) and Eureka (via US 101 south). The trip distribution assumptions used for the proposed project and expected daily trip generation by route is shown in Table 3-3.

Table 3-3 Project Trip Distribution for the Village Student Housing Project

Routes	Percentage Of Trips	Trip Generation
To/from Humboldt State	75%	1,183
To/from south on US 101	10%	158
To/from south on G-H	-	-
To/from south on Alliance	15%	237
To/from north on US 101	-	-
To/from north on Alliance	-	-
To/from east of US 101	-	-
To/from neighborhood	-	-
To/from south on Janes	-	-
TOTAL	**100%**	1,578

Level of service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, LOS A represents free-flow conditions and LOS F represents forced-flow or breakdown conditions. The study intersections in the W-Trans traffic study were analyzed using methodologies published in the Highway Capacity Manual (HCM), Transportation Research Board, 2010. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle (Appendix L; Pg. 12).

The Arcata General Plan Transportation Element does not establish a Peak Hour LOS that is defined as generally acceptable. The W-Trans Traffic Study used an operational standard of LOS C (Appendix L; Pg. 13). However, this is not an adopted standard by the City of Arcata. The Arcata General Plan Transportation Element (Policy T-1a) encourages investment in alternative modes of transportation (e.g., bikeways, etc.) as a priority over increasing vehicular capacities of streets.

As can be seen in Table 3-4, upon the addition of the traffic related to the proposed project to existing traffic volumes (i.e. Existing plus Individual Project Conditions), the study intersection of Sunset Avenue/LK Wood Boulevard would fall to LOS F and the study intersection of Foster Avenue/Alliance Road would fall to LOS D. All other study intersections would continue to operate at LOS C or better (Appendix L; Pg. 26). As noted in Table 3-4, design improvements are recommended to achieve LOS C or better at the intersection of Foster Ave/Alliance Rd which includes restriping the Alliance Road approaches.

Table 3-4 Existing plus the Village Project Peak Hour Intersection LOS

Study Intersection Approach	AM Peak		PM Peak	
	Delay	**LOS**	**Delay**	**LOS**
1. St. Louis Rd/US 101 Overcrossing	5.3	A	6.9	A
Northbound St. Louis Rd Approach	*10.0*	*A*	*9.7*	*A*
Westbound Overcrossing Approach	*9.4*	*A*	*10.44*	*B*
2. LK Wood Blvd/US 101 Overcrossing	2.8	A	2.2	A
Southbound LK Wood Approach	*12.5*	*B*	*13.1*	*B*
3. Sunset Ave/LK Wood Blvd	15.1	B	**58.9**	**F**
4. Sunset Ave/US 101 N Ramps	5.3	A	8.8	A
Northbound US 101 N Off-ramp Approach	*24.6*	*C*	*26.9*	*D*
5. Sunset Ave/US 101 S Ramps-G/H Streets	14.6	B	11.4	B
6. Sunset Ave/Foster Ave-Jay St	5.0	A	4.4	A
7. Foster Ave/Alliance Rd	19.0	C	**26.0**	**D**
Restripe Alliance Road Approaches*	14.0	B	17.7	C

Bold text = operation below the desired threshold
Shaded cells = conditions with recommended improvements
*The re-striping at the Alliance Road and Foster Avenue approaches was completed in Summer 2017

The W-Trans Traffic Study also analyzed several other scenarios for all six projects including the following:

- **Existing plus All Project Conditions:** This scenario analyzes the addition of all six projects included in this area-wide study with existing traffic volumes during the peak a.m. and peak p.m. periods (Appendix L; Pg. 14).
- **Future plus Individual Project Conditions:** This scenario analyzes the addition of each individual project included in this area-wide study with estimated future traffic volumes. The future traffic volumes were developed using an assumed conservative growth rate of 1.5 percent per year to a horizon of 2036, or 20 years out (Appendix L; Pg. 16).
- **Future plus All Project Conditions:** This scenario analyzes the addition of all six projects included in this area-wide study with estimated future traffic volumes. The future traffic volumes were developed using an assumed conservative growth rate of 1.5 percent per year to a horizon of 2036, or 20 years out (Appendix L; Pg. 16).

The results of the analysis for these additional scenarios are summarized below.

The **Existing plus All Project Conditions** analysis determined that the study intersections would be expected to continue operating at LOS C or better with the exception of Sunset Avenue/LK Wood Boulevard, Foster Avenue/Alliance Road, and 11th Street/K Street. With these conditions, an additional improvement was recommended to achieve an LOS C at the Foster Avenue/Alliance Road intersection. As noted in Table 3-5, this includes restriping of the eastbound approach (Appendix L; Pgs. 44-46).

Table 3-5 Existing plus All Projects Peak Hour Intersection LOS

Study Intersection Approach	AM Peak		PM Peak	
	Delay	**LOS**	**Delay**	**LOS**
1. St. Louis Rd/US 101 Overcrossing	5.3	B	6.9	A
Northbound St. Louis Rd Approach	*10.0*	*B*	*9.7*	*A*
Westbound Overcrossing Approach	*9.4*	*A*	*10.4*	*B*
2. LK Wood Blvd/US 101 Overcrossing	2.8	A	2.2	A
Southbound LK Wood Approach	*12.5*	*B*	*13.1*	*B*
3. Sunset Ave/LK Wood Blvd	15.7	C	**73.1**	**F**
4. Sunset Ave/US 101 N Ramps	8.0	B	21.1	C
Northbound US 101 N Off-ramp Approach	*38.3*	*E*	*67.7*	*F*
5. Sunset Ave/US 101 S Ramps-G/H Streets	15.3	C	12.4	B
6. Sunset Ave/Foster Ave-Jay St	5.6	A	5.3	A
7. Foster Ave/Alliance Rd	**29.1**	**D**	**58.6**	**F**
Restripe Alliance Road Approaches*	16.5	C	**27.0**	**D**
Additional: Restripe EB Approach	15.5	C	24.2	C
8. 17th St/Q St	7.7	A	7.3	A
Northbound Q St Approach	*8.8*	*A*	*8.6*	*A*
9. 17th St/Alliance Rd	1.9	A	0.9	A
Eastbound 17th St Approach	*19.4*	*C*	*17.1*	*C*
10. 11th St/K St	17.0	C	**39.0**	**E**
11. 11th St/Janes Rd	5.5	B	5.9	A
Eastbound 11th St Approach	*11.4*	*B*	*10.3*	*B*
Westbound 11th St Approach	*11.0*	*B*	*10.0*	*B*
12. Foster Ave/Janes Road	7.2	A	6.2	A
Northbound Janes Rd Approach	*8.7*	*A*	*8.7*	*A*
13. Foster Ave/Creekside Project Entrance	2.4	A	2.3	A
Northbound Q St Approach	*9.6*	*A*	*9.3*	*A*
14. Q St/Foster Ave	0.2	A	0.1	A
Northbound Q St Approach	*9.7*	*A*	*9.5*	*A*

Bold text = operation below the desired threshold.
Shaded cells = conditions with recommended improvements
***The re-striping at the Alliance Road and Foster Avenue approaches was completed in Summer 2017

The **Future plus Individual Project Conditions** analysis determined that with the proposed project added to future volumes, the study intersections would be expected to continue operating at LOS C or better with the exception of Sunset Avenue/LK Wood Boulevard and Foster Avenue/Alliance Road. The study intersections of Sunset Avenue/LK Wood Boulevard and Foster Avenue/Alliance Road are expected to operate at LOS F. As noted in Table 3-6, with these conditions, the traffic study recommends the following improvements: 1) Roundabout at Intersection 3 (Sunset Ave/LK Wood Blvd); and 2) Roundabout at Intersection 7 (Foster Ave/Alliance Rd) (Appendix L; Pgs. 46-47).

Table 3-6 Future plus the Village Project Peak Hour Intersection LOS

Study Intersection Approach	AM Peak		PM Peak	
	Delay	**LOS**	**Delay**	**LOS**
1. St. Louis Rd/US 101 Overcrossing	5.1	A	6.9	A
Northbound St. Louis Rd Approach	*10.4*	*B*	*9.7*	*A*
Westbound Overcrossing Approach	*9.5*	*A*	*10.44*	*B*
2. LK Wood Blvd/US 101 Overcrossing	3.3	A	2.6	A
Southbound LK Wood Approach	*14.4*	*B*	*14.9*	*B*
3. Sunset Ave/LK Wood Blvd	19.9	C	**122.3**	**F**
Roundabout – Intersections 3 and 4	12.3	B	27.7	D
4. Sunset Ave/US 101 N Ramps	10.6	B	**28.8**	**D**
Northbound US 101 N Off-ramp Approach	*53.0*	*F*	*94.3*	*F*
5. Sunset Ave/US 101 S Ramps-G/H Streets	20.2	C	13.0	B
6. Sunset Ave/Foster Ave-Jay St	5.7	A	5.2	A
7. Foster Ave/Alliance Rd	**40.4**	**E**	**73.1**	**F**
Roundabout	8.6	A	9.1	A

Bold text = operation below the desired threshold
Shaded cells = conditions with recommended improvements

The **Future plus All Project Conditions** analysis determined that the study intersections would be expected to continue operating at LOS C or better with the exception of Sunset Avenue/LK Wood Boulevard, Foster Avenue/Alliance Road, and 11th Street/K Street. These intersections are expected to operate at LOS F. With these conditions, the traffic study recommends the same improvements as proposed for the Future plus Individual Project Conditions scenario which are noted in Table 3-7 below (Appendix L; Pgs. 57-59).

Table 3-7 Future plus All Projects Peak Hour Intersection LOS

Study Intersection Approach	AM Peak		PM Peak	
	Delay	**LOS**	**Delay**	**LOS**
1. St. Louis Rd/US 101 Overcrossing	5.1	A	7.0	A
Northbound St. Louis Rd Approach	*10.4*	*B*	*9.9*	*A*
Westbound Overcrossing Approach	*9.5*	*A*	*10.8*	*B*
2. LK Wood Blvd/US 101 Overcrossing	3.3	A	2.6	A
Southbound LK Wood Approach	*14.4*	*B*	*14.9*	*B*
3. Sunset Ave/LK Wood Blvd	20.9	C	**	**F**
Roundabout – Intersections 3 and 4	13.9	B	**39.9**	**D**
4. Sunset Ave/US 101 N Ramps	18.9	C	**63.3**	**F**
Northbound US 101 N Off-ramp Approach	*96.56*	*F*	**	*F*
5. Sunset Ave/US 101 S Ramps-G/H Streets	23.4	C	14.2	B
6. Sunset Ave/Foster Ave-Jay St	6.4	A	6.2	A
7. Foster Ave/Alliance Rd	**66.4**	**F**	**	**F**
Roundabout	9.7	A	11.3	B
8. 17th St/Q St	7.7	A	7.3	A
Northbound Q St Approach	*8.9*	*A*	*8.6*	*A*
9. 17th St/Alliance Rd	2.6	A	1.2	A
Eastbound 17th St Approach	*24.1*	*C*	*22.7*	*C*
10. 11th St/K St	32.9	D	**121.3**	**F**
11. 11th St/Janes Rd	5.8	A	6.1	A
Eastbound 11th St Approach	*12.3*	*B*	*10.7*	*B*
Westbound 11th St Approach	*11.9*	*B*	*10.5*	*B*
12. Foster Ave/Janes Road	7.3	A	6.2	A
Northbound Janes Rd Approach	*8.7*	*A*	*8.8*	*A*
13. Foster Ave/Creekside Project Entrance	2.1	A	2.1	A
Northbound Q St Approach	*9.9*	*A*	*9.5*	*A*
14. Q St/Foster Ave	0.3	A	0.2	A
Northbound Q St Approach	*10.0*	*A*	*9.6*	*A*

Bold text = operation below the desired threshold.
Shaded cells = conditions with recommended improvements
****** = Delay greater than 120 seconds

The specific recommendations contained in the W-Trans Traffic Study (Appendix L; Pg. 71) take into consideration all of the scenarios analyzed in the Traffic Study for the proposed project in combination with the five other projects included in the study and identified in Chapter 7 (Cumulative Impact Analysis) of the EIR. To minimize the traffic impacts of the proposed project, the specific recommendations contained in the W-Trans Traffic Study (Appendix L; Pg. 71), or as required by the City of Arcata, have been included as Mitigation Measure 3.1a for the proposed project. The applicant will be responsible for paying a fair share proportion of the following near-term and future transportation improvements:

- Sunset Avenue/LK Wood Boulevard Re-Striping (Near-term)
- Re-Stripe Alliance Road & Foster Avenue Approaches (Near-term)
- Roundabout at Sunset Avenue/LK Wood Boulevard Intersection (Future)
- Roundabout at Foster Avenue/Alliance Road Intersection (Future)

In order to fund these transportation improvement projects, a Traffic Impact Mitigation Fee Collection Program or equivalent will be established by the City of Arcata. The anticipated cost of these improvements are listed below in Table 3-8, including the percent of the total cost of the improvements that will be funded by traffic impact mitigation fees. As shown in Table 3-8, the projects analyzed in the W-Trans Traffic Study will be responsible for $911,900 of the cost of the transportation improvements. Of this amount, the Village Student Housing Community project is estimated to be responsible for approximately 37%. Detailed information about the traffic impact mitigation fees is included on Pgs. 67-69 and in Appendix E of the W-Trans Central Arcata Areawide Traffic Study (Appendix L).

Table 3-8 Anticipated Transportation Improvement Project Costs

Transportation Improvement Projects	Cost	Percent of Project Cost included in Fee
Near Term		
Sunset Ave/LK Wood Blvd Re-Striping	$98,900	100%
Alliance Rd/Sunset Ave Re-Stripe	$8,800	100%
Future		
Sunset Ave/LK Wood Blvd Roundabout	$3,195,000	15%
Foster Ave/Alliance Rd Roundabout	$325,000	100%
TOTAL	**$3,627,700**	**$911,900**

Although, the re-striping of the Sunset Avenue/LK Wood Boulevard intersection is not listed as a recommended improvement in the W-Trans Traffic Study (see Tables 3-4 to 3-6), the City of Arcata has determined that this improvement is necessary to minimize traffic impacts to this intersection as a near-term measure. The re-striping at both the Alliance Road/Foster Avenue and Sunset Avenue/LK Wood Blvd intersections was completed in Summer 2017.

The future transportation improvements listed above may not be constructed prior to the operation of the approved/planned projects listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. Some of the projects may be delayed in obtaining all necessary entitlement for several years. Nonetheless, there is the potential that significant traffic impacts may occur until these improvements are in place. Because the EIR identifies traffic as an impact that cannot be

reduced to a less than significant level until the future transportation improvements are constructed, a Statement of Overriding Considerations may be adopted for the Village Student Housing project.

The Arcata General Plan contains several policies encouraging alternative modes of transportation including the following:

- **Policy T-2 (Travel Demand Management):** Reduce the percentage of automobiles and reduce the annual vehicle-miles of travel.

- **Policy T-3 (Bus Transit Policy):** Maintain a bus transit system which connects and serves major commercial and employment areas within Arcata, Humboldt State University, public schools, and higher density residential areas. Increase average citywide transit mode share of daily person-trips to 5% from the 1998 level of 1%.

- **Policy T-5 (Bicycle and Pedestrian Facilities):** Create a complete interconnected bicycle and pedestrian circulation system. Increase the percentage of person-trips via walking and bicycling. Provide a pedestrian and bicycle system which serves commuter as well as recreational travel.

In order to be consistent with the City's General Plan policies encouraging alternative modes of transportation, the Traffic Study completed by W-Trans evaluated the existing pedestrian, bicycle, and transit improvements for the proposed project. In addition, the LOS analysis done for the Traffic Study considered delays for pedestrians, bicyclists, and buses crossing the study intersections. The study concluded that the existing pedestrian, bicycle, and transit improvements are inadequate to serve the proposed project. The City has not adopted a standard including LOS to measure transportation impacts, so no quantitative standard could be applied to the results of the analysis. However, the Traffic Study did make recommendations intended to increase the use of alternative modes of transportation.

To comply with Policy T-5 (Bicycle and Pedestrian Facilities) of the Arcata General Plan Transportation Element, the Arcata Pedestrian & Bicycle Master Plan (2010), and the recommendations of the W-Trans Central Arcata Areawide Traffic Study (Appendix L), the proposed project will construct new on-site pedestrian/bicycle improvements throughout the development. This includes the following pedestrian/bicycle trails:

- An approximate 675-foot section of the Arcata Rail with Trail along the eastern edge of the project site from the northeast corner of the site to the southeast corner.
- An approximate 500-foot section of trail along the north property line of the project site from the northeast corner of the site to the northern central portion of the site. This trail will connect to the City-owned Janes Creek Meadows Openspace area and ultimately provide access to Maple Lane (see Figure 3E [Non-Vehicular Circulation]).
- Sidewalk and pedestrian trails throughout the project site as illustrated on the Landscape Plan prepared by KLA Landscape Architecture (see Figure 3D).

The applicant will also work with the City to develop off-site improvements that will improve pedestrian/bicycle access including the following:

- An approximate 200-foot section of the Arcata Rail with Trail from the southeast corner of the site to the northern end of Todd Court. This section of the trail will be developed through parcels 505-042-003 and -022 (see Figure 3E [Non-Vehicular Circulation]).
- An approximate 700-foot section of sidewalk from the northeast corner of the site to the existing sidewalk at the St. Louis Road overcrossing (see Figure 3E [Non-Vehicular Circulation]).

The proposed pedestrian/bicycle improvements will result in connecting the project site to the St. Louis Road overcrossing to the north, Maple Lane to the west, and Todd Court to the south (see Figure 3E [Non-Vehicular Circulation]). These improvements will provide connectivity to the existing trail systems in the project area, Humboldt State University, and to regional trails in the Humboldt Bay area including the Annie and Mary Trail and the Humboldt Bay Trail: Arcata to Eureka segment. It is anticipated that this increased connectivity will encourage residents to walk or bike to HSU instead of driving. As recommended in the W-Trans Traffic Study (Appendix L; Pgs. 61 and 64), and by the City of Arcata, pedestrian and bicycle traffic will be directed toward Eye Street and Todd Court until such time that this section of the Arcata Rail with Trail is completed to Sunset Avenue. The proposed on-site pedestrian/bicycle improvements have been included as Mitigation Measure 3.1b for the proposed project.

As discussed in Chapter 1 (Introduction), the project will include several other improvements or programs that will encourage the use of alternative modes of transportation or reduce vehicle miles traveled including the following:

- The applicant proposes to provide 505 bicycle parking spaces, which is greater than four times the City's minimum requirement.
- A car and bike share program will be available to the residents of the student housing community.
- The applicant will work closely with the City of Arcata and the Arcata & Mad River Transit System to provide bus service directly to the project site.

With the project design and proposed mitigation measures, the proposed project will not conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel, and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit. However, until construction of the future transportation improvements identified in Mitigation Measure 3.1a, there is the potential for significant traffic impacts to occur from the proposed project.

Determination:
Potentially significant impact until construction of the future transportation improvements identified in Mitigation Measure 3.1a.

Mitigation:
Implementation of the following mitigation measures would reduce potential impacts to a less than significant level.

Mitigation Measure 3.1a. To minimize the traffic impacts of the proposed project, the applicant will be responsible for paying a fair share proportion for the following near-term and future transportation improvements to the City of Arcata:

- Sunset Avenue/LK Wood Boulevard Re-Striping (Near-term)
- Re-Stripe Alliance Road & Foster Avenue Approaches (Near-term)
- Roundabout at Sunset Avenue/LK Wood Boulevard Intersection (Future)
- Roundabout at Foster Avenue/Alliance Road Intersection (Future)

The "near-term" improvements were completed in Summer 2017. The "future" transportation improvements may not be constructed for a decade or longer since the design of some of these improvements need to be coordinated with Caltrans and/or Humboldt State University. In order to fund these transportation improvement projects, a Traffic Impact Mitigation Fee Collection Program or equivalent will be established by the City of Arcata. The estimated total cost of these improvements will be approximately $3,627,700. The amount of the total cost of the improvements that will be funded by the Traffic Impact Mitigation Fee Collection Program is $911,900. Of this amount, the Village Student Housing Community project is estimated to be responsible for approximately 37%. Detailed information about the traffic impact mitigation fees is included on Pgs. 67-69 and in Appendix E of the W-Trans Central Arcata Areawide Traffic Study (Appendix L).

Mitigation Measure 3.1b. To comply with Policy T-5 (Bicycle and Pedestrian Facilities) of the Arcata General Plan Transportation Element, the Arcata Pedestrian & Bicycle Master Plan (2010), and the recommendations of the W-Trans Central Arcata Areawide Traffic Study (Appendix L), the proposed project will construct new on-site pedestrian/bicycle improvements throughout the development. This includes the following pedestrian/bicycle trails:

- An approximate 675-foot section of the Arcata Rail with Trail along the eastern edge of the project site from the northeast corner of the site to the southeast corner.
- An approximate 500-foot section of trail along the north property line of the project site from the northeast corner of the site to the northern central portion of the site. This trail will connect to the City-owned Janes Creek Meadows Open Space Area and ultimately provide access to Maple Lane.
- Sidewalk and pedestrian trails throughout the project site as illustrated on the Preliminary Landscape Plan prepared by KLA Landscape Architecture.

Figure 3D Landscape Plan including the Proposed On-site Pedestrian Trails (KLA, 2016)

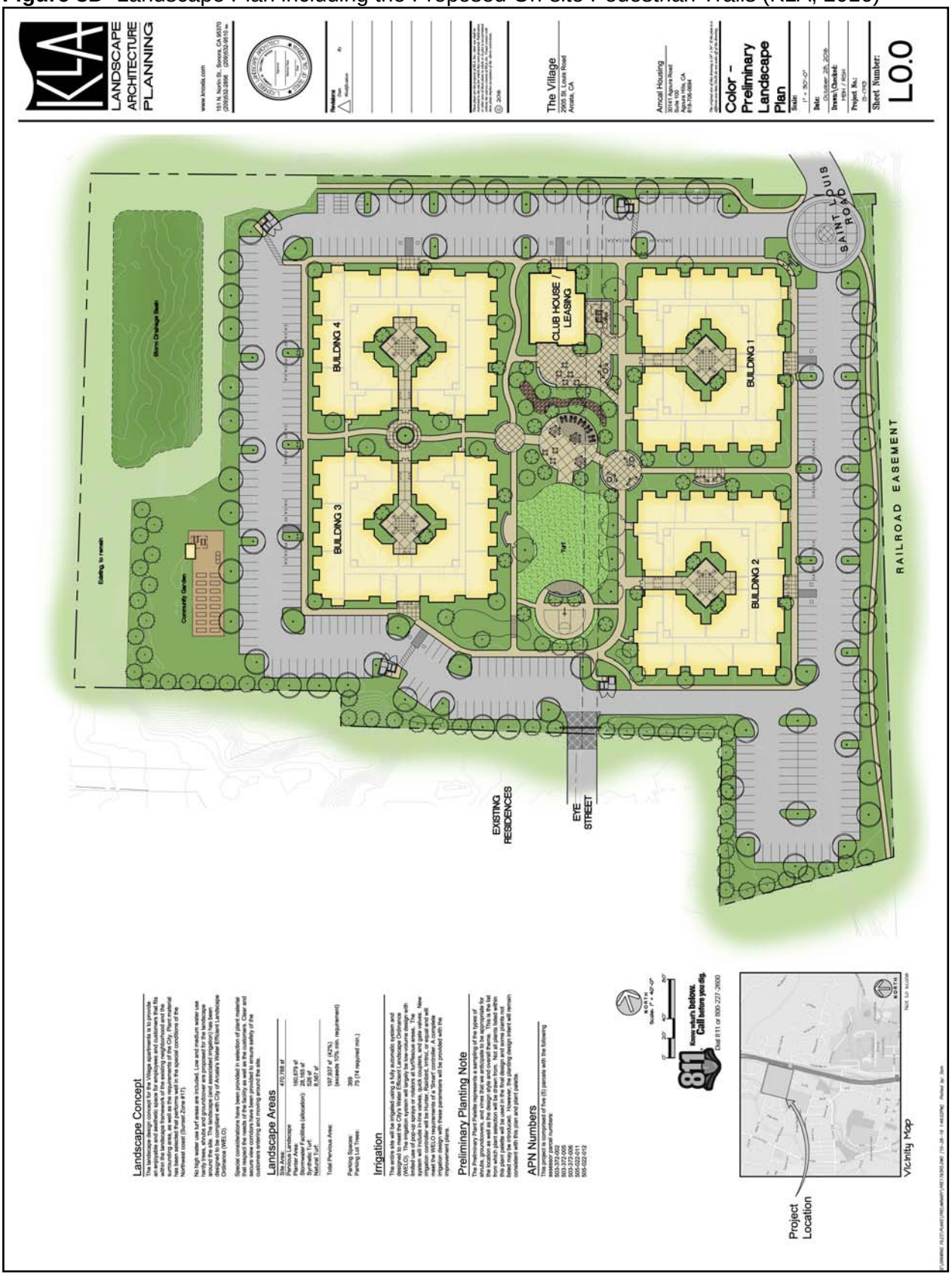
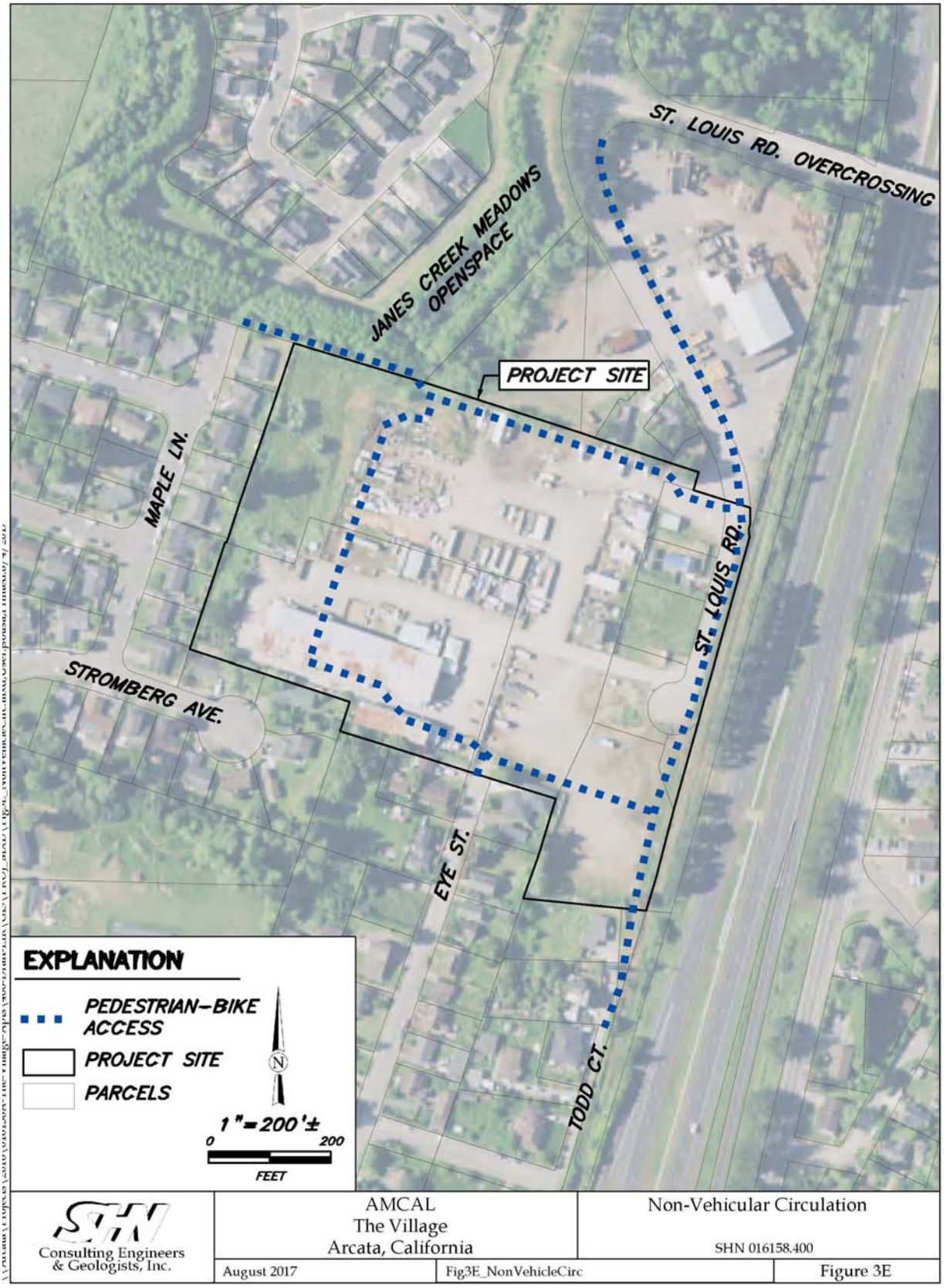


Figure 3E Non-Vehicular Circulation



Finding 3.2: Conflict with an Applicable Congestion Management Program, Including, but not Limited to Level of Service Standards and Travel Demand Measures, or other Standards Established by the County Congestion Management Agency for Designated Roads or Highways.

Discussion:
The Humboldt County Association of Governments (HCAOG) is the regional transportation planning agency for Humboldt County. However, Humboldt County is considered rural and does not have a Congestion Management Agency or an adopted Congestion Management Program.

The City of Arcata commissioned W-Trans to conduct a comprehensive traffic study to address the cumulative impacts associated with the potential development of six sites located in central Arcata within three-quarter of a mile of one another. These projects, which include the Village Student Housing project, are referred to by the City of Arcata as the Sunset Area housing projects, and are listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. The results of the Traffic Study are discussed in greater detail under Finding 3.1, including estimated trip generation and distribution, changes in Level of Service (LOS), and potential impact on alternative modes of transportation from the proposed project. As described under Finding 3.1, the specific recommendations contained in the W-Trans Traffic Study (Appendix L; Page 70), or as required by the City of Arcata, have been included as Mitigation Measures 3.1a and 3.1b for the proposed project.

Therefore, the proposed project will not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 3.3: Result in a Change in Air Traffic Patterns, including Either an Increase in Traffic Levels or a Change in Location that Results in Substantial Safety Risks.

Discussion:
The California Redwood Coast – Humboldt County Airport is located approximately six miles north of the project site and is the County's regional airport offering commercial air service to a three county area including Humboldt, Del Norte, and Mendocino counties. Other smaller County airports near the City of Arcata include Murray Field, which is approximately six miles to the south of the project site, and Samoa Field which is approximately ten miles southwest of the project site.

Due to the project's size (provide housing for approximately 800 residents), type of use (residential), and location (six miles to the nearest airport), there is limited potential to impact air traffic patterns.

Therefore, the project will not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 3.4: Substantially Increase Hazards Due to a Design Feature (e.g., Sharp Curves or Dangerous Intersections) or Incompatible Uses (e.g., Farm Equipment).

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four-story buildings on a underutilized industrial site that is within the north central portion of the City of Arcata, directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus.

Vehicular access to the project site will be provided from St. Louis Road. The portion of St. Louis Road on the eastern boundary of the project site is proposed to be vacated and incorporated into the site design as access, parking, and landscaping. This will include development of a traffic circle in the northeast corner of the project site. There are currently two gated access roads to the site off of St. Louis Road. As shown on the Site Plan, the proposed residential structures will be located in the central portion of the site with vehicular access and parking located around the perimeter of the structures. Other vehicular access improvements proposed as part of the project include a gated emergency access to Eye Street.

The proposed improvements will be reviewed by and constructed to the standards of the City Engineer and Public Works Department to ensure that no hazardous design features will be developed as part of the project. The City Engineer has reviewed the proposed transportation improvements for the project and determined that they will not present a safety hazard for the amount and type of traffic that will result from the proposed project.

The project site is located directly adjacent to existing neighborhoods in the northern central portion of Arcata and is only approximately 0.25 miles driving distance from the nearest arterial street (LK Wood Boulevard). Industrial uses occur north of the project site which generates truck traffic on St. Louis Road. The closest industrial operation to the project site is Mad River Lumber, which uses two properties (2935 St. Louis Road/APNs 505-011-010, -017 and 505-012-004) directly north of the project site, and occasionally moves equipment and vehicles back and forth between the properties. Traffic from this industrial operation occurs intermittently and it is

anticipated that there will be limited conflict between the traffic from this adjacent industrial operation and the traffic that will be generated by the proposed project.

Therefore, the proposed project will not substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 3.5: Result in Inadequate Emergency Access.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four-story buildings on a underutilized industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus.

Construction
Construction of utilities and transportation improvements to serve the proposed development would require temporary encroachments within the City right-of-way on St. Louis Road and other nearby roadways. An encroachment permit would be required for any work completed within the City road right-of-way. The encroachment permit applications for the City of Arcata require preparation of traffic control plans for work that would block the public right-of-way. Contractors would be required to adhere to approved traffic control plans, which would minimize conflicts related to emergency access and circulation. Contractors would be required to have ready at all times the means necessary to accommodate access by emergency vehicles, such as plating over excavations, and travel lane closures would be managed such as keeping one travel lane open at all times to allow alternating traffic flow in both directions along affected roadways. Through compliance with City requirements, construction activities would not result in inadequate emergency access.

Operation
Vehicular access to the project site will be provided from St. Louis Road. The portion of St. Louis Road on the eastern boundary of the project site is proposed to be vacated and incorporated into the site design as access, parking, and landscaping. This will include development of a traffic circle in the northeast corner of the project site. A gated emergency access road is also proposed to Eye Street that would provide a secondary means of access to the project site from the south for emergency vehicles.

St. Louis Road and the surrounding road network do not have any conditions that would restrict emergency vehicle access to the project site such as inadequate width of roadways or insufficient roadway surfaces that cannot support the weight of larger emergency vehicles.

The project's ingress/egress and on-site circulation are required to meet the requirements of the City Engineer, Arcata Fire Protection District and Arcata Police Department, which ensures that new development provides adequate access for emergency vehicles. The project has been reviewed by these City departments, and their requirements have been included in the proposed project design.

Therefore, the proposed project will not result in inadequate emergency access.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 3.6: Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities, or Otherwise Decrease the Performance or Safety of such Facilities.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four-story buildings on a underutilized industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus. The project will create new demand for bicycle and pedestrian facilities, and public transit in the immediate vicinity and connecting into other areas of the City. St. Louis Road currently does not provide any sidewalks or bikeways along the project site frontage.

Sidewalks near the project site exist on the St. Louis Road, West End Road, Spear Avenue, St. Louis O.C., LK Wood Boulevard, Sunset Avenue, J Street, and portions of Eye Street. The railroad tracks paralleling Highway 101 and crossing Sunset Avenue are also used as a foot path. Bike lanes near the project site include the following: 1) St. Louis Road from St. Louis O.C. to the Spear Avenue roundabout which continues north on West End Road and west on Spear Avenue (Class II); 2) LK Wood Boulevard from the St. Louis O.C. to 14th Street (Class II); 3) Sunset Avenue from LK Wood Boulevard to Foster Avenue (Class III); and 4) Foster Avenue from Alliance Road to Sunset Avenue (Class II). There is also a new Class I multi-use trail that provides access along Foster Avenue from Shay Park to Sunset Avenue.

The primary transit service provider for the City of Arcata is the Arcata & Mad River Transit System (AMRTS) along the Red, Gold, and Orange routes. The Gold line provides access to points north, south to the downtown, and to Humboldt State University to the east. The closest bus stop to the project site (~0.25 mile walking distance) is on the Gold and Red Routes near the intersection of LK Wood Blvd/Ridge Road. The next closest bus stops to the site include the following: 1) at the intersection of Spear Avenue/West End Road (~0.35 mile walking distance) on the Gold Route; 2) near the intersection of LK Wood Blvd/Diamond Drive (~0.4 mile

walking distance) on the Red and Gold Routes; and 3) near the intersection of LK Wood Blvd/California Ave (~0.45 mile walking distance) on the Red and Gold Routes (AMRTS, 2017).

The Arcata General Plan contains several policies encouraging alternative modes of transportation including the following:

- **Policy T-2 (Travel Demand Management):** Reduce the percentage of automobiles and reduce the annual vehicle-miles of travel.

- **Policy T-3 (Bus Transit Policy):** Maintain a bus transit system which connects and serves major commercial and employment areas within Arcata, Humboldt State University, public schools, and higher density residential areas. Increase average citywide transit mode share of daily person-trips to 5% from the 1998 level of 1%.

- **Policy T-5 (Bicycle and Pedestrian Facilities):** Create a complete interconnected bicycle and pedestrian circulation system. Increase the percentage of person-trips via walking and bicycling. Provide a pedestrian and bicycle system which serves commuter as well as recreational travel.

In order to be consistent with the City's General Plan policies encouraging alternative modes of transportation, the Traffic Study completed by W-Trans evaluated the existing pedestrian, bicycle, and transit improvements for the proposed project. In addition, the LOS analysis done for the Traffic Study considered delays for pedestrians, bicyclists, and buses crossing the study intersections. The study concluded that the existing pedestrian, bicycle, and transit improvements are inadequate to serve the proposed project. The City has not adopted a standard including LOS to measure transportation impacts, so no quantitative standard could be applied to the results of the analysis. However, the Traffic Study did make recommendations intended to increase the use of alternative modes of transportation.

To comply with Policy T-5 (Bicycle and Pedestrian Facilities) of the Arcata General Plan Transportation Element, the Arcata Pedestrian & Bicycle Master Plan (2010), and the recommendations of the W-Trans Central Arcata Areawide Traffic Study (Appendix L), the proposed project will construct new on-site pedestrian/bicycle improvements throughout the development. This includes the following pedestrian/bicycle trails:

- An approximate 675-foot section of the Arcata Rail with Trail along the eastern edge of the project site from the northeast corner of the site to the southeast corner.
- An approximate 500-foot section of trail along the north property line of the project site from the northeast corner of the site to the northern central portion of the site. This trail will connect to the City-owned Janes Creek Meadows Openspace area and ultimately provide access to Maple Lane (see Figure 3E [Non-Vehicular Circulation]).
- Sidewalk and pedestrian trails throughout the project site as illustrated on the Landscape Plan prepared by KLA Landscape Architecture (see Figure 3D).

The applicant will also work with the City to develop off-site improvements that will improve pedestrian/bicycle access including the following:

- An approximate 200-foot section of the Arcata Rail with Trail from the southeast corner of the site to the northern end of Todd Court. This section of the trail will be developed through parcels 505-042-003 and -022 (see Figure 3E [Non-Vehicular Circulation]).
- An approximate 700-foot section of sidewalk from the northeast corner of the site to the existing sidewalk at the St. Louis Road overcrossing (see Figure 3E [Non-Vehicular Circulation]).

As described under Finding 3.1, the on-site pedestrian/bicycle improvements have been included as Mitigation Measure 3.1b for the proposed project and will result in connecting the project site to the St. Louis Road overcrossing to the north, Maple Lane to the west, and Todd Court to the south (see Figure 3E [Non-Vehicular Circulation]). These improvements will provide connectivity to the existing trail systems in the project area, Humboldt State University, and to regional trails in the Humboldt Bay area including the Annie and Mary Trail and the Humboldt Bay Trail: Arcata to Eureka segment. It is anticipated that this increased connectivity will encourage residents to walk or bike to HSU instead of driving. As recommended in the W-Trans Traffic Study (Appendix L; Pgs. 61 and 64), and by the City of Arcata, pedestrian and bicycle traffic will be directed toward Eye Street and Todd Court until such time that this section of the Arcata Rail with Trail is completed to Sunset Avenue.

As discussed in Chapter 1 (Introduction), the project will include several other improvements or programs that will encourage the use of alternative modes of transportation or reduce vehicle miles traveled including the following:

- The applicant proposes to provide 505 bicycle parking spaces, which is greater than four times the City's minimum requirement.
- A car and bike share program will be available to the residents of the student housing community.
- The applicant will work closely with the City of Arcata and the Arcata & Mad River Transit System to provide bus service directly to the project site.

With the proposed project design and mitigation measures, the project will not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Determination*:*
Less than significant with incorporation of mitigation measures.

Mitigation:
Implementation of the following mitigation measures would reduce the potential impacts to a less than significant level.

Same as ***Mitigation Measure 3.1b.***

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CHAPTER 4.

NATURAL ENVIRONMENT

The following Sections are included in this Chapter:

SECTION 4.1 GEOLOGY & SOILS

This section evaluates the potential impacts related to geology and soils. The Environmental Setting section describes the existing setting as it relates to geology and soils. The Regulatory Framework section describes the applicable regulations at the federal, state, and local level. The Impact Analysis section establishes the thresholds of significance, evaluates potential geological and soils impacts, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to a less than significant level.

ENVIRONMENTAL SETTING

Regional Geological Setting

The Humboldt Bay region occupies a complex geologic environment characterized by very high rates of active tectonic deformation and seismicity. The region lies just north of the Mendocino Triple Junction, the intersection of three crustal plates (the North American, Pacific, and Gorda plates). North of Cape Mendocino, the Gorda plate is being actively subducted beneath North America, forming what is commonly referred to as the Cascadia subduction zone. In the Humboldt Bay region, deformation along the continental margin occurs as a series of northwest-trending, northeast-dipping thrust faults, and intervening folds. The geomorphic landscape of the Humboldt Bay region is largely a manifestation of the active tectonic processes and a dynamic coastal environment setting.

Local Geologic Conditions

Arcata is located within the Coast Ranges Geomorphic Province of California, which is characterized by subparallel north- to northwest-trending mountain ranges and intermountain and coastal alluvial valleys and plains. Topography in the province is controlled by the predominant geological structural trends within the Coast Range that generally consist of northwest trending synclines, anticlines, and faulted blocks.

The project site is located approximately two miles north of Humboldt Bay. The Humboldt Bay region is a complex geologic environment with very high seismicity and occurrences of tectonic deformation. The nearby Mendocino Triple Junction (MTJ) is the intersection of three crustal plates (the North American, Pacific, and Gorda plates) offshore from Cape Mendocino. North of the MTJ and offshore from Arcata, the Gorda plate is being actively subducted beneath the North American plate in the Cascadia subduction zone.

Based on geologic mapping by the United States Geological Survey (USGS), the majority of the site is underlain Quaternary-age aeolian deposits. The western margin of the site is mapped as Quaternary-age alluvium associated with the former McDaniel Slough. The soils conditions encountered in the subsurface explorations conducted as part of the Geocon Geotechnical Investigation are generally consistent with the USGS mapping (Appendix M).

Topography

The majority of the project site is an elevated terrace above the Arcata Bottom that slopes gently west with ground surface elevations of 50 to 60 feet above mean sea level (MSL). A lower elevation area exists on the western portion of the site with ground surface elevations of 32 to 40 feet MSL. The slope between the upper and lower portions of the site is identified on Figure PS-a (Hazards Map) of the Arcata General Plan as being greater than 15%.

Site Soils

Based on the Geotechnical Investigation prepared by Geocon Consultants, Inc. (Appendix M) for the project, the soils on the site differ between the elevated portion of the site (~50 feet) and the lower elevation (~35 feet) western portion of the site. The majority of the project site is elevated and contains terrace deposits which generally consist of very soft to stiff silts and clays, and loose to very dense silt sands and gravels. The lower elevation western portion of the site contains alluvial deposits from Janes Creek, which consists of very soft to medium stiff, moist to wet silts and clays, with occurrences of loose silty sands. Undocumented fill was also encountered in exploratory borings conducted throughout the site.

Seismicity

Regional Seismic Setting

The project site is located in a complex, dynamic tectonic setting. Due to the dynamic crustal deformation associated with location near the Mendocino Triple Junction, there is a high level of seismicity in the region; the north coast region of California is the most seismically active region in the continental United States. Over sixty earthquakes have produced discernible damage in the region since the mid-1800s (Dengler et al., 1992). Historic seismicity and paleoseismic studies in the area suggest there are six distinct sources of damaging earthquakes in the Humboldt Bay region: (1) the Gorda Plate; (2) the Mendocino fault; (3) the Mendocino Triple Junction (MTJ); (4) the northern end of the San Andreas fault; (5) faults within the North American Plate (including the Mad River fault zone); and (6) the Cascadia Subduction Zone (Dengler et al., 1992).

Earthquakes originating within the Gorda Plate account for the majority of historic seismicity. These earthquakes occur primarily offshore along left-lateral faults, and are generated by the internal deformation within the plate as it moves toward the subduction zone. Significant historic Gorda Plate earthquakes have ranged from magnitude 5.0 to 7.5. The November 8, 1980, earthquake (magnitude 7.2) was generated 30 miles (48 km) off the coast of Trinidad, on a left-lateral fault within the Gorda Plate.

The Mendocino fault is the second most frequent source of earthquakes in the region. The fault represents the plate boundary between the Gorda and Pacific plates, and typically generates right lateral strike-slip displacement. Significant historic Mendocino fault earthquakes have ranged in magnitude from 5.0 to 7.5. The September 1, 1994, magnitude 7.2 event originating west of Petrolia was generated along the Mendocino fault. Available data suggests the maximum magnitude earthquake for the Mendocino fault is magnitude 7.4 (CDMG/USGS, 1996).

The Mendocino Triple Junction (MTJ) was identified as a separate seismic source only after the magnitude 6.0 August 17, 1991 earthquake. Significant seismic events associated with the MTJ are shallow onshore earthquakes that appear to range from magnitude 5.0 to 6.0. Raised Holocene age marine terraces near Cape Mendocino suggest larger events are possible in this region.

Earthquakes originating on the northern San Andreas Fault are extremely rare, but can be very large. The northern San Andreas Fault is a right lateral strike-slip fault that represents the plate boundary between the Pacific and North American plates. The fault extends through the Point Delgada region and terminates at the Mendocino Triple Junction. The 1906 San Francisco earthquake (magnitude 8.3) caused the most significant damage in the north coast region, with the possible exception of the 1992 Petrolia earthquake (Dengler et. al., 1992).

Earthquakes originating within the North American plate can be anticipated from a number of intraplate sources, including the Mad River fault zone and Little Salmon fault. There has not been large magnitude earthquakes associated with faults within the North American plate, although the December 21, 1954, magnitude 6.5 event may have occurred in the Mad River fault zone. Damaging North American plate earthquakes are expected to range in magnitude from 6.5 to 8.0.

The project site lies within the broad Mad River fault zone, which consists of a series of northwest-trending, northeast-dipping thrust faults that extend from Arcata to Trinidad. Within the Mad River fault zone, the fault nearest to the site is the Fickle Hill fault, which has an estimated maximum magnitude of 6.9 (CDMG/USGS, 1996).

The Little Salmon fault, located south of Eureka, appears to be the most active fault in the Humboldt Bay region, and is capable of generating very large earthquakes. The Little Salmon fault is a northwest-trending, southwest-vergent reverse fault. Paleoseismic studies of the Little Salmon fault indicate that the fault deforms late Holocene sediments at the southern end of Humboldt Bay (Clarke and Carver, 1992). Estimates of the amount of fault slip for individual earthquakes along the fault range from 15 to 23 feet (4.5 to 7 meters). Radiocarbon dating suggests that earthquakes have occurred on the Little Salmon fault about 300, 800, and 1,600

years ago. Average slip rate for the Little Salmon fault for the past 6,000 years is between six and ten mm/yr. Based on currently available fault parameters, the maximum magnitude earthquake for the Little Salmon fault is thought to be between 7.0 (CDMG/USGS, 1996) and 7.3 (Geomatrix Consultants, 1994).

The Cascadia Subduction Zone (CSZ) represents the most significant potential earthquake source in the north coast region. A great subduction event may rupture along 200 km or more of the coast from Cape Mendocino to British Columbia, may be up to magnitude 9.5, and could result in extensive tsunami inundation in low-lying coastal areas. The seaward edge of the CSZ lies about 37 miles from the project site (Clarke, 1992). The fault dips eastward beneath the site, however, so the site-to-source distance is much less in the subsurface. Assuming an 11 degree dip for the CSZ interface, the minimum site-to-source distance is seven miles. The April 25, 1992, Petrolia earthquake (magnitude 7.1) appears to be the only historic earthquake involving slip along the subduction zone, but this event was confined to the southernmost portion of the fault. Paleoseismic studies along the subduction zone suggest that great earthquakes are generated along the zone every 300 to 500 years. Historic records from Japan describing a tsunami thought to have originated along the Cascadia Subduction Zone suggest the most recent event occurred on January 27, 1700. A great subduction earthquake would generate long duration, very strong ground shaking throughout the north coast region.

Geological Hazards

Surface Fault Rupture

The project site is located within the Mad River fault zone. The Mad River fault zone consists of a series of northwest-trending, northeast-dipping thrust faults, including (from south to north) the Fickle Hill, Mad River, McKinleyville, and Trinidad faults. Of these, the site is closest to the Fickle Hill fault, which traverses the southwestern flank of Fickle Hill and through the city of Arcata. The Fickle Hill fault projects toward, but is not expressed across the Mad River alluvial plain, presumably because the geomorphic evidence of the fault was erased during formation of the Holocene floodplain.

The State of California (per the Alquist-Priolo Earthquake Fault Zoning Act) has zoned the fault as "*active*" through Arcata, but the "*Earthquake Fault Zone*" terminates at the edge of the alluvial plain surface on the western edge of the City. The project site is about half-mile northeast of the Alquist-Priolo Earthquake fault zone boundary that surrounds the mapped fault trace. As stated in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project site, "*The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards*."

Strong Ground Shaking Hazard

As described above, the project site is located in a seismically active region with multiple nearby seismic sources. Therefore, the region is likely to experience strong seismic shaking during the

project lifespan. The amount and strength of ground shaking depends on the magnitude of the earthquake, the distance to the hypocenter, type of earth materials at the site, and between the site and hypocenter. Due to the proximity of the Humboldt Bay region to the Mad River fault zone, Little Salmon fault, and the Cascadia subduction zone, the potential exists for long, sustained periods of intense ground shaking.

Local site conditions can profoundly influence the nature of seismically-induced strong ground motions. The geometry and strength properties of subsurface materials, and site topography, can influence the amplitude, frequency, and duration of ground shaking. Typically, young weakly consolidated alluvial deposits, like those underlying the Arcata Bottom area, are capable of amplifying seismic ground motions, thus intensifying the damaging effects of strong earthquakes.

Liquefaction and Lateral Spreading Hazard

Liquefaction is defined as the sudden loss of soil shear strength due to a rapid increase of soil pore water pressures caused by cyclic loading from a seismic event. In simple terms, it means that a liquefied soil acts more like a fluid than a solid when shaken during an earthquake. In order for liquefaction to occur, the following are needed:

- granular soils lacking significant clay content (sand, silty sand, sandy silt, and some gravels);
- a high groundwater table; and
- a low density of the granular soils (usually associated with young geologic age).

The adverse effects of liquefaction include: local and regional ground settlement; ground cracking and expulsion of water and sand; the partial or complete loss of bearing and confining forces used to support loads; amplification of seismic shaking; and lateral spreading. Lateral spreading is defined as lateral earth movement of liquefied soils, or competent strata riding on a liquefied soil layer, downslope toward an unsupported slope face (such as a creek bank or an inclined slope face). In general, lateral spreading has been observed on low to moderate gradient slopes, but has been noted on slopes inclined as flat as one degree.

The liquefaction analysis contained in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project, indicated that potentially liquefiable sand layers exist on the western edge of the project site at a depth of approximately 15-22 feet. The report concludes the likely consequence of potential liquefaction at the site is ground surface settlement on the order of 1.5 inches or less.

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, and free face geometry. As stated in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project site, "*Due to relatively limited liquefaction potential and anticipated grading at the western margin of the site, we judge the likelihood of lateral spreading to be low*."

Slope Failure and Landslides

As described above, the majority of the project site is an elevated terrace above the Arcata Bottom that slopes gently west with ground surface elevations of 50 to 60 feet above mean sea level (MSL). A lower elevation area exists on the western portion of the site with ground surface elevations of 32 to 40 feet MSL. The slope between the upper and lower portions of the site is identified on Figure PS-a (Hazards Map) of the Arcata General Plan as being greater than 15%.

As stated in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project site, "*There are no known landslides near the site nor is the site in the path of any known or potential landslides. Topography in the immediate vicinity of the site is generally flat. We do not consider the potential for a landslide to be a significant hazard to this project*."

Unstable Geologic Units, Subsidence, or Collapse

Subsidence (e.g., settlement) is the depression of the bearing soil when a load, such as that of a building or new fill material, is placed upon it. Subsidence could occur if loose, saturated sands near the ground liquefy during severe ground shaking.

Previous land use at the site (e.g. lumber mill, industrial uses, etc.) may have alleviated some of the risk associated with the consolidation hazard due to the use of heavy equipment at the site for many years and the placement of undocumented fill over the site. Therefore, near-surface soils may have been somewhat compacted.

As noted above, the liquefaction analysis contained in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project, indicated that potentially liquefiable sand layers exist on the western edge of the project site at a depth of approximately 15-22 feet. The report concludes the likely consequence of potential liquefaction at the site is ground surface settlement on the order of 1.5 inches or less.

Expansive Soils

Expansive soils possess a "shrink-swell" characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time due to expansive soils, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

Industrial use of the site in the past has resulted in extensive modification of the site soils, including reworking of the upper soil mantle and placement of undocumented fill. The Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project, indicates that some of the soils encountered at the project site are considered to be expansive as defined by 2016 CBC (Expansion Index more than 20).

Soil Erosion/Loss of Topsoil

Because the majority of the site is flat, it is not subject to significant erosion hazards. There is a limited potential for erosion of the slope between the upper and lower portions of the site. This slope is currently stable and covered with vegetation. The project does not propose significant vegetation removal or any activity that would destabilize this slope. Therefore, there is a low risk of significant erosion or loss of topsoil resource over most of the site.

REGULATORY FRAMEWORK

State of California

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. In accordance with this act, the State Geologist established regulatory zones, called "*earthquake fault zones*," around the surface traces of active faults and published maps showing these zones. Within these zones, buildings for human occupancy cannot be constructed across the surface trace of active faults. Because many active faults are complex and consist of more than one branch, each earthquake fault zone extends approximately 200 to 500 feet on either side of the mapped fault trace. Title 14 of the CCR, Section 3601(e), defines buildings intended for human occupancy as those that would be inhabited for more than 2,000 hours per year. According to Figure PS-a (*Hazards Map*) of Arcata General Plan, the project site is not located within an Alquist-Priolo Earthquake Fault Zone. Therefore, the provisions of the Act do not apply to the project.

Seismic Hazards Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC Sections 2690 to 2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong groundshaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the state is charged with identifying and mapping areas at risk of strong groundshaking, liquefaction, landslides, and other corollary hazards, with cities and counties required to regulate development within mapped Seismic Hazard Zones. Under the California Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites within Seismic Hazard Zones until appropriate site-specific geologic and/or geotechnical investigations have been conducted and measures to reduce potential damage have been incorporated into the development plans. The California Geological Survey has not yet evaluated the project area under the Seismic Hazards Mapping Act.

California Building Code

The State of California provides minimum standards for building design through the California Building Code (CBC). Where no other building codes apply, CBC Chapter 29 regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the State and is based on the federal Uniform Building Code (UBC) used widely throughout the country. The CBC has been modified for California conditions with numerous more detailed and/or more stringent regulations. Specific minimum seismic safety and structural design requirements are set forth in CBC Chapter 16. The Code identifies seismic factors that must be considered in structural design. Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

City of Arcata

Arcata General Plan

The City of Arcata General Plan contains guidelines for geology and soils within the Resource Conservation and Management Element and the Public Safety Element. Table 4.1-1 below contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 4.1-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
RC-9 Soils and Mineral Resources	Conserve and manage soil and mineral resources.	RC-9a, RC-9b
PS-2 Seismic Hazards	Protect existing and new structures from seismic hazards. Identify and map seismic hazards and assure that any development within such hazard areas does not proceed until geologic and soils conditions are adequately investigated and appropriate mitigation measures, if any, are incorporated into development plans.	PS-2a-d, PS-2g
PS-3 Other Geologic Hazards	Protect existing and new structures from non-seismic geologic hazards such as unstable slopes and soils. Require that all non-seismic geologic hazards be adequately addressed and mitigated.	PS-3a, PS-3b, PS-3e

Arcata Land Use Code

The City of Arcata Land Use Code addresses geologic hazards and grading activity within Chapters 9.62 (Geologic Hazard Review) and 9.64 (Grading, Erosion, and Sediment Control).

Table 4.1-2 below contains a list of requirements from the Arcata Land Use Code that are applicable to the proposed project.

Table 4.1-2 Applicable Land Use Code Requirements

Policy	Objective	Applicable Sub-Policies
9.62 (Geologic Hazard Review)	Provide procedures for the filing, processing, and approval or disapproval of applications for Geologic Hazard Review, to protect the health, safety, and welfare of the residents of the City by minimizing the risk from carrying out development in areas subject to geologic and/or seismic hazards.	9.62.010 - 9.62.050
9.64 (Grading, Erosion, and Sediment Control)	Establishes minimum standards and regulations for grading activities as well as construction and post-construction runoff control criteria to prevent unreasonable or unnecessary erosion and sediment production and related degradation of the City's stormwater drainage systems.	9.64.010 - 9.64.080

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if it meets any of the following criteria.

If the project would:

- Expose people or structures to potential substantial adverse seismic effects, including the risk of loss, injury, or death involving: 1) 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; 2) strong seismic ground shaking; 3) seismic-related ground failure, including liquefaction; or 4) landslides.
- Result in substantial soil erosion or the loss of topsoil.
- 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.

- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- 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.

Proposed Project

Finding 4.1.1: Expose People or Structures to Potential Substantial Adverse Seismic Effects, including the Risk of Loss, Injury, or Death Involving 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.

Discussion:
Seismically induced ground rupture is defined as the physical displacement of surface deposits in response to an earthquake's seismic waves. The magnitude and nature of fault rupture can vary for different faults or even along different strands of the same fault. Surface rupture can damage or collapse buildings, cause severe damage to roads and pavement structures, and cause failure of overhead as well as underground utilities.

According to Figure PS-a (*Hazards Map*) of Arcata General Plan, the project site is not located within an Alquist-Priolo Zone. The project site lies within the broad Mad River fault zone, which consists of a series of northwest-trending, northeast-dipping thrust faults that extend from Arcata to Trinidad. Within the Mad River fault zone, the fault nearest to the site is the Fickle Hill fault, which has an estimated maximum magnitude of 6.9 (CDMG/USGS, 1996).

The State of California (per the Alquist-Priolo Earthquake Fault Zoning Act) has zoned the Fickle Hill fault as "*active*" through Arcata, but the "*Earthquake Fault Zone*" terminates at the edge of the alluvial plain surface on the western edge of the City. The project site is about half-mile northeast of the Alquist-Priolo Earthquake Fault Zone boundary that surrounds the mapped fault trace. As stated in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project site, "*The site is not within a currently established State of California Earthquake Fault Zone for surface fault rupture hazards*." Since the project area is not traversed by a known active fault and is not within 200 feet of an active fault trace, surface fault rupture is not considered to be a significant hazard for the project site.

Therefore, the proposed project will not expose people or structures to potential substantial adverse seismic effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.1.2: Expose People or Structures to Potential Substantial Adverse Seismic Effects, including the Risk of Loss, Injury, or Death Involving Strong Seismic Ground Shaking.

Discussion:
The project area is located within the northern Coast Ranges Geologic Province which is a seismically active region in which large earthquakes may be expected to occur during the anticipated lifespan of any development on the project site. Great, very large earthquakes are possible. Strong seismic shaking is a regional hazard, and is not specific to the project site. According to Figure PS-a (*Hazards Map*) of Arcata General Plan, the project site is not located within an Alquist-Priolo Zone. The project site lies within the broad Mad River fault zone, which consists of a series of northwest-trending, northeast-dipping thrust faults that extend from Arcata to Trinidad. Within the Mad River fault zone, the fault nearest to the site is the Fickle Hill fault, which has an estimated maximum magnitude of 6.9 (CDMG/USGS, 1996).

The State of California provides minimum standards for building design through the California Building Code (CBC). Where no other building codes apply, CBC Chapter 29 regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the State and is based on the federal Uniform Building Code (UBC) used widely throughout the country. The CBC has been modified for California conditions with numerous more detailed and/or more stringent regulations. Specific minimum seismic safety and structural design requirements are set forth in CBC Chapter 16. The Code identifies seismic factors that must be considered in structural design. Adherence to City and State seismic building standards will reduce impacts from strong seismic ground shaking to a less than significant level.

In addition, a Geotechnical Investigation was prepared by Geocon Consultants, Inc. (Appendix M) for the project that contains design recommendations for minimizing seismic hazards.

Therefore, the proposed project will not expose people or structures to substantial adverse effects involving strong seismic ground shaking.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.1.3: Expose People or Structures to Potential Substantial Adverse Seismic Effects, including the Risk of Loss, Injury, or Death Involving Seismic-Related Ground Failure, Including Liquefaction.

Discussion:
The liquefaction analysis contained in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project, indicated that potentially liquefiable sand layers exist on the western edge of the project site at a depth of approximately 15-22 feet. The report concludes the likely consequence of potential liquefaction at the site is ground surface settlement on the order of 1.5 inches or less.

To minimize potential damage to the proposed residential structures caused by liquefaction, all project construction will comply with the latest California Building Code (CBC) standards, as required by the City of Arcata General Plan and Land Use Code. In addition, the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) contains a recommendation for minimizing potential liquefaction impacts which states, "…*structures should be designed to accommodate approximately 1 ½ inch of total settlement and ¾ inch of differential seismic settlement across a horizontal distance of 50 feet*." The requirement to comply with the recommendations of the Geotechnical Investigation (Appendix M) will be included as a condition of approval by the City of Arcata for the proposed project.

Therefore, in compliance with the latest CBC standards and the recommendations of the Geotechnical Investigation (Appendix M), the proposed project will not expose people or structures to substantial adverse seismic effects involving seismic-related ground failure, including liquefaction.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.1.4: Expose People or Structures to Potential Substantial Adverse Seismic Effects, including the Risk of Loss, Injury, or Death Involving Landslides.

Discussion:
As described in the Environmental Setting, the majority of the project site is an elevated terrace above the Arcata Bottom that slopes gently west with ground surface elevations of 50 to 60 feet above mean sea level (MSL). A lower elevation area exists on the western portion of the site with ground surface elevations of 32 to 40 feet MSL. The slope between the upper and lower portions of the site is identified on Figure PS-a (Hazards Map) of the Arcata General Plan as being greater than 15%.

As stated in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project site, "*There are no known landslides near the site nor is the site in the path of*

any known or potential landslides. Topography in the immediate vicinity of the site is generally flat. We do not consider the potential for a landslide to be a significant hazard to this project."

Therefore, the proposed project will not expose people or structures to potential substantial adverse effect involving landslides.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.1.5: Result in Substantial Soil Erosion or the Loss of Topsoil.

Discussion:
The low relief nature of the majority of the project site significantly reduces the potential for erosion during construction and long-term operation of the proposed project. There is a limited potential for erosion of the slope between the upper and lower portions of the site. This slope is currently stable and covered with vegetation. The project does not propose significant vegetation removal or any activity that would destabilize this slope. Therefore, there is a low risk of significant erosion or loss of topsoil resource over most of the site.

Construction
As described in Section 4.2 (Hydrology and Water Quality) of the EIR, the project will be subject to the requirements of the State Water Resources Control Board (SWRCB) Construction General Permit (CGP) which requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP). A program containing construction Best Management Practices (BMPs) would be prepared and implemented as part of the SWPPP. Since some of the proposed construction activities would not be restricted to the dry months of the year, erosion control BMPs would be implemented to confine sediment to the construction area and prevent transportation off-site or discharge into the drainage ditch or wetland on the western portion of the site. The project will also be subject to the erosion and sediment control requirements contained in Section 9.64 (*Grading, Erosion, and Sediment Control*) of the Arcata Land Use Code.

Operation
Operation and maintenance of the proposed residential development is not expected to result in increased erosion. As required by the Construction General Permit and SWPPP, as well as Section 9.64 (*Grading, Erosion, and Sediment Control*) of the Arcata Land Use Code, disturbed areas at the project site must be left in a stabilized condition with adequate erosion control measures at the completion of construction. The stormwater facilities proposed for the development will be designed to comply with the Phase II Small MS4 General Permit requirements, which will control the volume and flow rate of run-off on-site and prevent substantial erosion or siltation during storm events. Vegetated areas (e.g. site landscaping and native plantings in the stormwater features) would be maintained and irrigated as needed to

ensure vegetation remains established. Operation of the proposed project is therefore not expected to increase erosion.

Therefore, in compliance with the requirements of the Arcata Land Use Code and MS4 General Permit requirements, the proposed project will not result in substantial soil erosion or the loss of topsoil.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.1.6: 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.

Discussion:
As described above under Finding 4.1.4, the majority of the project site is an elevated terrace above the Arcata Bottom that slopes gently west with ground surface elevations of 50 to 60 feet above mean sea level (MSL). A lower elevation area exists on the western portion of the site with ground surface elevations of 32 to 40 feet MSL. The slope between the upper and lower portions of the site is identified on Figure PS-a (Hazards Map) of the Arcata General Plan as being greater than 15%. As stated in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project site, "*There are no known landslides near the site nor is the site in the path of any known or potential landslides. Topography in the immediate vicinity of the site is generally flat. We do not consider the potential for a landslide to be a significant hazard to this project.*" As such, the proposed project has a limited potential to cause landslides on- or off-site.

Lateral spreading is a phenomenon in which soils move laterally during seismic shaking and is often associated with liquefaction. The amount of movement depends on the soil strength, duration and intensity of seismic shaking, and free face geometry. As stated in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project site, "*Due to relatively limited liquefaction potential and anticipated grading at the western margin of the site, we judge the likelihood of lateral spreading to be low.*"

As described under Finding 4.1.3, the liquefaction analysis contained in the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project, indicated that potentially liquefiable sand layers exist on the western edge of the project site at a depth of approximately 15-22 feet. The report concludes the likely consequence of potential liquefaction at the site is ground surface settlement on the order of 1.5 inches or less. To minimize potential damage to the proposed residential structures caused by liquefaction, all project construction will comply with the latest California Building Code (CBC) standards, as required by the City of Arcata General Plan and Land Use Code. In addition, the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) contains a recommendation for minimizing potential

liquefaction impacts which states, "…*structures should be designed to accommodate approximately 1½ inch of total settlement and ¾ inch of differential seismic settlement across a horizontal distance of 50 feet*."

As described in Chapter 1 (Introduction) of the EIR, a stormwater system is proposed to be constructed on-site that will include an infiltration basin in the upper, southwest portion of the site. The design of the infiltration basin is shown on the Conceptual Engineering Plan prepared by Manhard Consulting (Appendix N). The infiltration basin is proposed to occur on the edge of the elevated portion of the site adjacent to a slope that is greater than 15%. The potential for destabilization of the slope next to the infiltration basin by directing stormwater runoff to this portion of the site was analyzed by Geocon Consultants, Inc. As stated in a 09/25/17 e-mail from Geocon Consultants, Inc., much of the slope on the western edge of the site will be rebuilt with engineered fill, which will mitigate the potential for slope instability. The grading recommendations in the Geotechnical Investigation are included in Section 6.5 (Appendix M; Pgs. 9-11). The requirement to comply with the recommendations of the Geotechnical Investigation (Appendix M) will be included as a condition of approval by the City of Arcata for the proposed project.

Therefore, the proposed project will not 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.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.1.7: Be Located on Expansive Soil, as Defined in Table 18-1-B of the Uniform Building Code (1994), Creating Substantial Risks to Life or Property.

Discussion:
Expansive soils possess a "shrink-swell" characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may occur over a long period of time due to expansive soils, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils.

As described above in the Environmental Setting, the Geotechnical Investigation completed by Geocon Consultants, Inc. (Appendix M) for the project, indicates that some of the soils encountered at the project site are considered to be expansive as defined by 2016 CBC (Expansion Index more than 20). The Geotechnical Investigation contains recommendations designed to minimize impacts related to expansive soils which assume that foundations for the project will derive support in properly compacted soils or competent native materials.

Therefore, with implementation of the recommendations from the Geotechnical Investigation prepared for the project (Appendix M), the proposed project will not create substantial risks to life or property associated with expansive soils.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.1.8: 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.

Discussion:
City of Arcata's wastewater sewage treatment is available for and will be used by the proposed project. No onsite waste disposal system will be required, and on-site wastewater treatment systems are not allowed within City limits per City ordinances.

Therefore, the project will not have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewer is not available for the disposal of waste water.

Determination:
Less than significant impact.

Mitigation:
None required.

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SECTION 4.2 HYDROLOGY AND WATER QUALITY

This section evaluates the potential impacts related to hydrology and water quality during construction and operation of the proposed project. To provide the basis for this evaluation, the Environmental Setting section describes the hydrological and water quality setting for the project area, including regional and local surface water and groundwater characteristics. Descriptions in this section are based on reviews of published information, reports, and plans regarding regional and local hydrology, climate, topography, and geology. The Regulatory Framework section defines the applicable regulations at the federal, state and local level. The Impact Analysis section establishes the thresholds of significance, evaluates potential hydrology and water quality impacts, and identifies the significance of impacts. Where appropriate, mitigation measures are presented to reduce potential impacts to a less-than-significant level.

ENVIRONMENTAL SETTING

Hydrology

Hydrology in the project area is influenced by Pacific Ocean weather patterns, Humboldt Bay, and the Janes Creek watershed. Generally, air temperature averages about 52 degrees Fahrenheit, and ranges from the low 30s to around 80 degrees. Average annual rainfall is approximately 38 inches per year, based on historic records for 1961 through 2015. Storms generated by the Pacific Ocean contribute high amounts of annual rainfall between October and March. In some years, additional significant rainfall occurs through April. During the remainder of the year, coastal marine influences result in fog that at times is dense enough to generate moisture in the form of mist. Seasonal rainfall is often high in intensity and results in surface water runoff. Consequently, stream flows are typically high in the winter, and many of Arcata's small streams have little flow in late summer.

The Janes Creek watershed emanates from the coastal mountains northeast of the Arcata Bottom. The total watershed area is about 3.9 square miles. Janes Creek drains approximately 2,500 acres through forest, an industrial complex, urban areas, and low elevation pasture before discharging into Arcata Bay. The upper watershed of Janes Creek above the City of Arcata is comprised of steep uplands with mature redwood forests and limited home site developments. The lower portion of the watershed winds through residential and commercial properties and has a low stream gradient, meanders widely, and has a streambed composed of very fine sediments. Pasturelands and urban development influence much of this portion of the waterway by way of point and nonpoint source pollution. Channel clogging is a problem in the creek; it is caused by sedimentation, flat topography, and particular types of vegetation such as Reed canary grass. Janes Creek flows through numerous culverts within the City and ultimately into Arcata Bay.

Recent restoration work has removed invasive species along the lower reaches of the creek and has restored the Janes Creek estuary, including the removal of tide gates and planting of native species. According to the Resource Conservation and Management Element (Chapter 4) of the City of Arcata General Plan, Janes Creek is a Class 1 fish-bearing stream and protected watercourse. Janes Creek and on-site wetlands contribute to the project's surface water hydrology and are discussed below.

Surface Water Hydrology

Most of the project site is an elevated terrace above the Arcata Bottom that has a slight slope to the west and does not contain any significant surface water features. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, and a small wetland area. The project site generally drains to the west where it enters the drainage ditch along the western boundary of the site. Stormwater from the project site is ultimately directed to a tributary to Janes Creek, referred to as Sunset Creek, several hundred feet southwest of the site.

The ditch on the western portion of the site is irregularly sloped which causes the ponding of water in the winter. A wetland delineation of the project site was conducted by Natural Resource Management Corporation in the winter and spring of 2016 and spring of 2017, which identified approximately 0.21 acres (9,148 square feet) of two- and three-parameter wetlands on the western portion of the project site within and adjacent to the drainage ditch (Appendix P).

To the northwest of the project site is a section of Janes Creek which is included in the Janes Creek Meadows Open Space area. This open space area contains both a tributary to the creek and the main stem. The tributary runs along the northern property line of the project site and runs into the main stem approximately 450 feet to the northwest of the project site boundary. According to the Flood Insurance Rate Map (FIRM) panel 06023C0689F, revised by FEMA November 4, 2016, the project site does contain Zone AE floodplain along the western edge of the site. However, the topographic survey prepared by Manhard Consulting (2016), indicates the project site is above the mapped floodplain elevation of 30 feet.

Groundwater

Important groundwater resources in Arcata include several aquifers under the Mad River delta that is now the Arcata Bottom. Shallow aquifers in the low areas west and north of downtown Arcata supply numerous wells that are generally less than 100 feet deep. Exploration by the City of Arcata for a deep, confined aquifer that could serve as a municipal water source found inadequate flow at a test well on the south end of town. Explorations by the City in north Arcata, near Heindon Road, found a shallow aquifer at depths up to 50 feet, a second aquifer at depths of 130-140 feet, and a confined deep aquifer at depths of 150-190 feet.

Geocon Consulting, Inc. conducted a Geotechnical Investigation (Appendix M) of the project site which encountered groundwater at depths as shallow as approximately 16.5 feet in some of the soil borings.

Stormwater Drainage

Due to the inherent characteristics of the City's drainage system, Arcata is subject to relatively frequent and extensive high flows in several of its small creeks. Arcata creeks originate on the hillsides, so rainfall rapidly drains to creeks and flows down to the center of town. The center of town is also relatively flat, which causes creeks to slow down, deposit sediment, and widen in developed areas that are most susceptible to flood damage. The accumulation of sediment and debris, as well as downstream tide gates, reduces the ability of creeks to convey high flows. Urbanization causes higher runoff rates and reduces the wetland areas available for high flows to infiltrate into groundwater or be detained. Also, creeks and riparian areas have been extensively straightened and altered with the presence of culverts. Such modifications have reduced in-channel storage for floods, causing floodwaters to accumulate more quickly.

As noted above, most of the project site is an elevated terrace above the Arcata Bottom that has a slight slope to the west and does not contain any significant surface water features. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, and a small wetland area.

The project site generally drains to the west where it enters the drainage ditch along the western boundary of the site. There is a drainage inlet and culvert that drains surface runoff from the elevated portion of the site into the southern portion of this ditch and an adjacent depressional area (see Figure 4.2A). The drainage ditch is approximately 350 feet long by 5 feet wide and is mostly filled with sediment. The ditch has two drainage inlets which direct the runoff to an 18-inch concrete pipe that heads west towards Maple Lane (see Figure 4.2B). Stormwater from the project site is directed to a tributary to Janes Creek, referred to as Sunset Creek, several hundred feet southwest of the site. During long-term operation of the project, the applicant will be responsible for maintenance of the stormwater infrastructure on the project site.

Most of the project site contains compacted gravel surfaces and limited vegetation cover. After significant rainfall events, water collects on portions of the site (see Figure 4.2C). This is perhaps due to decreased infiltration from the compacted gravel fill.

Flooding

Janes Creek presents flooding problems because it flows through many urbanized areas, is channelized in several sections, and has sediment accumulation. The City’s ability to relieve these problems is limited because little land is available for flood storage or other mitigating improvements. However, most of Arcata is not subject to extensive major floods because it is not near a major river and because high creek flows drain into Arcata Bay.

Figure 4.2A Drainage Inlet on the Elevated Portion of the Site

Figure 4.2B Drainage Ditch and 18-inch Concrete Pipe Inlet

Figure 4.2C Ponding of Water on the Elevated Portion of the Site

The Federal Emergency Management Agency (FEMA) has developed mapping of Special Flood Hazard Areas (SFHA) in the City of Arcata, which participates in the National Flood Insurance Program (NFIP). An SFHA is defined as an area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any give year. Special Flood Hazard Areas in the City of Arcata include the following:

- A small area between Giuntoli Road and the Mad River;
- Janes Road and much of the neighborhoods east of Janes Road near Mad River Hospital;
- A corridor of about one block on either side of Janes Creek from where West End Road crosses under U.S. 101 southwest through the city;
- The Larry Street neighborhood in the Arcata Bottom;
- Most of the land south of Samoa Boulevard except for most of neighborhoods on E Street to I Street; and
- Most of the land between Old Arcata Road and Humboldt Bay, including U.S. 101.

The City of Arcata has developed a Long Term Drainage Maintenance Program which covers over seventy sites in the City including portions of Janes Creek and its tributaries. Implementation of this program will allow the City to conduct as needed maintenance activities including removing obstructions from drainage swales and culverts to restore capacity and reduce localized flooding. This program also includes improvements to existing drainage infrastructure such as widening and relocating drainage swales, culvert replacement, grading to alter drainage patterns and reduce seasonal flooding, and stream bank stabilization. The drainage swale on the western boundary of the project site is identified as Site #14 in the mapping (Sheet 3 of 10) for the City's Long Term Drainage Maintenance Program (City of Arcata, 2016d).

Flooding does not occur on the elevated portion of the project site either in response to major rainstorms or infrequent, extreme high ocean tides, or coincident with regular high Humboldt Bay tides. According to the Flood Insurance Rate Map (FIRM) panel 06023C0689F, revised by FEMA November 4, 2016, the project site does contain Zone AE floodplain along the western edge of the site. However, the topographic survey prepared by Manhard Consulting (2016), indicates the project site is above the mapped floodplain elevation of 30 feet. As indicated in the Village Scoping Meeting Follow-Up document (Appendix B), the residential properties along Maple Lane and Stromberg Avenue have been previously impacted by flooding on the western portion of the project site. The proposed residential development will occur on the elevated portion of the site (~50 feet) and outside of the 100-Year Floodplain. Based on the project's location and design, it is not anticipated that the proposed project will contribute to existing flooding hazards in the project area.

The Mad River also poses a flood hazard for Arcata. The highest Mad River flood on record was in 1964, with an estimated flow of 81,000 cubic feet per second. This flood flowed across the Arcata Bottom into Arcata Bay and caused significant damage, although little damage was within the City limits (Flood Insurance Study, Federal Emergency Management Agency, 2015).

The worst-case flood of the Mad River would occur if there was a catastrophic failure of the Matthews Dam. Studies of how the resulting flood wave would travel down the river and onto the coastal flood plain in Arcata indicate that this event would result in temporary inundation of the Arcata Bottom and several neighborhoods on the west side of the City. The western edge of the project site is mapped in Humboldt Bay Municipal Water District's (HBMWD) "Emergency Action Plan for R.W. Mathews Dam" as being within the anticipated maximum reach of floodwaters resulting from catastrophic failure of the dam, in conjunction with winter floods the size of those occurring in 1964. Although, the western edge of the project site is outside of the inundation area for the "*sunny day summer flow conditions with piping failure*" (HBMWD, 1999, Inundation Map – Sheet 12 of 13).

Storm tides pose another flood risk to parts of Arcata. The 100-year storm tide elevation in Arcata Bay has been estimated as 6.5 feet above normal elevations. The FEMA 100-year flood maps indicate that such coastal floods are expected to inundate only the immediate vicinity of tidal waters and none of Arcata's neighborhoods.

Water Quality

Municipal Water Supply

Arcata's municipal water supply is purchased from Humboldt Bay Municipal Water District (HBMWD) (see section 2.11 [Utilities and Service Systems] for a discussion of the municipal water supply system). The HBMWD treats the water with chlorine to kill disease organisms. Before distributing the water, the City of Arcata fluoridates it and boosts the chlorine concentration to prevent bacteria growth in distribution pipes. This water supply is of high quality, with all applicable drinking water standards being met consistently. During high flows in the Mad River, the turbidity of the water increases, which requires higher chlorination to

guarantee complete disinfection; therefore, during wet weather Arcata tap water can be slightly cloudy and have more chlorine.

Wastewater Collection & Disposal

The project site is located within the northern central portion of the City of Arcata and is currently connected to the City's municipal wastewater treatment system. As described in Section 2.11 (Utilities and Service Systems) of the EIR, there is an existing sewer line along St. Louis Road that serves the project site. Arcata's wastewater collection system consists of pipes, manholes, and lift stations. The collection system drains via gravity, to eight lift stations. Wastewater is pumped from the lift stations to the wastewater treatment facility. There are numerous studies illustrating the degree of infiltration and inflow into the City's collection system. Infiltration and inflow is water flowing into the collection system from an outside source such as groundwater or surface drainage. This condition is especially prevalent during the peak wet weather season.

Wastewater is treated by the City's wastewater treatment plant and marsh systems. The wastewater treatment plant facilities include headworks, primary clarifiers, oxidation ponds, treatment wetlands, enhancement wetlands, and chlorine disinfection. Solids removed in the primary clarifiers are treated in anaerobic digesters and solids drying beds (City of Arcata, 2016a). The treatment plant is designed for an average dry weather flow of 2.3 million gallons per day, and a peak wet weather flow of 5.0 million gallons per day. The City is currently at approximately 70 percent of dry weather design flow (City of Arcata, 2016c). The City regulates wastewater disposal, including industrial pretreatment standards, according to Chapter 2, Title VII of the Arcata Municipal Code. Wastewater treatment at the Arcata plant includes the following steps:

- Primary treatment using clarifiers (settling tanks) to remove solids and organic matter;
- Secondary treatment using oxidation ponds to remove additional organic matter;
- Additional organic matter and nutrient removal using treatment marshes;
- Mixing with outflow from the marshes at the Arcata Marsh and Wildlife Sanctuary; and
- Chlorination to kill disease organisms, followed by removal of the chlorine (which is toxic to aquatic life).

Under normal conditions, treated wastewater is discharged to Arcata Bay after flowing through the Arcata Marsh. About half of the Arcata Marsh outflow is returned to the treatment plant for mixing, and the rest discharged into Arcata Bay.

Arcata's wastewater treatment system must comply with regulatory requirements established by its National Pollutant Discharge Elimination System (NPDES) permit issued by the California Regional Water Quality Control Board. As described in the City's Wastewater Treatment Facility Improvements Project Report (2016a), effluent monitoring data shows that there have been ongoing exceedances of discharge limits on total suspended solids (TSS), biochemical

oxygen demand (BOD, a measure of biodegradable organic matter), pH, dichlorobromomethane, chronic toxicity, chlorine, and fecal coliform since 2004.

In 2012, the City's wastewater treatment system began operating under a new NPDES permit that specifically addressed several long-term issues regarding disinfection, treatment units, and outfalls. The new permit enabled changes to be made to improve wastewater treatment, protect beneficial uses, increase energy efficiency, reduce chemical usage, and reduce the potential for permit violations. Improvements to the City's wastewater treatment system that are required as part of the 2012 NPDES permit includes the following:

1) Conversion of the flow configuration to a single pass disinfection system and discharge through a new outfall of 5.9 mgd. Piping, screening, pumps, and pump station modifications will be required to switch to single pass flow through the system.
2) Construction of a new UV disinfection system for the disinfection of secondary effluent up to 5.9 mgd. The UV process will eliminate the disinfection by-product formation and permit violations that are occurring with the use of chlorine.

In response to the new permit requirements, the City initiated a Facility Plan and plant improvement project (2016a) to address several issues including:

- Ongoing NPDES permit violation and regulatory compliance.
- Need to repair or rehabilitate (R&R) aging infrastructure and address deferred maintenance.
- Providing reliable capacity and treatment for both wet and dry weather flows now and into the future.

The facility plan provides overall direction for current permit compliance as well as a future Capital Improvements Program (CIP) needed to maintain the treatment facility assets, repair, and rehabilitate existing assets, and modernize the facility to meet current levels of service. As part of the facility plan, the wastewater treatment plant facilities were evaluated for their overall condition. The findings from the assessment indicate that a majority of the mechanical equipment has exceeded its expected life, and that major structures are also starting to approach the end of their useful life. Based on the conditions assessment and capacity evaluations conducted as part of the Facility Plan, numerous facilities will need to be improved in the next ten years based on their expected useful life and current condition. Facilities that will be improved as part of this plan include the headworks, primary clarifiers, anaerobic digesters, and sludge heating/mixing systems. Other improvements to the wastewater treatment system that are proposed in the Facility Plan include the following:

1) Removal of solids and vegetation from the oxidations ponds and treatment wetlands to improve treatment and hydraulic capacity.
2) Construction of a new treatment wetland to increase the capacity of the treatment wetlands from 1.8 mgd to 2.3 mgd.

3) Vegetation removal and the installation of new baffles and new inlet/outlet structures in the enhancement wetlands to improve treatment and hydraulic efficiency and capacity.
4) Replacement of aging pump stations to increase capacity.
5) Augmentation of secondary treatment capacity to address BOD capacity shortfalls.

The proposed project, which includes upzoning the project site to Residential High Density (RH), will be required to pay standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, which will be used to fund some of the proposed improvements to the City's wastewater treatment system.

Surface Water Quality

Surface water quality at the project site is influenced by: the Janes Creek watershed, tidal waters circulating from Humboldt Bay, local surface runoff and shallow groundwater seepage from adjacent land uses, and atmospheric deposition. The quality of Humboldt Bay tidal waters is in turn dependent on such significant hydrologic and biological parameters as watershed inputs, complex circulation patterns in the bay, wind-driven mixing and resuspension of fine-grained sediments, time-varying salinity gradients and water temperature, and nutrient loading.

Contaminants carried by runoff on- and off-site derive from point or non-point sources. Point sources include easily verifiable discharge points such as sewage treatment plants, industrial outfalls, and marinas. Non-point sources represent diffused contamination over wider areas, including cultivated and urbanized lands. Typical contaminants in such non-point source urban runoff include heavy metals (e.g. mercury, lead, zinc, copper, chromium, nickel), nutrients, pesticides and herbicides, PCBs and related compounds, sediments, and oil and grease.

The City has, to a limited extent, investigated water quality in Arcata's creeks and storm drains, including City-funded studies conducted by Humboldt State University (HSU), and informal studies conducted by HSU engineering students. These studies indicate generally high water quality with exceptions such as the following:

- Fecal coliform bacteria counts are high at some times and locations. This is from wastewater being improperly discharged to storm drains, sewer leaks, use of riparian areas by domestic animals, or runoff from grazing lands.
- Dissolved oxygen concentrations are very low in the North Fork Janes Creek outflow from Aldergrove Marsh. This problem appears to be caused by biological activity in the marsh and low re-aeration in the creek due to its low velocity.
- Historic development/disturbances (logging, landslides, grazing activity, grading, etc.) near streams appear to be the major sediment sources in Arcata's streams. Increased flooding due to urbanization also contributes to creek bank damage and sedimentation.

All of Arcata's wastewater and most of its stormwater runoff are eventually discharged into Arcata Bay. Bay water quality concerns focus on aquaculture. The California Health Services

Department has the authority to stop the commercial oyster harvest if there is any evidence that oysters could be contaminated by pollution. Coliform bacteria are used as indicators of such contamination. Commercial oyster harvesting has been closed when pollutants have leaked into Arcata storm drains or creeks. To address this problem, the City has initiated studies of travel times and dilution in City creeks to give the State more information for determining whether pollution incidents are likely to affect oyster beds, and to avoid unnecessary harvest closures. The City is also working with the State to develop methods for sampling bay water quality more efficiently during pollution events in order to minimize the occurrence, duration, and cost of future shellfish harvest closures.

Groundwater Quality

Like most urban and industrial areas, Arcata has numerous small groundwater contamination sites. The Humboldt County Division of Environmental Health (HCDEH) and the North Coast Regional Water Quality Control Board (NCRWQCB) have identified approximately 60 sites of known groundwater contamination within Arcata, with most still under investigation or cleanup. Sites where gasoline and other petroleum products have been handled (e.g., industrial sites, school and government facilities, the Arcata Community Recycling Center, and most gas stations) and have had tank leaks and spills with resulting petroleum and heavy metals contamination. Contamination from wood preservatives (e.g., pentachlorophenol (PCP) and tetrachlorophenol (TCP)) occurs at lumber mill sites. Business and industrial sites have contamination from solvents and heavy metals. Redevelopment of industrial areas is likely to uncover additional sites. Contamination at these sites in Arcata is generally local; no extensive groundwater contaminant plumes are known and the municipal water supply is not threatened.

A Phase I Environmental Site Assessment (Appendix I) and Phase II Investigation Report (Appendix J) were conducted on the project site to test for potential soil and groundwater contamination that could affect potential residential development. According to the Phase II Investigation, no groundwater samples had detectable levels of wood preservatives (TCP or PCP), dioxins, arsenic, chromium, or copper.

REGULATORY FRAMEWORK

Federal

Clean Water Act

The federal Clean Water Act (CWA), enacted by Congress in 1972 and amended several times since, is the primary federal law regulating water quality in the U.S. and forms the basis for several State and local laws throughout the country. The CWA established the basic structure for regulating discharges of pollutants into the waters of the U.S. The CWA gave the U.S. Environmental Protection Agency (U.S. EPA) the authority to implement federal pollution

control programs, such as setting water quality standards for contaminants in surface water, establishing wastewater and effluent discharge limits for various industry categories, and imposing requirements for controlling nonpoint source pollution. At the federal level, the CWA is administered by the U.S. EPA and U.S. Army Corps of Engineers. At the State and regional levels in California, the Act is administered and enforced by the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs).

Section 303(d) of the CWA requires state governments to present the U.S. EPA with a list of "*impaired water bodies*," defined as "those water bodies that do not meet water quality standards, even after point sources of pollution have been equipped with the minimum required levels of pollution control technology."

Sections 404 and 401 of the CWA require permitting and State certification for construction and/or other work conducted in "waters of the United States." Such work includes levee work, dredging, filling, grading, or any other temporary or permanent modification of wetlands, streams, or other water bodies.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps identifying which land areas are subject to flooding. The maps provide flood information and identify flood hazard zones in each community. The design standard for flood protection is established by FEMA, with the minimum level of flood protection for new development determined to be the 1-in-100 annual exceedance probability (i.e. the 100-year flood event).

According to FEMA regulations, "*a revision of floodplain delineation based on fill must demonstrate that such fill has not resulted in a floodway encroachment*" (44 CFR 65.5 (a) (7)). The State of California model ordinance defines encroachment as "*the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain which may impede or alter the flow capacity of a floodplain*." The Floodplain Management and Protection of Wetlands section of the Federal Code of Regulations (44 CFR Section 9.2) states that it is FEMA's environmental review policy to:

1. Avoid long- and short-term adverse impacts associated with the occupancy and modification of floodplains and the destruction and modification of wetlands;
2. Avoid direct and indirect support of floodplain development and new construction in wetlands wherever there is a practicable alternative;
3. Reduce the risk of flood loss;
4. Promote the use of nonstructural flood protection methods to reduce the risk of flood loss;
5. Minimize the impact of floods on human health, safety, and welfare;
6. Minimize the destruction, loss, or degradation of wetlands;
7. Restore and preserve the natural and beneficial values served by floodplains;
8. Preserve and enhance the natural values of wetlands.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate industrial and municipal discharges to surface waters of the United States. NPDES permit regulations have been established for broad categories of discharges including point source municipal waste discharges and nonpoint source stormwater runoff. A NPDES permit is required when proposing to, or discharging of, waste into any surface water of the state. For discharges to surface waters, these requirements become a federal NPDES Permit from the RWQCB covering the project area.

Federal Antidegradation Policy

The federal Antidegradation Policy set forth in 40 CFR §131.12. SWRCB Order No. 68-16 incorporates the federal Antidegradation Policy into the state policy for water quality control and ensures consistency with federal CWA requirements. This federal regulation establishes a three-part test for determining when increases in pollutant loadings or other adverse changes in surface water quality may be permitted:

- Existing instream water use and level of water quality necessary to protect the existing uses shall be maintained and protected.
- Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife, and recreation in and on the water, that quality shall be maintained and protected unless the state finds after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved, the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.
- Where high quality waters constitute an outstanding National resource, such as waters of National and State Parks, wildlife refuges, and waters of exceptional recreational or ecological significance, water quality shall be maintained and protected.

The federal Antidegradation Policy serves as a catch-all water quality standard to be applied where other water quality standards are not specific enough for a particular waterbody or where other water quality standards do not address a particular pollutant.

State of California

California State Water Resources Control Board

As of July 1, 2015, all construction projects over one acre within a designated small Phase II municipal separate storm sewer system (MS4) must comply with both the state Construction General Permit and Phase II Small MS4 General Permits, as outlined below:

- NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION AND LAND DISTURBANCE ACTIVITIES ORDER NO. 2009-0009-DWQ NPDES NO. CAS000002 (Construction General Permit or CGP)

  Post Construction Permit runoff standards do not need to be met where a project is subject to MS4 Permit Post-Construction Standards. In the event MS4 Requirements are not used, the CGP calls for replicating the pre-project water balance for the 85th percentile, 24-hour runoff event. Regardless of the MS4 requirements, a CGP must be obtained and a construction Storm Water Pollution Prevention Plan (SWPPP) must be prepared and submitted to the State Waterboard, via SMARTS, with the appropriate Permit Registration Documents, Notice of Intent and appropriate fee. Appropriate best management practices (BMPs) and site monitoring must be outlined in the SWPPP and implemented onsite.

- WATER QUALITY ORDER NO. 2013 – 0001 – DWQ NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT NO. CAS000004 WASTE DISCHARGE REQUIREMENTS (WDRs) FOR STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4 Permit)

  Projects that create or replace 5,000 ft^2 or more impervious surface are considered Regulated Projects under this Permit. Regulated Projects must use Site Design Measures, as defined in the Permit, to capture the maximum amount of the 85th percentile, 24-hour storm runoff event. Any runoff that cannot be captured by Site Design Measures must then be routed to an appropriate bioretention facility. Additionally, for projects creating or replacing over one acre of impervious surface, the MS4 Hydromodification Standards must be met. For this geomorphic province, the post-project runoff shall not exceed the estimated pre-project runoff for the 2-year, 24-hour storm event.

In order to help guide its communities to meet these MS4 low impact development (LID) requirements, Humboldt County developed the Humboldt County Low Impact Development Stormwater Manual (HLIDSMS). The Preliminary Stormwater Management Report prepared by Manhard Consulting (Appendix N) details the site design measures that will be incorporated into the proposed project to manage stormwater runoff at the site in compliance with the MS4 requirements.

North Coast Regional Water Quality Control Board, Basin Plan

The Porter-Cologne Water Quality Control Act of 1967, Water Code section 13000 et seq., requires the State Water Resources Control Board (SWRCB) and the nine Regional Water Quality Control Boards (RWQCBs) to adopt water quality criteria to protect State waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The criteria for the project area are contained in the Basin Plan. The Basin Plan, adopted by the California Regional Water Quality Control Board, North Coast Region, and amended in 2012, establishes a number of policies regarding discharges of wastewater. The Basin Plan also includes a Water Quality Control Plan for the Enclosed Bays and Estuaries of California, and a specific Action Plan for Humboldt Bay (NCRWQCB, 2011). The Action Plan for Humboldt Bay requires surveillance and monitoring, review and assessment of land use activities, and Regional Board coordination with other state and local agencies with regard to protecting water quality in Humboldt Bay. In order to assure protection of waters in Humboldt Bay, the Regional Board closely monitors construction and industrial activities that could potentially impact water quality.

California Department of Fish & Wildlife

Section 1601 of the California Fish and Wildlife Code requires an agreement between the Department of Fish and Wildlife and a public agency proposing to substantially divert or obstruct the natural flow or effect changes to the bed, channel, or bank of any river, stream, or lake. The agreement is designed to protect the fish and wildlife values of a river, stream, or lake.

City of Arcata

Arcata General Plan

The City of Arcata General Plan contains guidelines for hydrology and water quality within the Resource Conservation and Management Element, Public Facilities & Infrastructure Element, and Public Safety Element. Table 4.2-1 contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 4.2-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
RC-2 Stream Conservation and Management	Enhance and maintain the biological integrity of entire streamcourses (headwaters to mouth), and their associated riparian habitats, as natural features in the City's landscape.	RC-2a-2d, 2g
RC-3 Wetlands Management	To protect existing wetland areas and their functional capacities, maintain "no net loss" standard, restore degraded wetlands, enhance wetland functions, and create additional wetland areas to replace historical losses.	RC-3b-3e, 3h, 3k
RC-7 Water Resources	Manage Arcata's water resources from a watershed	RC-7a, 7c

Policy	Objective	Applicable Sub-Policies
Management	perspective, to maintain surface and subsurface water quality and quantity. Runoff will be managed for the benefit of aquatic habitats.	
PF-3 Stormwater Management	Implement the City's drainage master plan to utilize natural drainage systems; minimize increases in stormwater runoff, flooding, and erosion; maintain the integrity of stream hydrology; reduce pollutant loads; and acquire easements and properties for effective drainage management.	PF-3a - 3c
PS-4 Flood Hazards	Protect current and future populations and property from flood hazards. Assure that new development within floodplains does not proceed until appropriate mitigation measures are incorporated into development plans.	PS-4b-4d, 4f - 4h

Arcata Land Use Code

The City of Arcata Land Use Code addresses hydrology and water quality within the Land Use Code in Article 6 (Site Development Regulations). Table 4.2-2 contains a list of requirements from the Arcata Land Use Code that are applicable to the proposed project.

Table 4.2-2 Applicable Land Use Code Requirements

Policy	Objective	Applicable Sub-Policies
9.64 (Grading, Erosion, and Sediment Control)	Establishes minimum standards and regulations for grading activities as well as construction and post-construction runoff control criteria to prevent unreasonable or unnecessary erosion and sediment production and related degradation of the City's stormwater drainage systems.	9.64.010 - 9.64.080
9.66 (Urban Runoff Pollution Control)	Establishes provisions to ensure that activities within Arcata add no new pollutants to waterways and reduce present pollutant levels and sediments which are carried to our area and regional waterways through stormwater runoff.	9.66.010 - 9.66.070

Arcata Municipal Code

The City of Arcata Municipal Code addresses hydrology and water quality within Title VIII (Building Regulations). Table 4.2-3 contains a list of requirements from the Arcata Municipal Code that are applicable to the proposed project.

Table 4.2-3 Applicable Building Regulations Requirements

Policy	Objective	Applicable Sub-Policies
Chapter 4 (Flood Hazard Mitigation Standards)	Establishes provisions intended to protect public health, safety, and general welfare, and to minimize public and private losses due to flood conditions.	8405(A)(3) and 8405(F)

Drainage Master Plan

The City prepared a Drainage Master Plan (1997) to guide stormwater management which includes a hydrological analysis, drainage management alternatives, operational plan, needs assessment, and capital improvement program. At the time that the Drainage Master Plan was completed, there were 900 acres of impervious surface citywide (buildings and paved area), 40 percent of which is the public street system. The Master Plan projected that, at general plan buildout, there would be 1,582 acres of impervious surface Citywide.

Long Term Drainage Maintenance Program

As described in the Environmental Setting, the City of Arcata has developed a Long Term Drainage Maintenance Program which is currently being reviewed by regulatory agencies with jurisdiction over the proposed maintenance activities. The program covers over seventy sites in the City including portions of Janes Creek and its tributaries. Implementation of this program will allow the City to conduct as needed maintenance activities including removing obstructions from drainage swales and culverts to restore capacity and reduce localized flooding. This program also includes improvements to existing drainage infrastructure such as widening and relocating drainage swales, culvert replacement, grading to alter drainage patterns and reduce seasonal flooding, and stream bank stabilization (City of Arcata, 2016d).

Storm Water Management Program

The City of Arcata prepared a Storm Water Management Program (SWMP) in response to State Water Resources Control Board (SWRCB) Water Quality Draft Order No. 2003 – 0005 – DWQ1 (GENERAL PERMIT NO. CAS000004) for National Pollutant Discharge Elimination System (NPDES) Phase II. The program covers the eleven square-mile area of the City of Arcata. Although none of the small urban streams in or near the City have been identified as "impaired" by the 303(d) list, the Mad River is listed as impaired due to temperature, sediment, turbidity, and siltation. Humboldt Bay, which receives Arcata runoff, is listed as "*impaired*" by the State of California for PCB's (City of Arcata, 2005).

The City's SWMP was derived from ongoing City programs that have been enhanced to meet the requirements of the SWRCB. The goal of the SWMP is to protect the health of the recreational public and the environment, meet Clean Water Act mandates through compliance with Phase II NPDES Permit requirements and applicable regulations, and foster heightened public involvement and awareness. Water quality monitoring has identified bacteria, nutrients, and sediment as pollutants of concern. Storm drains typically flow into creeks that have already

passed through a variety of land uses, including natural, agricultural, urban, and industrial, and in some cases, through more than one permit jurisdiction. The City is faced with the challenge of requiring and implementing controls to reduce the discharge of pollutants in stormwater runoff to the technology-based standard of "*Maximum Extent Practicable*" (MEP) as required by § 402(p)(3)(B)(iii) of the Clean Water Act, 33 U.S.C. § 1342(p)(3)(B)(iii) (City of Arcata, 2005).

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if it meets any of the following criteria.

If the project would:

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies, or interfere substantially with groundwater recharge, such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-site or off-site.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate of surface water runoff in a manner that would result in flooding on-site or off-site.
- Create or contribute runoff that would exceed the capacity of the existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map.
- Place within the 100-year flood hazard area structures that would impede or redirect flood flows.
- Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Inundation by seiche, tsunami, or mudflow.

Proposed Project

Finding 4.2.1: Violate any Water Quality Standards or Waste Discharge Requirements.

Discussion:
The surface water features on the project site include a drainage ditch and wetland area on the lower elevation western boundary of the site which ultimately drains to Janes Creek. Water quality in the Janes Creek watershed is influenced by stormwater runoff from a variety of land uses. It is reasonable to assume that the water quality in the vicinity of the project site is typical of the water quality in other residential and industrial areas.

Construction Impacts
Construction of the proposed project at the site will require clearing, grading, paving, utility installation, building construction, and the installation of landscaping, which would result in the generation of potential water quality pollutants such as silt, debris, chemicals, paints, and other solvents with the potential to adversely affect water quality. In addition, stormwater discharge may include debris, particulate, and petroleum hydrocarbons as a result of improper storage of construction materials, improper disposal of construction wastes, discharges resulting from construction dewatering activities, and spilled petroleum products. As such, short-term water quality impacts have the potential to occur during construction of the proposed project in the absence of any protective or avoidance measures.

Pursuant to the requirements of the State Water Resources Control Board (SWRCB) and the City, a Construction General Permit (CGP) will be required to be obtained for the proposed project. A CGP is required for all projects that include construction activities and/or excavation that would disturb at least one acre of total land area. The SWRCB CGP will require the preparation of a Stormwater Pollution Prevention Plan (SWPPP) which documents the stormwater dynamics at the site, the best management practices (BMPs) and water quality protection measures that are used, and the frequency of inspections. BMPs are activities or measures determined to be practicable, acceptable to the public, and cost effective in preventing water pollution or reducing the amount of pollution generated by non-point sources. Implementation of the SWPPP will ensure that water quality is protected during construction activities.

The SWPPP for the proposed project includes, but is not limited to, the following BMPs: 1) silt fences will be installed along the western edge of the property to ensure stormwater runoff and sediment does not enter the drainage ditch that leads to Janes Creek; 2) the drainage inlet on the elevated portion of the site will be protected with sand bags, fiber rolls, or other similar protective measures; 3) potential erosion in concentrated flow paths will be controlled by applying erosion control blankets, check dams, erosion control seeding, or alternate methods; and 4) seeding and mulching will provide immediate protection to exposed soils where construction will cease for more than 14 days and over the winter months.

Operational Impacts

For the purpose of estimating types and concentrations of pollutants that may come in contact with stormwater, the proposed project would be classified as a residential development. Stormwater that comes into contact with driveways, parking lots, and roadways is the primary pollutant source in runoff. Gasoline, grease, oil, and their constituents such as benzene and toluene, are commonly released through auto emissions, spills, leaks, gasoline tanks, oil pans, and crankcases. Lead, zinc, pyrene and other metals and hydrocarbons are components of asphalt and tires, which degrade over time and release their constituents to stormwater. Brake linings and clutch facings may wear, releasing copper and possibly asbestos. Landscaped areas may contribute hydrocarbons and pesticides, such as herbicides, insecticides, and fungicides, to stormwater runoff. Landscaping fertilizer contains nutrients, particularly nitrogen, potassium, and phosphorous. The unpaved, landscaped areas may also be a source of sediment and organic debris in stormwater. The use of native planting can reduce potential impacts from landscaping areas since they require significantly less fertilizer and pesticide treatment. Weathering of buildings over time releases building material constituents. Heavy metals, particularly copper, lead, zinc, and chromium are released from flashings, shingles, gutters and downspouts, galvanized pipes, and metal plating. Paints and other wood preservatives may also contain hydrocarbons.

The proposed student housing development will be connected to the City's wastewater system and does not involve the use of on-site waste water treatment systems. The City is required to adhere to the discharge requirements of the North Coast Regional Water Quality Board (NCRWQCB) for its wastewater treatment plant. In 2012, the City's wastewater treatment system began operating under a new NPDES permit that specifically addressed several long-term issues regarding disinfection, treatment units, and outfalls. The new permit enabled changes to be made to improve wastewater treatment, protect beneficial uses, increase energy efficiency, reduce chemical usage, and reduce the potential for permit violations. As described in Section 2.11 (Utilities and Service Systems) of the EIR, the City initiated a Facility Plan and plant improvement project (2016a) which proposes a variety of improvements to the wastewater treatment system to increase treatment capacity and prevent the exceedance of discharge limitations. The City of Arcata also conducted an analysis of wastewater treatment capacity (Appendix K) which determined there is sufficient capacity for the current potential and approved/planned residential development projects in the City. However, as described above, the facilities must be improved to meet the demand of both current and future population. The proposed project, which includes upzoning the project site to Residential High Density (RH), will be required to pay standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, which will be used to fund some of the proposed improvements to the City's wastewater treatment system.

In addition, discharge/pre-treatment requirements for development projects are regulated by the City of Arcata subject to information submitted on the City's wastewater survey/questionnaire. This will be required as part of the review of the proposed residential development to describe pre-treatment/discharge equipment and system design so that discharges will not impact the City's wastewater system and result in violations of waste discharge standards.

The increase in development and impervious surfaces as a result of the proposed project and the associated increase in stormwater runoff will likely increase the presence of sediment and urban pollutants in stormwater runoff. Stormwater drainage facilities for the development are required to be designed to meet both State and local stormwater regulations which are focused on maintaining or improving a site's pre-development runoff characteristics. In order to help guide its communities to meet the MS4 low impact development (LID) requirements, Humboldt County developed the Humboldt Low Impact Development Stormwater Manual (HLIDSM). Since the proposed project will create and replace more than one acre of impervious area, it is subject to the hydro-modification requirement of the HLIDSM. As described in the Preliminary Stormwater Management Report (Appendix N), compliance with State and local stormwater regulations will be achieved by the on-site management of stormwater through low impact development (LID) site design measures including tree planting, soil quality improvement and maintenance, rain/rock gardens, native plantings, bioswales, impervious area disconnection, and an underground infiltration basin. The proposed stormwater improvements will reduce the volume and rate of run-off and provide for greater infiltration, evaporation, and runoff quality treatment without violating any water quality standards or waste discharge requirements (see additional discussion under Findings 4.2.3 to 4.2.5).

A Phase I Environmental Site Assessment (Appendix I) and Phase II Investigation Report (Appendix J) were conducted on the project site to test for potential soil and groundwater contamination that could affect potential residential development. According to the Phase II Investigation, no groundwater samples had detectable levels of wood preservatives (TCP or PCP), dioxins, arsenic, chromium, or copper.

Therefore, the proposed project will not violate any water quality standards or waste discharge requirements.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.2.2: Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge such that there Would be a Net Deficit in Aquifer Volume or a Lowering of the Local Groundwater Table Level (e.g. the Production Rate of Pre-Existing Nearby Wells would Drop to a Level which would Not Support Existing Land Uses or Planned Uses for which Permits have been Granted).

Discussion:
Domestic water would be provided to the project site by the City of Arcata. The majority of the City's water supply is purchased from the Humboldt Bay Municipal Water District (HBMWD) with a secondary source from the City-owned Heindon Well. The City of Arcata has an Urban

Water Management Plan (as required by the California Water Code) that defines the current and future capacity of the system. The City has currently 1.37 billion gallons of water available annually and by 2040, the City projects that water use will increase to 880 million gallons per year (City of Arcata, 2015). As such, the City of Arcata, with its present mix of water sources, possesses a significant surplus of capacity.

Due to the previous use of the site for industrial activities, the project site is composed mostly of compacted gravel surfaces of low permeability. Some of the proposed project features, including the stormwater improvements and landscaping areas, will result in more permeable soils due to the removal of compacted topsoil and soil treatment during site preparation and construction. However, the proposed project is not expected to result in any significant increase or decrease in volume of groundwater in the vicinity of the project area.

Therefore, the proposed project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.2.3: Substantially Alter the Existing Drainage Pattern of the Site or Area, including Through the Alteration of the Course of a Stream or River, in a Manner that would Result in Substantial Erosion or Siltation On-Site or Off-Site.

Discussion:
The surface water features on the project site include a drainage ditch and wetland area on the lower elevation western boundary of the site, which ultimately drains to Janes Creek. Development of the project site will create impervious surfaces and increase the amount of surface runoff. The proposed project will require City approval of an erosion and sediment control plan and grading, drainage, and erosion control will be per City standards consistent with Section 9.64 (Grading, Erosion, and Sediment Control) of the Arcata Land Use Code and the City's Drainage Master Plan.

Stormwater drainage facilities for the development are required to be designed to meet both State and local stormwater regulations which are focused on maintaining or improving a site's pre-development runoff characteristics. In order to help guide its communities to meet the MS4 low impact development (LID) requirements, Humboldt County developed the Humboldt Low Impact Development Stormwater Manual (HLIDSM). Since the proposed project will create and replace more than one acre of impervious area, it is subject to the hydro-modification requirement of the HLIDSM. Based on the proposed stormwater system design (Appendix N),

the site will drain west via storm sewer and open swales to an infiltration basin in the southwest corner of the site. The basin will overflow to the lower western portion of the site to the City's existing stormwater infrastructure.

The HLIDSM requires that the post-project runoff rate shall not exceed the estimated pre-project flow rate for the 2-year, 24-hour storm. For the Preliminary Stormwater Management Report completed by Manhard Consulting (Appendix N), existing and proposed runoff hydrographs were modeled using Hydraflow for the 2-year, 24-hour storm and 100-year, 24-hour storm. The results of the model show a pre-project, existing conditions 2-year, 24-hour storm peak flow rate of 5.717cubic feet per second (cfs) and a post-project peak flow rate of 5.100 cfs. The proposed stormwater system reduces the 2-year 24-hour storm peak flow rate and therefore does not require detention. For the 100-year, 24-hour storm event, the post-development peak flow rate is 14.09 cfs which is also less than the pre-development peak flow rate of 14.89 cfs.

The stormwater system is designed to control the volume and flow rate of run-off to not exceed the pre-development condition so the drainage pattern of the area will not be substantially altered and cause erosion or siltation. In addition, the proposed stormwater facilities are required to comply with the requirements of the Phase II Small MS4 General Permit and Construction General Permit to control erosion and siltation.

Therefore, the proposed project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.2.4: Substantially Alter the Existing Drainage Pattern of the Site or Area, including Through the Alteration of the Course of a Stream or River, or Substantially Increase the Rate of Surface Water Runoff in a Manner that would Result in Flooding On-Site or Off-Site.

Discussion:
The surface water features on the project site include a drainage ditch and wetland area on the lower elevation western boundary of the site. Development of the project site will create impervious surfaces and increase the amount of surface runoff.

The project site generally drains to the west where it enters the drainage ditch along the western boundary of the site. There is a drainage inlet and culvert that drains surface runoff from the elevated portion of the site into the southern portion of this ditch and an adjacent depressional area (see Figure 4.2A). The drainage ditch is approximately 350 feet long by 5 feet wide and is mostly filled with sediment. The ditch has two drainage inlets which direct the runoff to an 18-

inch concrete pipe that heads west towards Maple Lane (see Figure 4.2B). Stormwater from the project site is directed to a tributary to Janes Creek, referred to as Sunset Creek, several hundred feet southwest of the site.

Increased volume and speed of runoff from the proposed development could cause runoff to reach downstream areas sooner and coincide more closely with the peak of runoff from lower areas; the effect, along with that of higher runoff, could be increased flood flows. Any increase in impervious surfaces and soil compaction will effectively decrease infiltration and increase runoff volumes for the site. While the volumes may be increased, the actual flow rate can be modified so that there is no increase in peak flow rate off-site.

Stormwater drainage facilities for the development are required to be designed to meet both State and local stormwater regulations which are focused on maintaining or improving a site's pre-development runoff characteristics. In order to help guide its communities to meet the MS4 low impact development (LID) requirements, Humboldt County developed the Humboldt Low Impact Development Stormwater Manual (HLIDSM). Since the proposed project will create and replace more than one acre of impervious area, it is subject to the hydro-modification requirement of the HLIDSM. Based on the proposed stormwater system design (Appendix N), the site will drain west via storm sewer and open swales to an infiltration basin in the southwest corner of the site. The basin will overflow to the lower, western portion of the site to the City's existing stormwater infrastructure.

The HLIDSM requires that the post-project runoff rate shall not exceed the estimated pre-project flow rate for the 2-year, 24-hour storm. For the Preliminary Stormwater Management Report completed by Manhard Consulting (Appendix N), existing and proposed runoff hydrographs were modeled using Hydraflow for the 2-year, 24-hour storm and 100-year, 24-hour storm. The results of the model show a pre-project, existing conditions 2-year, 24-hour storm peak flow rate of 5.717cubic feet per second (cfs) and a post-project peak flow rate of 5.100 cfs. The proposed stormwater system reduces the 2-year 24-hour storm peak flow rate and therefore does not require detention. For the 100-year, 24-hour storm event, the post-development peak flow rate is 14.09 cfs which is also less than the pre-development peak flow rate of 14.89 cfs.

The stormwater system is designed to control the volume and flow rate of run-off so to not exceed the pre-development conditions so the drainage pattern of the project site and area will not substantially contribute to flooding on or off-site.

As indicated in the Village Scoping Meeting Follow-Up document (Appendix B), the residential properties along Maple Lane and Stromberg Avenue have been previously impacted by flooding on the western portion of the project site. Due to the existing flooding issues at the site, the City of Arcata will require the applicant to conduct an analysis of the existing City stormwater infrastructure from the western edge of the project site to the intersection of Maple Lane and Stromberg Avenue. The analysis will determine the as-built design and capacity of the existing stormwater infrastructure and recommend improvements to reduce the localized flooding that occurs on the residential properties to the west of the project site. The improvements may include a small enhancement wetland basin adjacent to the existing wetlands at the site. The infiltration basin overflow pipe would drain to this feature, and the enhancement wetland would

control the release of stormwater from the site to ensure it does not exceed the capacity of the City's infrastructure. The design of the proposed improvements must demonstrate that after providing the detention required by the MS4 permit requirements and the HLIDSM, the City's stormwater infrastructure will have adequate capacity to convey the overland flow of stormwater that enters the ditch on the western boundary of the project site.

The analysis of the City's existing stormwater infrastructure and any improvements recommended for reducing existing seasonal flooding on the project site, are not analyzed in the EIR. These improvements would occur as part of the City of Arcata Long-Term Drainage Maintenance Program, which includes the drainage ditch on the western boundary of the project site (Site #14 in the mapping [Sheet 3 of 10] for the City's Long Term Drainage Maintenance Program). Implementation of this program will allow the City to conduct as needed maintenance activities including removing obstructions from drainage swales and culverts to restore capacity and reduce localized flooding. This program also includes improvements to existing drainage infrastructure such as widening and relocating drainage swales, culvert replacement, grading to alter drainage patterns and reduce seasonal flooding, and stream bank stabilization. A Mitigated Negative Declaration was adopted by the City of Arcata for the Drainage Maintenance Program in March 2017 (SCH# 2017022003).

Subsequent CEQA analysis may be required for the improvements recommended for the project site, if they were not previously analyzed in the Mitigated Negative Declaration adopted for the Drainage Maintenance Program. If proposed, the enhancement wetland feature would be designed as a habitat restoration project which is categorically exempt from the California Environmental Quality Act (CEQA) per Section 15333 (Small Habitat Restoration Projects) of the CEQA Guidelines. Any permits required for the proposed improvements would be obtained by the City of Arcata as part of implementation of the City's Drainage Maintenance Program.

With the proposed on-site stormwater system and improvements to the City's existing stormwater infrastructure, the existing flooding on the western boundary of the site will be reduced by the proposed project and implementation of the City's Drainage Maintenance Program.

Therefore, the proposed project will not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate of surface water runoff in a manner that would result in flooding on-site or off-site.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.2.5: Create or Contribute Runoff that would Exceed the Capacity of the Existing or Planned Stormwater Drainage Systems or Provide Substantial Additional Sources of Polluted Runoff.

Discussion:
The surface water features on the project site include a drainage ditch and wetland area on the lower elevation western boundary of the site. The project site generally drains to the west where it enters the drainage ditch along the western boundary of the site. There is a drainage inlet and culvert that drains surface runoff from the elevated portion of the site into the southern portion of this ditch and an adjacent depressional area (see Figure 4.2A). The drainage ditch is approximately 350 feet long by 5 feet wide and is mostly filled with sediment. The ditch has two drainage inlets which direct the runoff to an 18-inch concrete pipe that heads west towards Maple Lane (see Figure 4.2B). Stormwater from the project site is directed to a tributary to Janes Creek, referred to as Sunset Creek, several hundred feet southwest of the site. As discussed in the Environmental Setting, the City of Arcata has indicated that residential properties along Maple Lane and Stromberg Avenue have been previously impacted by flooding on the western portion of the site (City of Arcata, 2016b).

Currently the project site contains 1.208 acres of buildings and 0.098 acres of concrete. The majority of the project site (6.618 acres) is covered in compacted gravel fill, much of which is of moderate to low permeability (Appendix N). Development of the project site will create impervious surfaces (e.g. buildings, pavement, etc.) and increase the amount of surface runoff. As described in the Preliminary Stormwater Management Report completed by Manhard Consulting (Appendix N), approximately 6.27 acres of impervious surface will be developed throughout the entire 10.81 acre project site. This will include 2.2 acres of buildings, 2.75 acres of paved parking, and 1.32 acres of paved open space.

Stormwater drainage facilities for the development are required to be designed to meet both State and local stormwater regulations which are focused on maintaining or improving a site's pre-development runoff characteristics. In order to help guide its communities to meet the MS4 low impact development (LID) requirements, Humboldt County developed the Humboldt Low Impact Development Stormwater Manual (HLIDSM). Since the proposed project will create and replace more than one acre of impervious area, it is subject to the hydro-modification requirement of the HLIDSM. As described in the Preliminary Stormwater Management Report (Appendix N), compliance with State and local stormwater regulations will be achieved by the on-site management of stormwater through low impact development (LID) site design measures including tree planting, soil quality improvement and maintenance, rain/rock gardens, native plantings, bioswales, impervious area disconnection, and an underground infiltration basin. Based on the proposed stormwater system design, the site will drain west via storm sewer and open swales to an infiltration basin in the southwest corner of the site. The basin will overflow to the lower western portion of the site to the City's existing stormwater infrastructure.

Since the proposed project will create and replace more than one acre of impervious area, it is subject to the hydro-modification requirement of the Humboldt County Low Impact Development Stormwater Manual (HLIDSM). The HLIDSM requires that the post-project runoff rate shall not exceed the estimated pre-project flow rate for the 2-year, 24-hour storm. For

the Preliminary Stormwater Management Report completed by Manhard Consulting (Appendix N), existing and proposed runoff hydrographs were modeled using Hydraflow for the 2-year, 24-hour storm and 100-year, 24-hour storm. The results of the model show a pre-project, existing conditions 2-year, 24-hour storm peak flow rate of 5.717cubic feet per second (cfs) and a post-project peak flow rate of 5.100 cfs. The proposed stormwater system reduces the 2-year 24-hour storm peak flow rate and therefore does not require detention. For the 100-year, 24-hour storm event, the post-development peak flow rate is 14.09 cfs which is also less than the pre-development peak flow rate of 14.89 cfs. The proposed on-site stormwater system is designed to control the volume and flow rate of run-off so that it does not increase the volume of flow to the City's existing stormwater system.

To minimize sources of polluted runoff, the project proposes landscaping with a variety of native species, which will require significantly less fertilizer and pesticide treatment. The rules of the proposed student housing community will also not allow repair of vehicles on-site, with the exception of car washing in a designated location that will allow for the infiltration of wash water. Additionally, with required adherence to Section 9.64 (Grading, Erosion, and Sediment Control) of the Arcata Land Use Code (Pgs. 6-23 - 6-30), the City's Drainage Master Plan, the Construction General Permit, and the Phase II Small MS4 General Permit, the project would not provide substantial additional sources of polluted runoff. This response incorporates the responses for Findings 4.2.1, 4.2.3, and 4.2.4 which adequately addressed the potential for the proposed project to provide substantial sources of polluted runoff.

Therefore, the proposed project will not create or contribute runoff that would exceed the capacity of the existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.2.6: Otherwise Substantially Degrade Water Quality.

Discussion:
There are no conditions associated with the proposed project that could result in the substantial degradation of water quality beyond what is described above in the responses to Findings 4.2.1, 4.2.3, and 4.2.5, which adequately answer the question.

Therefore, the proposed project will not otherwise substantially degrade water quality.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.2.7: Place Housing within a 100-Year Flood Hazard Area as Mapped on a Federal Flood Hazard Boundary, Flood Insurance Rate Map, or Other Flood Hazard Delineation Map.

Discussion:
According to the Flood Insurance Rate Map (FIRM) panel 06023C0689F, revised by FEMA November 4, 2016, the project site does contain Zone AE floodplain along the western edge of the site. However, the topographic survey prepared by Manhard Consulting (2016), indicates the project site is above the mapped floodplain elevation of 30 feet. As shown on the Site Plan, the area proposed for residential development will be located on the elevated portion of the site (~50 feet) and outside of the 100-year flood hazard area.

Therefore, the proposed project will not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary, Flood Insurance Rate Map, or other flood hazard delineation map.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.2.8: Place within the 100-Year Flood Hazard Area Structures that would Impede or Redirect Flood Flows.

Discussion:
According to the Flood Insurance Rate Map (FIRM) panel 06023C0689F, revised by FEMA November 4, 2016, the project site does contain Zone AE floodplain along the western edge of the site. However, the topographic survey prepared by Manhard Consulting (2016), indicates the project site is above the mapped floodplain elevation of 30 feet. As noted under Finding 4.2.7, the area proposed for residential development will be located on the elevated portion of the site (~50 feet) and outside of the 100-year flood hazard area.

Therefore, the proposed project will not place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.2.9: Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding, including Flooding as a Result of the Failure of a Levee or Dam.

Discussion:
As discussed under Findings 4.2.7 and 4.2.8, the 100-year flood hazard area for Janes Creek is located on the western edge of the project site. As shown on the Site Plan, the area proposed for residential development will be located on the elevated portion of the site (~50 feet) and outside of the 100-year flood hazard area.

As noted above under Findings 4.2.7 and 4.2.8, the western edge of the project site is approximately 15 feet lower than the elevated portion that is proposed for residential development. This lower elevation area at the site is mapped in Humboldt Bay Municipal Water District's (HBMWD) "Emergency Action Plan for R.W. Mathews Dam" as being within the anticipated maximum reach of floodwaters resulting from catastrophic failure of the dam, in conjunction with winter floods the size of those occurring in 1964. Although, the western edge of the site is outside of the inundation area for the "*sunny day summer flow conditions with piping failure*" (HBMWD, 1999, Inundation Map – Sheet 12 of 13).

In a seismic or flood event of a magnitude great enough to cause dam failure, persons present at the site could leave the site before flooding occurred due to the adequate lead time of 7-15 hours before it is estimated flooding would reach this area (7 hours to reach the area and 15 hours to peak). Evacuation of the site may be desired by the future residents, since the flood mapping shows a portion of the access road to the site (St. Louis Road) as being within the inundation area.

The HBMWD Emergency Action Plan for the dam includes plans for notification of the affected areas. Humboldt County has a Contingency Plan/Dam Failure Evacuation Plan. The County is responsible for determining the approximate flood inundation area and notifying the City of Arcata. The City is responsible for manning roadblocks to isolate the inundation area. The City is currently working toward a more detailed emergency plan that considers the worst-case inundation scenario described above. The City's plan will clearly delineate responsibilities and mechanisms for notification, evacuation, and isolation of the affected areas.

Arcata General Plan Policy PS-2f (*Failure of Matthews Dam*) (Pgs. 6-7) requires development of an early warning system and evacuation plan for all new buildings designed for human occupancy that are located in the area of potential inundation resulting from a catastrophic failure of Matthews Dam. The Arcata General Plan PEIR notes that compliance with General Plan Policy PS-2f will ensure no significant adverse impacts will result.

In compliance with Policy PS-2f, a site specific early warning system and evacuation plan will be created and implemented for the proposed development and approved by the City prior to

issuance of the Certificate of Occupancy. This will be required as a condition of approval for the project.

With the above described condition of approval requiring compliance with Arcata General Plan Policy PS-2f (Pgs. 6-7), the proposed project will not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure or a levee or dam.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.2.10: Inundation by Seiche, Tsunami, or Mudflow.

Discussion:
There is no potential for impacts from a mudflow in the project area, based on surrounding geology and topography. Due to the known seismic activity in the Pacific Rim, a tsunami or seiche could impact Humboldt Bay. The last significant known tsunami to occur in Humboldt Bay was in 1964 as result of the Gulf of Alaska earthquake. It had a recorded maximum height of twelve feet on the inside of the north spit, with lower heights occurring along the waterfront areas. The March 11, 2011 Tsunami from the Japan earthquake had minimal effects in both North Humboldt Bay and the Mad River.

It is expected that the impact of a tsunami on Humboldt Bay would primarily occur along the north and south spits and the King Salmon and Fields Landing areas, which are located directly across from the opening to Humboldt Bay. There are some areas of the City of Arcata, immediately adjacent to the bay, that are within a seiche or tsunami run-up zone as identified in the *Planning Scenario in Humboldt and Del Norte Counties, California for a Great Earthquake on the Cascadia Subduction Zone* (CGS, 1995). These areas have been designated Natural Resource [NRP] by the City of Arcata, which does not allow residential, commercial or industrial development, and are located over one mile from the project site. As such, the project parcels are located outside of the NRP designated areas.

Therefore, the proposed project will not result in impacts due to inundation by seiche, tsunami, or mudflow.

Determination:
Less than significant impact.

Mitigation:
None required.

REFERENCES

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SECTION 4.3 BIOLOGICAL RESOURCES

This section evaluates the potential impacts related to biological resources during construction and operation of the project. The Environmental Setting section describes the existing environmental conditions for biological resources. The Regulatory Framework section defines the applicable regulations at the federal, state and local level. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to biological resources, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less-than-significant levels.

ENVIRONMENTAL SETTING

The project site is located in the north central portion of the City of Arcata directly west of Highway 101, and approximately 0.5 miles from the Humboldt State University campus. The project site is an approximate 11-acre site composed of seven parcels that was historically used for industrial and residential uses. A lumber mill (Arcata Manufacturing Company) was developed on the site in the 1940s and operated until the 1960s. Most of the project site is currently home to the Craftsman's Mall – a collection of artisan and light industrial rental spaces.

The majority of the project site is an elevated terrace (~50 feet elevation) above the Arcata Bottom that is developed with two remaining warehouse buildings from the former mill (Arcata Manufacturing Company), two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. The site contains very little vegetation with the exception of the undeveloped western portion of the site. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, and a small wetland area. Figures 4.3A and 4.3B are pictures showing the western edge of the project site.

Based on the Geotechnical Investigation prepared by Geocon Consultants, Inc. (Appendix M) for the project, the soils on the site differ between the elevated portion of the site (~50 feet) and the lower elevation (~35 feet) western portion of the site. The majority of the project site is elevated and contains terrace deposits which generally consist of very soft to stiff silts and clays, and loose to very dense silt sands and gravels. The lower elevation western portion of the site contains alluvial deposits from Janes Creek which consists of very soft to medium stiff, moist to wet silts and clays, with occurrences of loose silty sands. Undocumented fill was also encountered in exploratory borings conducted throughout the site.

As indicated in the NRM Biological Review (Appendix O), vegetation on the western portion of the project site includes species such as sweet vernal grass (*Anthoxanthum odoratum*), tall fescue

(*Festuca arundinace)*, Kentucky bluegrass *(Poa pratensis*), Western buttercup *(Ranunculus occidentalis),* wild radish *(Raphanus sativus),* velvet grass *(Holcus lanatus),* and teasel (*Dipsacus fullonum*).

Land uses surrounding the project site include single-family residential development to the north, west, and south, industrial uses to the north, and Highway 101 to the east. The Janes Creek Meadows riparian/open space area occurs to the north of the site, which contains a section of Janes Creek and one of its tributaries. A strip of riparian vegetation surrounds Janes Creek, and common plants in this area include red alder (*Alnus rubra*), willows (*Salix* spp.), Himalayan blackberry, reed canary grass (*Phalaris arundinacea*), goose grass (*Galium aparine*), creeping buttercup, lady fern (*Athyrium filix-femina*), water parsley (*Oenanthe sarmentosa*), small-flowered bulrush (*Scirpus microcarpus*), and others. The Janes Creek corridor contains potential habitat for birds, mammals, amphibians, and fish species protected by federal or state regulations.

Wetland & Riparian Areas

Wetlands

A Wetland Delineation of the project site was conducted by Natural Resource Management (NRM) Corporation (Appendix P) in the winter and spring of 2016 and spring of 2017. The Wetland Delineation was conducted in accordance with the three-parameter method of the U.S. Army Corps of Engineers (ACOE) Wetland Delineation Manual (ACOE, 1987 and 2010). The wetland delineation also identified two-parameter wetlands in accordance with Arcata General Plan Policy RC-3a. Since the elevated developed portion of the project site is highly disturbed and does not contain wet areas or depressions, the report focuses on the 1.4 acre undeveloped western portion of the project site. Within the 1.4 acre study area, 0.21 acres (9,148 s.f.) of two- and three-parameter wetlands were identified. As indicated on Page 8 of the NRM Wetland Delineation (Appendix P), there are approximately 0.2 acres of three-parameter wetlands and 0.0097 acres of two-parameter wetlands on the project site. The wetland areas at the project site are shown below in Figure 4.3C which is from the NRM Wetland Delineation (Appendix P, Pg. 9).

Riparian Areas

To the northwest of the project site is a section of Janes Creek and one of its tributaries which is included in the Janes Creek Meadows Openspace Area. Janes Creek is a small, third order stream that is classified by the U.S. Fish and Wildlife Service (Cowardin et al. 1979) as a Riverine, Lower Perennial wetland. This type of system is defined as having a channel, a low gradient, perennially-flowing water of slow velocity, no tidal influence, a substrate consisting primarily of sand and mud, and a well-developed floodplain (Cowardin et al. 1979). The riverine wetland includes the creek bottom to the top of the banks.

Figure 4.3A View of the Western Edge of the Project Site Looking Southwest

Figure 4.3B View of the Warehouse Structures from the Western Edge of the Project Site

Figure 4.3C Wetland Areas

The riparian area surrounding Janes Creek could also be classified as a Palustrine, Scrub-Shrub wetland (Cowardin et al. 1979). This type of system is dominated by woody vegetation less than six meters (20 feet) tall, including shrubs and young trees. It may represent a successional stage leading to Forested Wetland (Cowardin et al. 1979).

The City of Arcata General Plan classifies Janes Creek as an environmentally sensitive habitat area (ESHA). The riparian area around Janes Creek lies within a City-designated Streamside Protection Area (SPA).

The project site generally drains to the west where it enters the drainage ditch along the western boundary of the site. There is a drainage inlet and culvert that drains surface runoff from the elevated portion of the site into the southern portion of this ditch and an adjacent depressional area. The drainage ditch is approximately 350 feet long by 5 feet wide and is mostly filled with sediment. The ditch has two drainage inlets which direct the runoff to an 18-inch concrete pipe that heads west towards Maple Lane (see Figure 4.3D). Stormwater from the project site is directed to a tributary to Janes Creek, referred to as Sunset Creek, several hundred feet southwest of the site.

Figure 4.3D Drainage Ditch and 18-inch Concrete Pipe Inlet

Special-Status Plant & Wildlife Species

A Biological Review, including a field survey, was completed for the proposed project by Natural Resources Management (NRM) Corporation for the proposed project, which addressed the environmentally sensitive resources that occur on the site (Appendix O). Since the elevated developed portion of the project site is highly disturbed and does not contain potential habitat for protected plant and animal species, the report focuses on the 1.4 acre undeveloped western portion of the project site. This area is approximately 15-20 feet lower in elevation then the majority of the project site and contains a variety of native and non-native vegetation, a drainage ditch, and a small wetland area.

The NRM report addressed the environmentally sensitive resources that occur on the western portion of the project site. The on-site investigation (conducted April 20, 2016) included a seasonally-appropriate survey for rare plant species, a list of plant and wildlife species observed on site, and a list of special-status species with the potential for occurrence on site.

Plants

Vegetation is almost non-existent on the majority of the project site, which is an elevated developed area above the Arcata Bottom. The vegetation on the elevated portion of the site is primarily non-native grasses growing in compacted gravel surfaces. The majority of the vegetation on the site exists on the western portion of the site which is lower in elevation and undeveloped. This area was reviewed by NRM as part of their Biological Review. Common plant species identified in this area included sweet vernal grass (*Anthoxanthum odoratum*), tall fescue (*Festuca arundinace)*, Kentucky bluegrass *(Poa pratensis*), Western buttercup *(Ranunculus occidentalis),* wild radish *(Raphanus sativus),* velvet grass *(Holcus lanatus),* and teasel (*Dipsacus fullonum*). No rare, endangered, or CNPS list 1, 2, 3, or 4 plants were found at the project site during the surveys conducted by NRM (Appendix O, Pgs. 5-8).

Wildlife

As noted above, the majority of the project site is an elevated developed terrace that does not contain any potential habitat. The undeveloped western portion of the site contains a variety of native and non-native vegetation, a drainage ditch, and a wetland area. This area was surveyed by NRM for special-status wildlife species as part of their Biological Review, which determined that the area contains potential habitat that would most likely be used by amphibians and nesting birds seasonally. The list of wildlife species with potential habitat at the project site is shown below in Table 4.3-1. No special-status species were observed on the project site during the surveys conducted by NRM (Appendix O, Pgs. 4-5). A great blue heron (*Ardea Herodias*) was observed circling above the site during the survey, which is a State Species of Special Concern.

Table 4.3-1 Wildlife with Potential Habitat on the Project Site (Appendix O; Pg. 4, Table 1)

Species	Status		Breeding Period
	Federal	State	
Cooper's Hawk (*Accipiter cooperii*)	none	Species of Concern	Spring
great egret (*Ardea alba*)	none	Species of Concern	Spring
Pacific tailed frog (*Ascaphus truei*)	none	Species of Concern	May-October
obscure bumble bee (*Bombus caliginosus*)	none	Species of Concern	January- October
western bumble bee (*Bombus occidentalis*)	none	Species of Concern	Winter- Early Spring
snowy egret (*Egretta thula*)	none	Species of Concern	March- May
black-crowned night heron (*Nycticorax nycticorax)*	none	Species of Concern	March- July
Del Norte salamander (*Plethodon elongatus*)	none	Species of Concern	Fall, Spring
California clapper rail (*Rallus longirostris obsoletus*)	Endangered	Endangered	February- August
northern red-legged frog (*Rana aurora*)	none	Species of Concern	October- February
foothill yellow-legged frog (*Rana boylii*)	none	Species of Concern	April- October
southern torrent salamander (*Rhyacotriton variegatus)*	none	Species of Concern	Spring-Early summer
great blue heron (*Ardea herodias*)	none	Species of Concern	March- June
white-footed vole (*Arborimus albipes*)	none	Species of Concern	April- September
western pond turtle (*Emys marmorata*)	none	Species of Concern	April-August

Aquatic Environment & Sensitive Fish Species

The Janes Creek watershed drains approximately 4.5 square miles, flowing through forestlands, an industrial complex, urban areas, and low elevation pasture. Seasonal rainfall is often high in intensity and results in surface water runoff. Typical stream flows in Janes Creek and its tributaries are perennial, with high flows in the winter and little flow in the late summer. The upper Janes Creek watershed is forested with second and third growth redwood. West of Highway 101, Janes Creek winds through residential and commercial property, and passes through culverts under streets and residential areas (City of Arcata/CDFG, 2006).

Janes Creek and one of its tributaries occur within the Janes Creek Meadows open space area directly north of the project site. Fish species known to occur in Janes Creek include coastal

cutthroat trout (*Oncorhynchus clarkii clarkii*) and three-spine sticklebacks (*Gasterosteus aculeatus*) (City of Arcata/CDFG, 2006).

Coastal cutthroat trout are often found in small, coastal streams as opposed to larger channels. They require watercourses with shaded areas, cool water, and small-grained gravel for spawning. Generally, these fish are threatened by water diversion, siltation, and marsh and tideland reclamation. There are records of cutthroat trout in the upper Janes Creek watershed (City of Arcata/CDFG, 2006). Coastal cutthroat trout are designated by the CDFW as a Species of Special Concern.

Threespine stickleback are often found in inland coastal waters or freshwater bodies and can live in fresh, brackish, or salt water. They prefer slow-flowing water with emergent vegetation. The upper Janes Creek watershed is known to support a population of threespine stickleback. Threespine stickleback are not federally or state listed and are not considered a sensitive fish species.

Coho salmon (*Oncorhynchus kisutch*), steelhead trout (*O. mykiss irideus*), and Chinook salmon (*O. tshawytscha*) are known to occur in Humboldt Bay and use other tributaries to the Bay to spawn. These fish are currently listed as threatened under the Federal ESA. With the replacement of a failed culvert along Samoa Blvd and the restoration of McDaniel Slough (i.e., lower Janes Creek) in 2013, these fish species are again able to spawn in Janes Creek and ultimately increase their overall populations (City of Arcata/CDFG, 2006). Based on fish surveys conducted by the City of Arcata and the California Department of Fish & Wildlife (CDFW), coho salmon have been observed in lower Janes Creek since 2014 (City of Arcata, 2016).

REGULATIORY FRAMEWORK

Federal

Federal Endangered Species Act

The federal Endangered Species Act of 1973 (ESA) recognizes that many species of fish, wildlife, and plants are in danger of or threatened with extinction and established a national policy that all federal agencies should work toward conservation of these species. The Secretary of the Interior and the Secretary of Commerce are designated in the Act as responsible for identifying endangered and threatened species and their critical habitats, carrying out programs for the conservation of these species, and rendering opinions regarding the impact of proposed federal actions on endangered species. The Act also outlines what constitutes unlawful taking, importation, sale, and possession of endangered species, and specifies civil and criminal penalties for unlawful activities.

Biological assessments are required under Section 7(c) of the Act if listed species or critical habitat may be present in the area affected by any major construction activity conducted by, or subject to issuance of a permit from, a federal agency as defined in Part 404.02. Under Section 7(a)(3) of the Act every federal agency is required to consult with the U.S. Fish and Wildlife Service (USFWS) or National Oceanic and Atmospheric Administration (NOAA) Fisheries on a proposed action if the agency determines that its proposed action may affect an endangered or threatened species.

Section 9 of the ESA prohibits the “take” of any fish or wildlife species listed under the ESA as endangered or threatened. Take, as defined by the ESA, means “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such action." However, Section 10 allows for the “incidental take” of endangered and threatened species of wildlife by non-federal entities. Incidental take is defined by the ESA as take that is “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.” Section 10(a)(2)(A) requires an applicant for an incidental take permit to submit a “conservation plan” that specifies, among other things, the impacts that are likely to result from the taking and the measures the permit applicant will undertake to minimize and mitigate such impacts. Section 10(a)(2)(B) provides statutory criteria that must be satisfied before an incidental take permit can be issued.

Clean Water Act, Section 404

Proposed discharges of dredged or fill material into waters of the U.S. require U.S. Army Corps of Engineers (USACE) authorization under Section 404 of the Clean Water Act (CWA) [33 U.S.C. 1344]. Waters of the U.S. generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands (with the exception of isolated wetlands). Wetlands subject to the CWA Section 404 are defined as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3 [b]; 40 CFR 230.3 [t]). The USACE identifies wetlands using a "multi-parameter approach," which requires positive wetland indicators in three distinct environmental categories: hydrology, soils, and vegetation. According to the USACE Wetlands Delineation Manual, except in certain situations, all three parameters must be satisfied for an area to be considered a jurisdictional wetland. The Regional Supplement to the Corps of Engineers Wetland Delineation Manual (USACE, 2010) is also utilized when conducting jurisdictional wetland determinations in areas identified within the boundaries of the arid west.

The CWA also defines the ordinary high water mark as the Section 404 jurisdictional limit in non-tidal waters. When adjacent wetlands are present, the limit of jurisdiction extends to the limit of the wetland. Field indicators of ordinary high water include clear and natural lines on opposite sides of the banks, scouring, sedimentary deposits, drift lines, exposed roots, shelving, destruction of terrestrial vegetation, and the presence of litter or debris. Typically, the width of waters corresponds to the two-year flood event.

Clean Water Act, Section 401

Section 401 of the CWA requires applicants acquiring a federal license or permits to conduct any activity that may result in a discharge of a pollutant into waters of the United States, to also obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board (RWQCB) regulates Section 401 requirements (see under State below).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 (50 CFR 10.13) established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. A migratory bird is defined as any species or family of birds that live, reproduce, or migrate within or across international borders at some point during their annual life cycle. "Take" is defined in the MBTA "to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing or transporting any migratory bird, nest, egg, or part thereof." Only non-native species such as feral pigeon (*Columba livia*), house sparrow (*Passer domesticus*), and European starling (*Sturnus vulgaris*) are exempt from protection. The federal Migratory Bird Treaty Act makes it unlawful to "take" (kill, harm, harass, etc.) any migratory bird listed in the Code of Federal Regulations (CFR) 50 CFR 10, including their nests, eggs, or products. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, and many other types of birds.

State of California

California Environmental Quality Act

Rare or endangered plant or wildlife species are defined in the CEQA Guidelines Section 15380: Endangered means that survival and reproduction in the wild are in immediate jeopardy. Rare means that a species is either presently threatened with extinction or that it is likely to become endangered within the foreseeable future. A species of animal or plant shall be presumed to be rare or endangered if it is listed in Sections 670.2 or 670.5, Title 14, California Administrative Code; or Title 50, CFR Sections 17.11 or 17.12 pursuant to the federal ESA as threatened or endangered.

California Endangered Species Act

The California Endangered Species Act (CESA) includes provisions for the protection and management of species listed by the State of California as endangered or threatened or designated as candidates for such listing (Fish and Wildlife Code Sections 2050 through 2085). The Act requires consultation "to ensure that any action authorized by a State lead agency is not likely to jeopardize the continued existence of any endangered or threatened species or results in the destruction or adverse modification of habitat essential to the continued existence of the species" (Section 2053). California plants and animals declared to be endangered or threatened are listed in 14 California Code of Regulations (CCR) 670.2 and 14 CCR 670.5, respectively.

The State prohibits the take of protected amphibians (14 CCR 41), protected reptiles (14 CCR 42), and protected furbearers (14 CCR 460). The California Department of Fish and Wildlife (CDFW) may also authorize public agencies through permits or a memorandum of understanding to import, export, take, or possess any endangered species, threatened species, or candidate species for scientific, educational, or management purposes (Section 2081[a]). The CDFW may also authorize, by permit, the take of endangered species, threatened species, and candidate species provided specific conditions are met (Section 2081[b]).

California Fish and Game Code

The California Department of Fish and Wildlife (CDFW) enforces the California Fish and Game Code (CFGC), which provides protection for "fully protected birds" (Section 3511), "fully protected mammals" (Section 4700), "fully protected reptiles and amphibians" (Section 5050), and "fully protected fish" (Section 5515). With the exception of permitted scientific research, no take of any fully protected species is allowed.

Section 3503 of the CFGC prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 specifically prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks and eagles) or Strigiformes (owls) and their nests. These provisions, along with the federal MBTA, essentially serve to protect nesting native birds. Non-native species, including European starling and house sparrow, are not afforded protection under the MBTA or CFGC.

Streams, lakes, and riparian vegetation as habitat for fish and other wildlife species, are subject to jurisdiction by the CDFW under Sections 1600-1616 of the CFGC. Activity that will do one or more of the following, generally require a Section 1602 Lake and Streambed Alteration Agreement: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake. The term "stream," which includes creeks and rivers, is defined in the CCR as follows: "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (14 CCR 1.72). In addition, the term stream can include ephemeral streams, dry washes, watercourses with subsurface flows, canals, aqueducts, irrigation ditches, and other means of water conveyance if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Riparian is defined as, "on, or pertaining to, the banks of a stream;" therefore, riparian vegetation is defined as, "vegetation which occurs in and/or adjacent to a stream and is dependent on, and occurs because of, the stream itself." Removal of riparian vegetation also requires a Section 1602 Lake and Streambed Alteration Agreement from the CDFW.

Clean Water Act and the State of California's Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) regulates construction stormwater discharges through SWRCB Order No. 2003-0017-DWQ, "General Waste Discharge Requirements for Dredge and Fill Discharges that have Received State Water Quality Certification." The State's authority to regulate activities in wetlands and waters resides primarily with the SWRCB, which in turn has authorized the State's nine RWQCBs, discussed below, to regulate such activities. Under Section 401 of the federal CWA, every applicant for a federal permit for any activity that may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with State water quality standards.

In the project area, the North Coast RWQCB (NCRWQCB) regulates construction in waters of the U.S. and waters of the State, including activities in wetlands, under both the CWA and the State of California's Porter-Cologne Water Quality Control Act (California Water Code, Division 7). Under the CWA, the RWQCB has regulatory authority over actions in waters of the U.S., through the issuance of water quality certifications, as required by Section 401 of the CWA, which are issued in conjunction with permits issued by the USACE under Section 404 of the CWA. The RWQCB must certify that a USACE permit action meets State water quality objectives (§401 CWA, and Title 23 CCR 3830, et seq.) before a USACE permit is issued. Activities in areas that are outside of the jurisdiction of the USACE (e.g., isolated wetlands, vernal pool, or stream banks above the ordinary high water mark) are regulated by the nine RWQCBs, under the authority of the Porter-Cologne Act, and may require the issuance of either individual or general waste discharge requirements.

The California Wetlands Conservation Policy (Executive Order W-59-93) establishes a primary objective to "ensure no overall net loss of wetlands acreage and values in California." The RWQCBs implement this policy and the Basin Plan Wetland Fill Policy, both of which require mitigation for wetland impacts.

State Species of Special Concern

The CDFW maintains a list of species and habitats of special concern. These are broadly defined as species that are of concern to the CDFW because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California; the criteria used to define special-status species are described by the CDFW. Impacts to special-status plants, animals, and habitats may be considered significant under CEQA.

State Species of Special Concern include those plants and wildlife species that have not been formally listed; yet are proposed or may qualify as endangered or threatened, or are candidates for such listing under the CESA. This affords protection to both listed species and species proposed for listing. In addition, CDFW Species of Special Concern, which are species that face extirpation in California if current population and habitat trends continue, United States Fish and Wildlife Service (USFWS) Birds of Conservation Concern, and CDFW special-status invertebrates are considered special-status species by CDFW. Plant species included within the

California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (Inventory) with California Rare Plant Rank (CRPR) of 1 and 2 are also considered special-status plant species. Few Rank 3 or Rank 4 plants meet the definitions of Section 1901 Chapter 10 of the Native Plant Protection Act (see below) or Sections 2062 and 2067 of the CDFG Code that outlines the CESA. There are occasions where CRPR List 3 or 4 species might be considered of special concern particularly for the type locality of a plant, for populations at the periphery of a species range, or in areas where the taxon is especially uncommon or has sustained heavy losses, or from populations exhibiting unusual morphology.

Also under the jurisdiction of CDFW and considered sensitive are vegetation alliances with a State ("S") ranking of S1 through S3 in the List of Vegetation Alliances (CDFG, 2009). CDFG ranks sensitive communities as "threatened" or "very threatened" and keeps records of their occurrences in its California Natural Diversity Database (CNDDB).

Native Plant Protection Act

The CDFW administers the California Native Plant Protection Act (CNPPA) (Sections 1900–1913 of the CFGC). These sections allow the California Fish and Game Commission to designate rare and endangered plant species and to notify landowners of the presence of such species. Section 1907 of the CFGC allows the Commission to regulate the "*taking, possession, propagation, transportation, exportation, importation, or sale of any endangered or rare native plants*." Section 1908 further directs that "*[n]o person shall import into this state, or take, possess, or sell within this state, except as incident to the possession or sale of the real property on which the plant is growing, any native plant, or any part or product thereof, that the Commission determines to be an endangered native plant or rare native plant.*"

California Species Preservation Act

The California Species Preservation Act (CFGC Sections 900–903) includes provisions for the protection and enhancement of the birds, mammals, fish, amphibians, and reptiles of California. The administering agency is the CDFW.

City of Arcata

Arcata General Plan

The City of Arcata General Plan contains guidelines for biological resources within the Resource and Conservation Element. The General Plan has developed several specific Goals and related Policies that address biological resources. Table 4.3-2 contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 4.3-2 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
OS-1 Overall Open Space System	Designate, maintain, and enhance the quality, and increase the amount of permanently protected open space in the Arcata Planning Area, including: natural resource areas; resource production areas; outdoor recreation areas; and areas subject to health and safety hazards. These areas are to be protected, linked together in a network wherever practical for accessibility, managed for resource production, and maintained for enjoyment by City residents and visitors.	OS-1d
OS-2 Natural Resources Protection & Enhancement	Designate, maintain, and enhance natural resource areas, including sensitive habitat areas, necessary to sustain plant and animal life and native biological diversity.	OS-2b
RC-1 Natural Biological Diversity/ Ecosystem Function	Set an overarching policy that emphasizes the overall value of biological diversity and the fact that all natural resources are optimized when they function as part of a healthy ecosystem.	RC-1a to RC-1h
RC-2 Streams Conservation & Management	Enhance, maintain, and restore the biological integrity of entire streamcourses (headwaters to mouth), and their associated riparian habitats, as natural features in the City's landscape.	RC-2a to RC-2h
RC-3 Wetlands Management	Enhance, maintain, and restore the biological integrity of entire streamcourses (headwaters to mouth), and their associated riparian habitats, as natural features in the City's landscape.	RC-3a to RC-3h, RC-3j, and RC-3k

Arcata Land Use Code

The City of Arcata Land Use Code addresses biological resources within Chapters 9.58 (Tree Preservation and Hazardous Tree Removal) and 9.59 (Environmentally Sensitive Habitat Areas Protection and Preservation). Table 4.3-3 below contains a list of requirements from the Arcata Land Use Code that are applicable to the proposed project.

Table 4.3-3 Applicable Land Use Code Requirements

Policy	Objective	Applicable Sub-Policies
9.58 (Tree Preservation and Hazardous Tree Removal)	Provide procedures for the filing, processing, and approval or disapproval of applications for tree removal. Establishes minimum standards and regulations to preserve and protect trees which are considered important to the character of the City of Arcata and its neighborhoods.	Sections 9.58.010 through 9.58.070

Policy	Objective	Applicable Sub-Policies
9.59 (Environmentally Sensitive Habitat Areas Protection and Preservation)	Establishes minimum standards and regulations to protect Environmentally Sensitive Habitat Areas (ESHA). Ensures that any proposed subdivision, land use or development adjacent to or capable of affecting ESHA will not degrade these resources or diminish their structure, function, and natural processes. Per Sections 9.59.050 of the Arcata Land Use Code, Environmental Buffer Areas from streams in an existing developed area shall extend a minimum setback of 25 feet outward on both sides of the stream, measured from the top of bank, or the area bounded by the FEMA Flood Zone A. New detention basins are an allowable use/activity within the EBA for streams but shall not exceed 50% of the setback area and not be located within 25 feet of the top of bank of the stream. Per Sections 9.59.060 of the Arcata Land Use Code, Environmental Buffer Areas (EBAs) from wetlands in an existing developed area shall extend a minimum setback of 50 feet upland of the wetland boundary. New detention basins are an allowable use/activity within the EBA for wetlands but shall not exceed 50% of the setback area and not be located within 25 feet of the delineated wetland boundary.	Section 9.59.010 through 9.59.100

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact to biological resources is considered to be significant if it meets any of the following criteria.

If the project would:

- 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 CDFW or USFWS;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community in local or regional plans, polices, or regulations, or by the CDFW or USFWS;
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- 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;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Proposed Project

Finding 4.3.1: 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 CDFW or USFWS.

Discussion:
The project proposes a residential development on an elevated terrace above the Arcata Bottom area that was previously disturbed by industrial and residential development. The project site contains very little habitat for plant or animal species except for the undeveloped western portion of the site. This area of the site is approximately 15-20 feet lower in elevation and contains a variety of native and non-native vegetation, a drainage ditch, and a small wetland area (see Figures 4.3A through 4.3D).

A Biological Review, including a field survey, was completed by Natural Resources Management (NRM) Corporation (Appendix O) for the proposed project, which addressed the environmentally sensitive resources that occur on the site. Since the elevated portion of the project site is highly disturbed and does not contain potential habitat for protected plant and animal species, the report focuses on the 1.4 acre undeveloped western portion of the project site.

Plant Species
Based on the Biological Review prepared by Natural Resources Management (NRM) Corporation (Appendix O), no plant species protected by federal and state regulations were observed at the project site. Plant species observed on-site were characteristic of a disturbed environment. Based on the existing disturbed conditions at the project site, it is not anticipated

that the project will have a substantial effect, either directly or indirectly through habitat modifications, on any plant species identified as a candidate, sensitive, or special-status species.

Animal Species
As noted above, the majority of the project site is an elevated developed terrace that does not contain any potential habitat. The undeveloped western portion of the site contains a variety of native and non-native vegetation, a drainage ditch, and a wetland area.

Based on the Biological Review prepared by Natural Resource Management (NRM) Corporation (Appendix O), the undeveloped western portion of the project site contains potential habitat that would most likely be used by amphibians (e.g. Northern red-legged frog and Foothill yellow-legged frog) and nesting birds seasonally (e.g. herons and egrets). The list of wildlife species with potential habitat at the project site is shown in Table 4.3-1 in the Environmental Setting. No special-status wildlife species were observed on the project site during the survey conducted by NRM (Appendix O, Pgs. 4-5). A great blue heron (*Ardea Herodias*) was observed circling above the site during the survey, which is a State Species of Special Concern.

In addition, various species of birds, mammals, amphibians, and fish protected by federal and state regulations have potential habitat along Janes Creek and the associated riparian zone to the north of the project site.

The project proposes to develop the elevated, disturbed portion of the project site with a student housing project. As described in the Geotechnical Investigation prepared by Geocon Consultants, Inc. (Appendix M), grading activity for the project will include rebuilding much of the western slope on the property with engineered fill. In addition, a stormwater system improvement is proposed to occur on the undeveloped western portion of the project site which includes the construction of an overflow pipe from the infiltration basin to the bottom of the slope. As such, direct impacts to amphibians and nesting birds protected by federal or state regulations, and/or their nests, eggs, or young, could potentially occur from the proposed construction activity.

Due to the potential for protected species to exist on the western portion of the project site, surveys by a qualified biologist will occur prior to the issuance of a building permit for the project. If any of these species are observed at or directly adjacent to the project site, mitigation will include establishing buffers and operational restrictions. This has been included as Mitigation Measure 4.3.1a for the proposed project.

The applicant has indicated that household pets, including cats and dogs, will be allowed in at least one of the proposed residential buildings. Household pets, particularly cats, have the potential to affect migratory birds and other wildlife that may use the habitat areas on the western portion of the project site and in the Janes Creek riparian corridor. The City of Arcata Municipal Code contains regulations concerning the keeping of animals, which address licensing, vaccination, trespassing, nuisance animals, tethering, waste disposal, etc. The future residents will be required to comply with these regulations, which will minimize potential impacts to wildlife species and their habitat from the keeping of household pets at the proposed student housing development. The requirement to comply with the regulations concerning the keeping

of animals in the City's Municipal Code, will be included as a condition of approval for the proposed project.

With the proposed mitigation measures and compliance with the City of Arcata Municipal Code, the proposed project will not 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 CDFW or USFWS.

Determination:
Less than significant impact with incorporation of mitigation measures.

Mitigation:
Implementation of the following mitigation measures would reduce the potential impacts to a less than significant level.

Mitigation Measure 4.3.1a. The applicant shall have a qualified biologist conduct a focused survey for the protected wildlife species identified in the NRM Biological Review (Appendix O; Pg. 4, Table 1) as having potential habitat on the 1.4 acre western portion of the project site, including amphibians and nesting birds. If protected wildlife species are observed at or directly adjacent to the project site, the qualified biologist shall design appropriate project activity buffer widths and operational restrictions. The survey shall be completed and submitted to the City of Arcata Community Development Department prior to issuance of the building permit for the project.

Finding 4.3.2: Have a Substantial Adverse Effect on any Riparian Habitat or Other Sensitive Natural Community in Local or Regional Plans, Polices, or Regulations, or by the CDFW or USFWS.

Discussion:
The majority of the project site is an elevated terrace (~50 feet elevation) above the Arcata Bottom that is developed with two remaining warehouse buildings from the former mill (Arcata Manufacturing Company), two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. Most of the site contains compacted gravel surfaces and very little vegetation with the exception of the undeveloped western portion of the site. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, and a small wetland area (see Figures 4.3A through 4.3D). A tributary to Janes Creek also occurs within the Janes Creek Meadows open space area to the north of the project site.

The project site generally drains to the west where it enters the drainage ditch along the western boundary of the site. There is a drainage inlet and culvert that drains surface runoff from the elevated portion of the site into the southern portion of this ditch and an adjacent depressional area. The drainage ditch is approximately 350 feet long by 5 feet wide and is mostly filled with sediment. The ditch has two drainage inlets which direct the runoff to an 18-inch concrete pipe

that heads west towards Maple Lane (see Figure 4.3D). Stormwater from the project site is directed to a tributary to Janes Creek, referred to as Sunset Creek, several hundred feet southwest of the site.

The ditch on the western portion of the site is irregularly sloped, which causes the ponding of water in the winter. A wetland delineation of the project site was conducted by Natural Resource Management (NRM) Corporation (Appendix P) in the winter and spring of 2016 and spring of 2017 which identified approximately 0.21 acres (9,148 s.f.) of two- and three-parameter wetlands on the western portion of the project site within and adjacent to the drainage ditch and an adjacent depressional area (see Figure 4.3C).

Although, the drainage ditch on the western boundary of the site contains riparian vegetation, it is part of the City's existing stormwater infrastructure. For this reason, the drainage ditch is not identified as a protected watercourse in Figure RC-a of the Arcata General Plan and setbacks are not required from the ditch. To ensure the drainage ditch has adequate capacity to convey stormwater runoff, it is proposed to be maintained by the City of Arcata as part of their Long Term Drainage Maintenance Program (Site #14 in the mapping [Sheet 3 of 10] for the City's Long Term Drainage Maintenance Program). A Mitigated Negative Declaration was adopted by the City of Arcata for the Drainage Maintenance Program in March 2017 (SCH# 2017022003).

The project proposes to develop the elevated, disturbed portion of the project site with a student housing project. As described in the Geotechnical Investigation prepared by Geocon Consultants, Inc. (Appendix M), grading activity for the project will include rebuilding much of the western slope on the property with engineered fill. This grading activity will occur outside of the boundaries of the delineated wetlands and the drainage ditch on the western boundary of the site. In addition, a stormwater system improvement is proposed to occur on the undeveloped western portion of the project site, which includes the construction of an overflow pipe from the infiltration basin to the bottom of the slope. As shown on the Conceptual Engineering Plan prepared by Manhard Consulting (Appendix N), the proposed overflow pipe for the infiltration basin will be setback approximately 75 feet from the drainage ditch and approximately 40 feet from the wetlands. As such, the proposed project will not significantly impact riparian habitat on the western portion of the project site.

As noted above, a tributary to Janes Creek occurs within the Janes Creek Meadows open space area to the north of the project site. Per Sections 9.59.050.A.1 of the Arcata Land Use Code, Environmental Buffer Areas from streams in 'existing developed areas' shall extend a minimum setback of 25 feet outward on both sides of the stream, measured from the top of bank, or the area bounded by the FEMA Flood Zone A. Per Sections 9.59.050.A.2 of the Arcata Land Use Code, Environmental Buffer Areas from streams in 'undeveloped areas' shall extend a minimum setback of 25 feet outward on both sides of the stream, measured from the top of bank, or the area bounded by the FEMA Flood Zone A. New detention basins are an allowable use/activity within the EBA for streams but shall not exceed 50% of the setback area and not be located within 25 feet of the top of bank of the stream. The setback requirements for 'existing developed areas' (minimum 25 feet) would apply to the elevated, developed portion of the project site and the setback requirements for 'undeveloped areas' (minimum 100 feet) would apply to the western, undeveloped portion of the project site. As shown on the Conceptual Engineering Plan

prepared by Manhard Consulting (Appendix N), no portion of the project will occur within the creek setbacks required by the Arcata Land Use Code.

As described in Chapter 1 (Introduction), the project proposes various sources of new outdoor lighting (street, pedestrian-scale, security, and buildings). If not designed properly designed, the proposed outdoor lighting could shine on the Janes Creek riparian corridor which is designated as an Environmentally Sensitive Habitat Area (ESHA) in the City of Arcata General Plan. To minimize potential impacts, the project proposes outdoor lighting consistent with the City's design guidelines, Section 9.30.070 (Outdoor Lighting) of the Arcata Land Use Code, and the recommendations of the International Dark-Sky Association (IDA), which includes standards for fixtures, shielding, wattage, placement, height, and illumination levels. To comply with these requirements, lighting for the project will be the minimum lumens necessary, directed downward, shielded, and pedestrian level when feasible. This will ensure lighting is contained within the site and does not cause significant lighting impacts for the Janes Creek riparian corridor.

Therefore, the proposed project will not have a substantial adverse effect on any riparian habitat or other sensitive natural community in local or regional Plans, polices, or regulations, or by the CDFW or USFWS.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.3.3: Have a Substantial Adverse Effect on Federally Protected Wetlands as Defined by Section 404 of the Clean Water Act (Including, but not Limited to, Marsh, Vernal Pool, Coastal, etc.) Through Direct Removal, Filling, Hydrological Interruption, or Other Means.

Discussion:
Based on the wetland delineation conducted by Natural Resources Management (NRM) Corporation (Appendix P), the project site contains 0.21 acres (9,148 s.f.) of two- and three-parameter wetlands on the western portion of the site within and adjacent to a drainage ditch (see Figure 4.3C). This wetland area is seasonally wet with standing water during winter and spring months.

The project proposes to develop the elevated, disturbed portion of the project site with a student housing project. As described in the Geotechnical Investigation prepared by Geocon Consultants, Inc. (Appendix M), grading activity for the project will include rebuilding much of the western slope on the property with engineered fill. This grading activity will occur outside of the boundaries of the delineated wetlands. As described in Chapter 1 (Introduction) of the EIR, as part of the stormwater system for the development, an infiltration basin is proposed to be constructed in the upper, southwest corner of the site. The infiltration basin will overflow to the

lower, western portion of the site to the City's existing stormwater infrastructure. The design of the infiltration basin is shown on the Conceptual Engineering Plan prepared by Manhard Consulting (Appendix N). As shown on the Conceptual Engineering Plan, the proposed overflow pipe for the infiltration basin will be setback approximately 40 feet from the wetland area on the project site. This complies with Section 9.59.060.B.8 of the Arcata Land Use Code, which allows stormwater basins within 25 feet of wetland boundaries. The City of Arcata General Plan PEIR (Pg. 6-8) concludes that compliance with the Resource Conservation and Management Element Policies of the General Plan, which are implemented through the Arcata Land Use Code, will reduce potential impacts to wetlands to a less than significant level. As designed and in compliance with the requirements of the Arcata Land Use Code, the proposed project will not impact the delineated two- and three-parameter wetlands on the western edge of the project site.

Therefore, the proposed project will not have a substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water Act (Including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.3.4: 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.

Discussion:
The project site is an approximate 11-acre site that was historically used for industrial and residential uses. The majority of the project site is an elevated terrace (~50 feet elevation) above the Arcata Bottom that is developed with two remaining warehouse buildings from the former mill (Arcata Manufacturing Company), two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. Most of the site contains compacted gravel surfaces and very little vegetation with the exception of the undeveloped western portion of the site. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, and a small wetland area. Figures 4.3A and 4.3B are pictures showing the western edge of the project site.

Due to the developed condition of the project site, the only potential wildlife corridor on the site is on the undeveloped western portion of the site. As described in the NRM Biological Review (Appendix O), the undeveloped western portion of the project site contains potential habitat that would most likely be used by amphibians (e.g. Northern red-legged frog and Foothill yellow-

legged frog) and nesting birds seasonally (e.g. herons and egrets). However, use of this area as a wildlife corridor is minimized by the following factors: 1) the small size and irregular shape of the area; 2) metal and wood fencing that is located on all sides of the area; and 3) the surrounding residential and industrial development.

As described above, grading activity and stormwater improvements will occur on the slope on the western portion of the site. These improvements are not anticipated to interfere with the movement of fish or wildlife species. However, due to the potential for protected species to exist at or adjacent to the project site, surveys by a qualified biologist will occur prior to the issuance of a building permit for the project. If any of these species are observed at or directly adjacent to the project site, mitigation will include establishing buffers and operational restrictions. This has been included as Mitigation Measure 4.3.1a for the proposed project.

With the proposed mitigation measures, the proposed project will not 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.

Determination:
Less than significant impact with incorporation of mitigation measures.

Mitigation:
Implementation of the following mitigation measures would reduce the potential impacts to a less than significant level.

Same as ***Mitigation Measure 4.3.1a.***

Finding 4.3.5: Conflict with any Local Policies or Ordinances Protecting Biological Resources, such as a Tree Preservation Policy or Ordinance.

Discussion:
The Arcata General Plan Resource Conservation Element has been developed in order to protect biological resources. The proposed project is consistent with Arcata General Plan Resource Conservation Policies RC-1, Natural Biological Diversity/Ecosystem Function, RC-2 Streams Conservation and Management, RC-3 Wetlands Management, and RC-7 Water Resources Management, by delineating and protecting sensitive habitat (including streams and two- and three- parameter wetlands), conducting biological surveys, and mitigating for potential impacts to amphibians and nesting birds that could be impacted during construction activities. See further discussion under Findings 4.3.1 to 4.3.4 above.

Chapter 9.58 (Tree Preservation and Hazardous Tree Removal) of the Arcata Land Use Code contains regulations governing the removal of trees greater than 16 inches in diameter or the removal or relocation of a group of 30 or more trees with diameters greater than 10 inches. Most of the larger trees on the site occur within the undeveloped western portion of the site and will not be impacted by the proposed project. However, there is the potential for removal of trees meeting these criteria as part of construction activity on the slope on the western portion of the

project site. If this were to occur, the applicant would be required to submit a Tree Removal Permit application to the City of Arcata in compliance with Sections 9.58.030 and 9.58.050 of the Land Use Code and Policies D-3j and D-4d of the General Plan. These regulations and policies allow the City to require mitigation including, but not limited to, tree replacement, the removal of invasive vegetation, erosion control measures, and biological surveys to ensure that the trees do not contain active nesting or roosting sites. The project will be conditioned to require submittal of a Tree Removal Permit application, as applicable, to ensure the proposed project complies with Chapter 9.58 of the Land Use Code.

Therefore, in compliance with the City of Arcata General Plan and Land Use Code, the proposed project will not conflict with any local policies or ordinances protecting biological resources or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved plan applicable to the project area.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.3.6: Conflict with the Provisions of an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other Approved Local, Regional, or State Habitat Conservation Plan.

Discussion:
According to the U.S. Fish & Wildlife Service Environmental Conservation Online System (ECOS), the project site is not located within the boundaries of a Habitat Conservation Plan. Habitat Conservation Plans in Humboldt County include the following: 1) Green Diamond Resource Company California Timberlands & Northern Spotted Owl (formerly Simpson Timber Company); 2) Humboldt Redwood Company (formerly Pacific Lumber, Headwaters); and 3) Regli Estates. These Habitat Conservation Plans primarily apply to forest lands in the County. The project site is approximately 0.5 mile from the nearest forest lands which occur on the eastern side of Highway 101.

According to the California Department of Fish & Wildlife (CDFW) website, the project site is not located in the boundaries of a Natural Community Conservation Plan. The conservation plans for Humboldt County listed on California Regional Conservation Plans Map on the CDFW website include the Green Diamond and Habitat Conservation Plans.

Therefore, the proposed project will not conflict with any local policies or ordinances protecting biological resources or conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved plan applicable to the project area.

Determination:
Less than significant impact.

Mitigation:
None required.

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SECTION 4.4 AGRICULTURE AND FORESTRY RESOURCES

This section evaluates the potential impacts related to agriculture and forest resources with implementation of the project. The Environmental Setting section describes the existing setting as it relates to agricultural and forest resources in the project area. The Regulatory Framework section describes the applicable regulations at the federal, state, and local level. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to agriculture and forest resources, and identifies the significance of impacts. Where appropriate, mitigation is presented to reduce impacts to less than significant levels.

ENVIRONMENTAL SETTING

Agricultural Resources

Humboldt County was ranked 33rd in terms of gross agricultural production for California counties, recording a value of $174,422,000 for its total gross agricultural production in 2012 (CDFA, 2012). The project site is located at the edge of the Arcata Bottom area. The Arcata Bottom is a significant contributor to Humboldt County agricultural production with extensive dairy lands, Sun Valley Floral Farms, and specialty organic farms.

The project site is not in agricultural production or under a Williamson Act contract. The project site was used as a lumber mill in the past, but has not been used for this purpose since the 1960s. Prior to this, the project site may have been used for grazing activities. Most of the project site is currently home to the Craftsman's Mall – a collection of artisan and light industrial rental spaces within wood-framed warehouse buildings. Two single-family residences also exist on the project site on parcels 507-372-003 and 505-022-012. Six of the seven project parcels are currently designated and zoned Industrial Limited (IL). Parcel 503-372-006 is currently designated and zoned Residential Low Density (RL).

Surrounding land uses include single-family residential development to the north, west, and south, industrial uses to the north, and Highway 101 to the east. According to the Humboldt County Web GIS system, the closest Williamson Act Preserve to the project site is on parcels 507-092-003, -033 which are approximately 500 feet west of the project site along Alliance Road. These parcels are zoned Agriculture Exclusive (AE) by the City of Arcata.

Humboldt County has not yet been mapped by the California Department of Conservation's (DOC's) Farmland Mapping and Monitoring Program (FMMP); therefore, lands in the county have not been rated as to its agricultural importance. The U.S.D.A. Natural Resource

Conservation Service (NRCS) has also not yet mapped the project site as part of the National Cooperative Soil Survey update based on information available on the Web Soil Survey website (www.websoilsurvey.sc.egov.udsa.gov). According to the Wetland Delineation completed by Natural Resources Management (NRM) Corporation (Appendix P) for the project site, soils on the undeveloped western portion of the project site are classified as the Dungan series, which consist of very deep well-drained soils on high floodplain steps, alluvial fans, and fan remnants on alluvial plains.

Forestry Resources

There are 1.2 million acres of private forested land and 0.3 million acres of public forested land in Humboldt County, covering more than 80 percent of the county's land area. Roughly 990,000 acres are zoned Timber Production Zone (TPZ), two-thirds of which are held by timber companies. Dedicated timber management of these lands and unique growing conditions have consistently made Humboldt County the State's leading timber producer, contributing more than 20 percent of the State's total since 2000 (Humboldt County, 2012).

The eastern portion of Arcata is located on forested slopes of Fickle Hill Ridge. The slopes contain mostly second growth conifer stands. These forested lands are both publicly and privately held. The City of Arcata owns two separate tracts of forest land that comprise approximately 1,125 acres. Together, the publicly owned Arcata Community and Jacoby Creek Forests constitute a significant ecological, recreational, economic, and educational resource for the citizens of Arcata and the surrounding region.

The project site is not on forest land and is not zoned for timber production. The majority of the project site is an elevated terrace (~50 feet elevation) above the Arcata Bottom that is developed with two remaining warehouse buildings from the former mill (Arcata Manufacturing Company), two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. Most of the site contains compacted gravel surfaces and very little vegetation with the exception of the undeveloped western portion of the site. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, and a small wetland area. The project site is zoned for industrial and residential uses. Surrounding land uses include single-family residential development to the north, west, and south, industrial uses to the north, and Highway 101 to the east.

REGULATORY FRAMEWORK

Federal

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) requires federal agencies to minimize the extent to which federal programs contribute to unnecessary and irreversible conversion of farmland to nonagricultural uses. Farmland subject to FPPA requirements does not have to be currently used for cropland. Areas under protection include forestland, pastureland, cropland, or other land, but not bodies of water or urban, developed land. The FPPA does not authorize the Federal Government to regulate the use of private property, or in any way affect the uses of private property or the rights of property owners.

The FPPA is not applicable to projects that are planned and completed without the assistance of a Federal agency. As the proposed project is a private development, on private lands, and not being developed with the assistance of the Federal Government, the FPPA is not applicable to this project.

Natural Resource Conservation Service (NRCS)

There is not a single definition of prime agricultural land. The Land Capability Classification System, the Land Inventory and Monitoring System, and the Storie Index Rating system are each used by the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service in its effort to survey soils and assess agricultural lands throughout the United States. Prime farmlands are defined by the USDA in the following manner:

> Prime farmlands are soils that are best suited to food, feed, forage, fiber, and oilseed crops. Such soils have properties that favor the economic production of sustained high yields of crops. The soils need only to be treated and managed by acceptable farming methods.

The following are two definitions of urban land found on the NRCS website that further suggest that the project site would likely not be considered as prime agricultural land by the NRCS:

> Urban Land. Areas so altered or obstructed by urban works or structures that identification of soils is not feasible.
>
> Urban and built-up areas. A land cover/use category consisting of residential, industrial, commercial, and institutional land; construction sites; public administrative sites; railroad yards; cemeteries; airports; golf courses; sanitary landfills; sewage treatment plants; water control structures and spillways; other land used for such purposes; small parks (less than 10 acres) within urban and

built-up areas; and highways, railroads, and other transportation facilities if they are surrounded by urban areas. Also included are tracts of less than 10 acres that do not meet the above definition but are completely surrounded by Urban and built-up land. Two size categories are recognized in the NRI: areas of 0.25 acre to 10 acres, and areas of at least 10 acres.

State of California

Department of Conservation (DOC)

The California Department of Conservation (DOC), Division of Land Resource Protection works to assist landowners and local governments in the identification and protection of agricultural lands. The program is intended to be a consistent resource to land managers and decision makers using impartial data to evaluate the current status of agricultural lands in California. The DOC has mapped and designated farmlands in cooperation with county governments through the Farmland Mapping and Monitoring Program (FMMP). The FMMP designates lands in the following categories, from greater to lower agricultural value (as a general rule). Those designations are (1) Prime, (2) Farmland of Statewide Importance, (3) Unique Farmland, (4) Farmland of Local Importance, (5) Grazing Land, (6) Urban and Built-Up Land, (7) Other Land, and (8) Water. Due to the developed condition of the project site, it would be designated as Urban and Built-Up Land.

California Department of Forestry and Fire Protection (CAL FIRE)

California is rich in natural resources. Of the ±85 million acres classified as wildlands, nearly 17 million are commercial forestlands; about half are privately-owned and half government-owned. In addition to timber, the state's wildlands also provide valuable watershed, wildlife habitat, and recreation resources.

CAL FIRE administers state and federal forestry assistance programs for landowners, demonstrates forest management practices on eight demonstration state forests, enforces the California Forest Practice Act on all non-federal timberlands, provides research and educational outreach to the public on forest pests such as Sudden Oak Death, and coordinates efforts for fuel reduction to reduce the risk of fire and improve the quality of California ecosystems.

California Forest Legacy Program. The California Forest Legacy Program Act of 2007 was developed to recognize the importance of California forest lands and provide a means to allow the State and owners of private forest lands to enter into conservation easements whereby private owners can voluntarily restrict development of their forest lands, with compensation from the State. For the meaning of the Act, Section 12220(g), describes “forest land” as land that can support, under natural conditions, 10 percent native tree cover of any species, including hardwoods, and that allows for the preservation or management of forest-related resources such as timber, aesthetic value,

fish and wildlife, biodiversity, water quality, recreational facilities and other public benefits.

Timberland. Timberland in California is managed under the provisions of the Z'berg-Nejedly Forest Practice Act of 1973, also referred to as the "Forest Practice Act". Timberland is considered lands that are capable of growing a crop of commercial tree species. Specifically, the California Forest Practices Act defines timberland as *"'Timberland' means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees."* (Public Resources Code [PRC] 4526).

CAL FIRE has oversight responsibility for private forest and timberlands in California. When a private landowner decides to convert their timberlands to non-timber growing uses (including but not limited to agricultural, residential, commercial, etc.) the owner must file a Timber Conversion Permit (TCP) with CAL FIRE, including environmental documentation such as an EIR. As specified in the regulations (CCR, Section 1100(g)), timberland conversion means the specific conversion or transformation of timberlands into non-timber growing purposes; such as timberland converted to vineyards.

CAL FIRE also has oversight and regulatory authority to approve private timber operations under Timber Harvest Plans (THP), including the conversion of timberlands to non-timber purposes. Both the TCP and the Exemption require the timber harvest to be developed under the direction and oversight of a California Registered Professional Forester (RPF).

City of Arcata

Arcata General Plan

The City of Arcata General Plan contains guidelines for the management and protection of agriculture and forest lands in the Land Use Element and the Resource Conservation and Management Element. Table 4.4-1 below contains a list of policies from the Arcata General Plan that are applicable to the proposed project.

Table 4.4-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
LU-6 Agricultural and Natural Resource Lands	Preserve and promote the sustained production of natural resources; preserve and promote the agricultural, forest, and aquaculture lands; and protect public natural resource/open space lands, including stream courses, wetlands, tidelands, and open space areas. Provide for complementary uses including farm housing, processing of agricultural and aquaculture products, and access for	LU-6c

Policy	Objective	Applicable Sub-Policies
	timber harvesting, in designated areas.	
RC-5 Agricultural Resources Management	Protect and enhance agricultural uses on prime agricultural lands within the City, and encourage more productive agricultural use of agriculturally suitable lands.	RC-5a
RC-6 Forest Resources Management	Protect and enhance private and public forest lands (Community and Jacoby Creek) to maintain the integrity of the ecosystem while providing timber production, recreation, and habitat values.	RC-6f

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact is considered to be significant if the project would:

- 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.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- 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.

Proposed Project

Finding 4.4.1: 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.

Discussion:
The Farmland Mapping and Monitoring Program of the California Resources Agency have not yet mapped farmland in Humboldt County (www.consrv.ca.gov). The U.S.D.A. Natural Resource Conservation Service (NRCS) has also not yet mapped the project site as part of the National Cooperative Soil Survey update based on information available on the Web Soil Survey website (2016).

The project site was used as a lumber mill in the past, but has not been used for this purpose since the 1960s. Prior to this, the project site may have been used for grazing activities. Most of the project site is currently home to the Craftsman's Mall – a collection of artisan and light industrial rental spaces.

The majority of the project site is an elevated terrace (~50 feet elevation) above the Arcata Bottom that is developed with two remaining warehouse buildings from the former mill (Arcata Manufacturing Company), two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. Most of the elevated portion of the site contains compacted gravel surfaces. Surrounding land uses include single-family residential development to the north, west, and south, industrial uses to the north, and Highway 101 to the east.

According to the Wetland Delineation completed by Natural Resources Management (NRM) Corporation (Appendix P) for the project site, soils on the undeveloped western portion of the project site are classified as the Dungan series, which consist of very deep well-drained soils on high floodplain steps, alluvial fans, and fan remnants on alluvial plains. This area of the site may have the potential to be used for limited agricultural purposes (e.g. grazing), but due to its disturbed condition, limited access, small size, and surrounding development, would not be considered an economically viable unit of agricultural land.

Therefore, the proposed project will not 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.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.4.2: Conflict with Existing Zoning for Agricultural Use, or a Williamson Act Contract.

Discussion:
The project site is currently zoned by the City of Arcata for limited industrial and residential development. The project proposes to rezone the project site for high-density residential development. Based on the existing and proposed zoning for the parcels that will be developed as part of the project, the project will not conflict with zoning for agricultural use.

There is no Williamson Act contract applicable to the project site or the parcels that will be developed with off-site improvements. According to the Humboldt County Web GIS system, the closest Williamson Act Preserve to the project site is on parcels 507-092-003, -033 which are approximately 500 feet west of the project site along Alliance Road. As such, the project will not conflict with an existing Williamson Act contract.

Therefore the proposed project will not conflict with existing zoning for agricultural use, or a Williamson Act contract.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.4.3: Conflict with Existing Zoning for, or Cause Rezoning of, Forest Land (as Defined in Public Resources Code Section 12220(g)), Timberland (as Defined by Public Resources Code section 4526), or Timberland Zoned Timberland Production (as defined by Government Code section 51104(g)).

Discussion:
This project will not conflict with existing forestland or timberland zoning because the project parcels do not contain timberland and are zoned by the City of Arcata for limited industrial and residential development. The closest forest lands are approximately 0.5 miles from the project site on the east side of Highway 101. The project also does not propose a zone change that would convert existing forest or timberland zoning.

Therefore, the proposed project will not conflict with existing zoning for, or cause rezoning of, forest land or timberland.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 4.4.4: Result in the Loss of Forest Land or Conversion of Forest Land to Non-Forest Use.

Discussion:
The project site is located in the northern central portion of the City of Arcata on parcels that were historically used for industrial and residential uses. The project site does not contain forestland and is not zoned for timber production. The closest forest lands are approximately 0.5 miles from the project site on the east side of Highway 101.

Therefore, the proposed project will not result in the loss of forestland or conversion of forest land to non-forest use.

Determination:
No impact.

Mitigation:
None required.

Finding 4.4.5: 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.

Discussion:
This project proposes a new purpose-built, student housing community comprised of approximately 240 units / 800 beds in four-story buildings on a former industrial site that is within the north central portion of the City of Arcata directly west of Highway 101 and approximately 0.5 miles from the Humboldt State University campus.

The project site is located on an elevated terrace above the Arcata Bottom area that is surrounded by urban development. Since the closest agricultural land to the project site is designated as a Williamson Act Preserve, it is not anticipated that these lands will be converted to non-agricultural use as a result of the proposed project. The nearest forestlands to the project site are approximately 0.5 miles away on the east side of Highway 101 and are developed with low-density residential neighborhoods. Since the nearest forestlands are managed as private timberland or as the Arcata Community Forest, it is not anticipated that these lands will be converted to non-forest use as a result of the proposed project.

Therefore, the proposed project would not 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.

Determination:
Less than significant impact.

Mitigation:
None required.

REFERENCES

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SECTION 4.5 MINERAL RESOURCES

This section evaluates the potential impacts related to mineral resources during construction and operation of the project. To provide the basis for this evaluation, the Environmental Setting section describes the existing mineral resources for the project area and the Regulatory Framework section describes the regulatory background that applies to the project. The Impact Analysis section establishes the thresholds of significance, evaluates potential impacts to mineral resources, and identifies the significance of impacts. Where appropriate, mitigation measures are presented to reduce impacts to less than significant.

ENVIRONMENTAL SETTING

Mineral Resources

Humboldt County has a wealth of mineral resources. There are 93 extraction sites around the county producing sand and gravel, metals, stone, and clay. Mining provides an input of vital importance to a number of key activities in the construction industry, primarily the raw materials for concrete used in foundations. Mining materials are also used for road construction, maintenance and repair, and other important uses (Humboldt County, 2012).

The mineral resources in the City of Arcata planning area are primarily aggregate deposits found along the Mad River and in the Arcata Bottom. Areas along the Mad River, within and upstream of the City's Sphere of Influence, are currently used for aggregate resource extraction (gravel). The Arcata Bottom is not an aggregate reserve. Other than instream aggregate, no locally important mineral resources have been identified in Arcata. No mineral of state importance has been identified in or near the City's planning area (Arcata General Plan PEIR, Pg. 5-43).

Project Site

The project site is an approximately 11-acre site that was historically used for industrial and residential uses. A lumber mill (Arcata Manufacturing Company) was developed on the site in the 1940s and operated until the 1960s. Most of the project site is currently home to the Craftsman's Mall – a collection of artisan and light industrial rental spaces.

The majority of the project site is an elevated terrace (~50 feet elevation) above the Arcata Bottom that is developed with two remaining warehouse buildings from the former mill (Arcata Manufacturing Company), two residential units, and several smaller metal and wood structures used for storage. The site is also used for the storage of vehicles, storage containers, mobile homes, and construction and scrap materials. Most of the site contains compacted gravel

surfaces and very little vegetation with the exception of the undeveloped western portion of the site. The western portion of the site is 15-20 feet lower than the majority of the site and is an undeveloped area with a variety of native and non-native vegetation, a drainage ditch, and a small wetland area.

Based on the Geotechnical Investigation prepared by Geocon Consultants, Inc. (Appendix M) for the project, the soils on the site differ between the elevated portion of the site (~50 feet) and the lower elevation (~35 feet) western portion of the site. The majority of the project site is elevated and contains terrace deposits which generally consist of very soft to stiff silts and clays, and loose to very dense silt sands and gravels. The lower elevation western portion of the site contains alluvial deposits from Janes Creek, which consists of very soft to medium stiff, moist to wet silts and clays, with occurrences of loose silty sands. Undocumented fill was also encountered in exploratory borings conducted throughout the site. The project site does not contain any important mineral resources.

REGULATORY FRAMEWORK

State of California

Department of Conservation (DOC)

The California Department of Conservation has statewide oversight for the development of mining and mineral production on private and state lands, with many local jurisdictions providing additional oversight and management of mineral resources through county general plans, local area plans, zoning, and related ordinances. One of the objectives of the Department of Conservation is to collect and provide data related to minerals, and that is accomplished through the Mineral Resources and Mineral Hazards Mapping Program (MRMHMP). The state has not developed mapping related to mineral resources within the area of the proposed project.

City of Arcata

Arcata General Plan

Table 4.5-1 Applicable General Plan Policies

Policy	Objective	Applicable Sub-Policies
RC-9 Soils and Mineral Resources	Conserve and manage soil and mineral resources.	RC-9c

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA Guidelines (Appendix G)

An impact to mineral resources is considered to be significant if it meets any of the following criteria.

If the project would:

- 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.
- 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.

Proposed Project

Finding 4.4.1: 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.

Discussion:
The majority of the project site is located on an elevated terrace above the Arcata Bottom area. As noted in the setting, the native soils at the site are primarily terrace deposits within some alluvial materials on the lower elevation western portion of the site. There is undocumented fill located in several areas throughout the project site. No known mineral resources have been identified on the project site.

Therefore, the proposed project will not 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.

Determination:
No impact.

Mitigation:
None required.

Finding 4.4.2: 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.

Discussion:
The majority of the project site is located on an elevated terrace above the Arcata Bottom area. The mineral resources in the City of Arcata planning area are primarily aggregate deposits found along the Mad River and in the Arcata Bottom. Figure 7-1 (Rock and Mineral Extraction Sites) of the Humboldt County Natural Resources and Hazards report completed for the County General Plan Update, does not identify the project site as a rock and mineral extraction site. No known mineral resources have been identified on the project site.

Therefore, the proposed project will not 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.

Determination:
No impact.

Mitigation:
None required.

REFERENCES

California Department of Conservation. 2016. *Mineral Resources and Mineral Hazards Mapping Program (MRMHMP).* www.conservation.ca.gov/cgs/minerals. Accessed 02/08/17.

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CHAPTER 5.

ENERGY CONSERVATION

The following Sections are included in this Chapter:

Introduction
Environmental Setting
Regulatory Framework
Impact Analysis
References

CHAPTER 5 ENERGY CONSERVATION

INTRODUCTION

CEQA GUIDLINES

Appendix F of the California Environmental Quality Act (CEQA) Guidelines requires that an EIR shall include a "*discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy*."

The goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include: 1) decreasing overall per capita energy consumption; 2) decreasing reliance on fossil fuels such as coal, natural gas and oil; and 3) increasing reliance on renewable energy sources.

Section II (EIR Contents) of Appendix F describes the contents that need to be included in an EIR to adequately address energy conservation which states, "*Potential significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the project.*" Section II provides guidance on what to discuss in the various sections of the document including the Project Description, Environmental Setting, Environmental Impacts, Mitigation Measures, Alternatives, and other CEQA considerations. For the proposed project, most of the discussion related to Energy Conservation is contained with this Chapter, with the exception of a summarized discussion in Chapter 1 (Introduction).

ENVIRONMENTAL SETTING

Humboldt County is a relatively sparsely populated rural county that lacks the strong financial resource base often associated with more metropolitan areas. It is located in a remote, rural corner of the State of California. These characteristics pose numerous constraints, including: electricity and natural gas transmission issues, fuel supply and reliability issues, limited access to energy programs, limited access to capital resources, and limited buying power in energy markets (Schatz Energy Lab, 2005; Pgs. 4-5).

However, Humboldt County's remote, rural locale offers many opportunities as well, including a potential wealth of local renewable energy resources, a strong interest in developing local energy resources, and a desire to make wise and efficient use of energy resources and to be as energy self-reliant as possible. Humboldt County is known for its strong independent spirit, and that

spirit extends to the area of energy supply and demand. Opportunities for the development of sustainable energy resources in the county include: the development of local renewable energy resources and distributed generation, increased energy efficiency efforts, the development and implementation of county-wide strategic energy planning, local management of energy supplies and services, and upgrades of energy transmission facilities (Schatz Energy Lab, 2005; Pg. 5).

In Humboldt County, energy is used as a transportation fuel and as electrical and heat energy in homes, businesses, industries, and agriculture. The majority of primary energy used in Humboldt County is imported, with the exception of biomass energy. Essentially all of the county's transportation fuels are imported. Although the majority of electricity is generated in the county, a large portion of it is generated using natural gas. The county imports about 90% of its natural gas; the rest is obtained locally from fields in the Eel River valley (Schatz Energy Lab, 2005; Pgs. 1-2).

Humboldt County is remotely located at the end of the electrical and natural gas supply grids, and this limits both energy supply options and system reliability. PG&E owns the natural gas and electricity transmission and distribution systems in Humboldt County. There is one major natural gas supply line that serves the county and four electrical transmission circuits (Schatz Energy Lab, 2005; Pg. 3).

Prior to May 2017, electricity to the project site was provided by the PG&E Humboldt Bay Generating Station (HBGS) which is located just south of the City of Eureka along Humboldt Bay. The HBGS began commercial operation in 2010 and normally runs on natural gas, with ultra-low sulfur diesel as its backup fuel. As indicated on the PG&E website (www.pge.com), the HBGS is 33 percent more efficient than the previous Humboldt Bay Power Plant (HBPP) fossil fuel units.

Beginning in May 2017, electricity service for the City of Arcata was transitioned to the Redwood Coast Energy Authority (RCEA) Community Choice Energy (CCE) program. The CCE program allows city and county governments to pool (or aggregate) the electricity demands of their communities in order to increase local control over electric rates, purchase power with higher renewable content, reduce greenhouse gas emissions, and reinvest in local energy infrastructure. The electricity continues to be distributed and delivered over the existing power lines by Pacific Gas & Electric (PG&E). The CCE program procures approximately 40% of its power from renewable and carbon-free sources, which is approximately 5% more renewable energy than the power sources previously provided by PG&E (RCEA, 2017). In addition, customers can choose to opt up to a premium service called Repower+, which is 100% renewable energy at only $0.01 more per kilowatt hour (kWh). The proposed project will be automatically enrolled in the RCEA CCE program and will contribute towards increasing the amount of renewable power placed on California's grid, which has the effect of reducing greenhouse gas emissions and stimulating new renewable development in our region and State.

REGULATORY FRAMEWORK

Federal and state agencies regulate energy use and consumption through various means and programs. At the federal level, the U.S. Department of Transportation, the U.S. Department of Energy, and the U.S. Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. At the state level, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from setting state fuel economy standards for new on-road motor vehicles. Some of the more relevant federal and state energy-related laws and plans are discussed below.

Federal

Energy Policy and Conservation Act

Enacted in 1975, this legislation established fuel economy standards for new light-duty vehicles sold in the United States. The law placed responsibility on the National Highway Traffic and Safety Administration (a part of the U.S. Department of Transportation) for establishing and regularly updating vehicle standards. The U.S. Environmental Protection Agency (U.S. EPA) administers the Corporate Average Fuel Economy (CAFE) program, which determines vehicle manufacturers' compliance with existing fuel economy standards.

Energy Policy Act of 2005

Passed by Congress in July 2005, the Energy Policy Act includes a comprehensive set of provisions to address energy issues. The act includes tax incentives for the following: energy conservation improvements in commercial and residential buildings; fossil fuel production and clean coal facilities; and construction and operation of nuclear power plants, among other things. Subsidies are also included for geothermal, wind energy, and other alternative energy producers. It directs the Department of Energy to study and report on alternative energy sources such as wave and tidal power, and includes funding for hydrogen research. The act also increases the amount of ethanol required to be blended with gasoline, and extends daylight saving time (to begin earlier in spring and end later in fall) to reduce lighting requirements. It also requires the federal vehicle fleet to maximize use of alternative fuels. The Act further includes provisions for expediting construction of major energy transmission corridors, such as high-voltage power lines, and fossil fuel transmission pipelines.

Energy Independence and Security Act of 2007

Signed into law in December 2007, this broad energy bill most notably included an increase in auto mileage standards, and also addressed biofuels, conservation measures, and building efficiency. The bill amended the CAFE standards to mandate significant improvements in fuel efficiency (i.e., average fleetwide fuel economy of 35 miles per gallon by 2020, versus the previous standard of 27.5 mpg for passenger cars and 22.2 mpg for light trucks). Another provision includes a mandate to increase use of ethanol and other renewable fuels by 36 billion gallons by 2022, of which 21 million gallons is to include advanced biofuels, largely cellulosic ethanol, that have 50 to 60 percent lower GHG emissions. The bill also includes establishment of a new energy block grant program for use by local governments in implementing energy-efficiency initiatives, as well as a variety of green building incentives and programs.

EnergyStar Program

In 1992, the U.S. EPA introduced Energy Star as a voluntary labeling program designed to identify and promote energy-efficient products to reduce GHG emissions. The program applies to major household appliances, lighting, computers, and building components such as windows, doors, roofs, heating and cooling systems. Under this program, appliances that meet specifications for maximum energy use established under the program are certified to display the Energy Star label. In 1996, U.S. EPA joined with the Energy Department to expand the program, which now also includes qualifying commercial and industrial buildings, and homes.

State

Energy Action Plan

In 2003, the three key energy agencies in California— the CEC, the California Power Authority (CPA), and the CPUC— jointly adopted an Energy Action Plan (EAP) that listed goals for California's energy future and set forth a commitment to achieve these goals through specific actions. In 2005, the CPUC and the CEC jointly prepared the EAP II to identify the further actions necessary to meet California's future energy needs. EAP II describes the priority sequence for actions to address increasing energy needs, also known as "loading order." The loading order identifies energy efficiency and demand response as the state's preferred means of meeting growing energy needs. After cost-effective efficiency and demand response, the state is to rely on renewable sources of power and distributed generation, such as combined heat and power applications. To the extent that efficiency, demand response, renewable resources, and distributed generation are unable to satisfy increasing energy and capacity needs, the EAP II supports the use of clean and efficient fossil-fired generation. The plan recognizes that concurrent improvements are required to the bulk electricity transmission grid and distribution facility infrastructure to support growing demand centers and the interconnection of new generation, both on the utility and customer side of the meter. The EAP II identifies key actions to be taken in all of these areas in order to meet the state's growing energy requirements. The plan recommendations are implemented by the governor through executive orders, by the legislature through new statutes, and by the responsible state agencies through regulations and

programs. Progress on EAP II implementation is reported in successive biennial updates of the plan.

Title 24, Energy Efficiency Standards

Title 24, which was promulgated by the CEC in 1977 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, provides energy efficiency standards for residential and nonresidential buildings. These standards conserve electricity and natural gas and prevent the state from having to build more power plants. The success of these standards and other energy efficient efforts is a significant factor in California's per capita electricity use remaining flat over the last 40 years while the rest of the country's use continues to rise. The energy efficient standards have saved Californians billions in reduced electricity bills since 1977.

California's Building Energy Efficient Standards are updated on an approximately three-year cycle. The most recent update was in 2016 which took effect on January 1, 2017. Pursuant to the California Building Standards Code and the Title 24 Energy Efficiency Standards, the City of Arcata will review the design and construction components of the project's Title 24 compliance when specific building plans are submitted.

Green Building Standards Code

On January 12, 2010, the California Building Standards Commission adopted the 2010 California Green Building Standards Code, otherwise known as CALGreen. (CALGreen took effect in January 2014.) CALGreen is contained within Part 11 of the California Building Standards Code, otherwise known as the state Building Code, Title 24 of the California Code of Regulations. The list below identifies the most substantive CALGreen requirements. In addition, CALGreen encourages local governments to adopt voluntary provisions, known as Tier 1 and Tier 2 provisions, to reduce air pollutant emissions, improve energy efficiency, and conserve natural resources. If a local government adopts one of the tiers, the provisions become mandates for all new construction within that jurisdiction. CALGreen includes the following provisions:

- A 20 percent mandatory reduction in indoor water use, along with fixture-specific restrictions on water flow
- Separate indoor and outdoor water meters to measure nonresidential buildings' indoor and outdoor water use, with a requirement for moisture-sensing irrigation systems for larger landscape projects
- Diversion of 50 percent of construction waste from landfills
- Mandatory periodic inspections of energy systems (i.e., heat furnace, air conditioner and mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies
- Mandatory use of low-pollutant-emitting interior finish materials such as paints, carpet, vinyl flooring, and particleboard.

Arcata

The City of Arcata developed a Community Greenhouse Gas Reduction Plan in 2006 which set a greenhouse gas (GHG) emissions target of 20% below 2000 GHG levels by 2010. The plan was developed in part by analyzing an inventory of community-wide greenhouse gas emissions that was conducted in 2000. The plan focuses on six action areas:

1) Energy efficiency
2) Renewable energy
3) Sustainable transportation
4) Waste and consumption reduction
5) Sequestration and other methods
6) Cross-cutting approaches

In addition to reducing greenhouse gas emissions it is expected that the implementation of this plan will offer many other community benefits. These include: energy cost savings with subsequent benefits to the local economy, cleaner air, less reliance on fossil fuels and imported energy sources, and a move toward a more sustainable energy economy.

Based on an updated community-wide GHG emissions inventory conducted in 2007, City of Arcata staff estimates that the City's GHG reduction target has not been achieved within the residential, commercial, and industrial sectors.

IMPACT ANALYSIS

Impact Evaluation Criteria

CEQA GUIDELINES (APPENDIX F)

Although Appendix F is not described as a threshold for determining the significance of impact, for purposes of determining the significance of an impact in the EIR, the following criteria are used:

- Would the project result in the wasteful and inefficient use of nonrenewable resources during construction of the project.
- Would the project result in the wasteful and inefficient use of nonrenewable resources during the long-term operation of the project.

Proposed Project

Finding 5.1: Would the Project Result in the Wasteful and Inefficient Use of Nonrenewable Resources during Construction of the Project.

During demolition of the existing structures at the project site and construction of the proposed residential development, energy will be consumed in the form of diesel fuel (mobile construction equipment) and electricity (e.g. power tools). It is not possible to reasonably estimate the amount of energy consumed by construction activities, as a number of variables, which are difficult to project, influence energy consumption (length of activities, size of buildings, equipment fleet, management practices, etc.). However, measures that focus on reducing construction air pollutant emissions, noise impacts, and the generation of waste, would also reduce energy consumption.

California regulations (CCR Title 13, Sections 2449(d)(3) and 2485) limit idling from both on-road and off-road diesel-powered equipment and are enforced by the California Air Resources Board (CARB). Limitations on the idling of construction equipment will reduce the amount of fuel consumed during construction of the project.

The applicant proposes to only use construction equipment that complies with U.S. Environmental Protection Agency Tier 1 engine standards or better. Tier 1 engines have reduced emissions, increased performance, and improved fuel efficiency compared to engines that do not meet these standards.

As described in Section 2.9 (Noise) of the EIR, Section 9.30.050(D)(2) of the Arcata Land Use Code places limitations on the hours of construction activities to minimize potential noise impacts. This limitation on construction to daytime hours would not require the use of lighting and would therefore reduce the amount of diesel fuel and electricity consumed.

The applicant also proposes to recycle or salvage over 50% of the construction waste from the project. Recycling/salvaging of construction waste will reduce the amount of fuel consumed for transporting waste to landfills.

As such, the applicant proposed operating restrictions combined with local, state, and federal regulations, would reduce short-term energy demand due to project construction.

Therefore, the project as proposed and in compliance with regulatory requirements would not result in the wasteful and inefficient use of nonrenewable resources during construction of the project.

Determination:
Less than significant impact.

Mitigation:
None required.

Finding 5.2: Would the Project Result in the Wasteful and Inefficient Use of Nonrenewable Resources during Long-Term Operation of the Project.

During long-term operation of the proposed project, energy use will include electricity and natural gas consumption by the residents, energy consumption related to obtaining water, and fuel consumption by operation of vehicles. As described below, the proposed project's inherent site and design features will reduce the consumption of energy during long-term operation.

The proposed project's electricity use was estimated using the California Emissions Estimator Model (CalEEMod) (Appendix G). As described in Sections 2.7 (Air Quality) and 2.8 (Greenhouse Gas Emissions) of the EIR, the project proposes land use, community design, and water and energy conservation site and design features including the following:

- The project proposes a density of 21 units/acre which is an increase of 13 residential units/acre compared to surrounding single-family residential uses (~8 units/acre);
- To reduce the energy needs of the proposed buildings, the project seeks a Leadership in Energy and Environmental Design (LEED) Silver rating which would include energy-efficient design for windows, walls, HVAC, and lighting. Other aspects of the project that will contribute towards achieving a LEED Silver rating include: 1) infill development project away from sensitive habitats and in close proximity to mass transit; 2) on-site pedestrian/bicycle improvements; 3) bicycle storage in excess of the City's Land Use Code standards; 4) preferred off-street parking for clean fuel vehicles; 5) electric vehicle charging stations; 6) use of low flow plumbing fixtures; 7) water efficient landscaping; and 8) diversion of construction waste (see additional discussion of these measures in this chapter).
- To reduce indoor water use, the project proposes to install low flow plumbing fixtures in the residential buildings and club house.
- To reduce outdoor water use, the project proposes to install water efficient landscaping and a low flow irrigation system in compliance with the City of Arcata's Water Efficient Landscape Ordinance (WELO).

With the project design features that reduce energy use, the project would result in an estimated 950,760 kWh per year (950.8 MWh per year) of electricity and 1,045,210 kBtu per year (10,452 therm) of natural gas each year (Appendix G).

As described in the Environmental Setting, the proposed project will be subject to the California Building Standards Code and the Title 24 Energy Efficiency Standards. It has generally been the presumption throughout the State of California that compliance with Title 24 (as well as compliance with the federal and state regulations discussed above) ensures that projects will not result in the inefficient, wasteful, and unnecessary consumption of energy.

Energy in the form of fuel (gasoline or diesel) would be consumed by vehicles associated with the project through the generation of new vehicle trips. As described in Chapter 3 (Traffic/Transportation) of the EIR, the proposed project would be expected to have a combined total daily trip generation of 1,578 trips. Due to the type of residential development proposed

(student housing community) and close proximity (0.5 miles) to Humboldt State University (HSU), it is anticipated that the majority of vehicle trips will occur between HSU and the project site.

Vehicle miles traveled (VMT) can be used to determine energy consumption based on assumptions of fuel economy and fleet mix. Based on the design measures and location, the project would generate approximately 4.42 million vehicle miles traveled (VMT) per year (Appendix G). Based on the estimated increase in VMT, the proposed project would result in an increased energy use of approximately 17.2 billion BTUs per year associated with transportation. This is based on an average of 3,885 BTUs per vehicle mile. To reduce the amount of fuel consumed for transportation, the project proposes the following measures that will encourage the use of low-emission vehicles and alternative forms of transportation:

- Twenty of the vehicle parking spaces (5% of total parking) will be reserved for clean air vehicles and twelve of the spaces (3% of total parking) will have EV-charging stations.
- The applicant proposes to provide 505 bicycle parking spaces, which is greater than four times the City's minimum requirement.
- The applicant proposes on-site pedestrian/bicycle improvements, and will work with the City on off-site improvements, that will result in connecting the project site to the St. Louis Road overcrossing to the north, Maple Lane to the west, and Todd Court to the south. These improvements will provide connectivity to the existing trail systems in the project area, Humboldt State University, and to regional trails in the Humboldt Bay area, including the Annie and Mary Trail and the Humboldt Bay Trail: Arcata to Eureka segment.

In addition to the project design features, various federal and state regulations on vehicle and fuel manufacturing would likely result in the substantial reduction of the project's vehicle fuel consumption each year into the future. Specifically, the federal CAFE standards and the state's low carbon fuel standard are anticipated to improve the fuel economy of vehicles.

Therefore, the proposed project would not result in the wasteful and inefficient use of nonrenewable resources during long-term operation of the project.

Determination:
Less than significant impact.

Mitigation:
None required.

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CHAPTER 6.

ALTERNATIVES ANALYSIS

The following Sections are included in this Chapter:

Introduction
Project Objectives
Alternatives Eliminated from Further Consideration
Description and Evaluation of Alternatives
Comparison of Alternatives Analyzed
Environmentally Superior Alternative

CHAPTER 6 ALTERNATIVES ANALYSIS

INTRODUCTION

This chapter presents the alternatives analysis for the project. The California Environmental Quality Act (CEQA) requires that the EIR shall describe a range of reasonable alternatives to the project that would "feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives" (CEQA Section 15126.6(a)). The CEQA guidelines also note in Section 15126.6(a) that an EIR "need not consider every conceivable alternative to a project" and that "An EIR is not required to consider alternatives which are infeasible." The development of alternatives is a means to provide ways of "avoiding or substantially lessening any significant effects of the project" (CEQA Section 15126.6(b)).

CEQA GUIDLINES

CEQA guidelines state that the EIR must describe a range of reasonable alternatives to the project, but provide no clear direction for determining the nature or scope of those alternatives. The guidelines state that there is no rule that governs "the scope of the alternatives to be discussed other than the rule of reason" (CEQA Guidelines Section 15126.6(a) and (f)). Alternatives are limited to those that would avoid or substantially lessen any of the significant effects of the project.

The guidelines also provide that an EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. A matrix displaying the major characteristics and significant environmental effect of each alternative may be used to summarize the comparison. If an alternative would cause one or more significant effects in addition to those that would be caused by the proposed project, the significant effects of the alternative shall be discussed, but in less detail than the significant effects of the project as proposed.

The specific No Project alternative, along with its impacts shall also be evaluated (CEQA Guidelines 15126.6(e)), with the purpose of the No Project alternative being the evaluation of conditions should the project not be approved. The No Project is not the baseline for determining a project's environmental impacts, unless it is identical to the existing environmental setting. Through evaluation of the project alternatives, if the environmentally superior alternative is the No Project alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Several alternatives were identified but were eliminated from further review because they do not meet several of the basic requirements of CEQA; Section 15126.6(c) states "The EIR should also identify any alternatives that were considered . . . . but were rejected as infeasible during the scoping process . . . .Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts."

Rule of Reason

CEQA specifically addresses the Rule of Reason (Section 15126.6(f)) and provides some clarity on the scope of the alternatives, if not their nature. The focus of the discussions in this section of CEQA revolve around the ability of alternatives to lessen any significant effects of the project, and provides that the only alternatives the Lead Agency needs to examine are those that could feasibly attain most of the basic objectives of the project. CEQA specifically addresses three items of (1) Feasibility, (2) Alternative Locations, and (3) Reasonable Effects (Section 15126.6(f) (1 to 3).

Feasibility
As provided for in CEQA, factors that may be taken into account in evaluating alternatives includes "site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or the site is already owned by the proponent." (Section 15126.6(f)(1)).

Alternative Locations
Two primary points of the CEQA Guidelines related to alternative locations are relevant to the proposed Project being evaluated in the EIR, which are (1) the key question as to any significant effects being avoided by an alternative and (2) if there is no feasible alternative locations to the proposed project. The third relates to previous documents that sufficiently evaluate the reasonable range of alternatives and impacts, which is not the case here.

The key question CEQA asks as the first step in alternative locations is whether "any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location" (Section 15126.6(f)(2)(A)). Only those locations that would avoid or substantially lessen any of the significant effects of the project need to be considered.

The second question that CEQA poses is related to no feasible alternative location for the project. CEQA Guideline Section 15126.6(f)(2)(B), states: "If the Lead Agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion, and should include the reasons in the EIR." The rationale is that in some cases, there may be no alternative to the location of the project other than on the site proposed by the Project. In those cases no other site need to be evaluated, but the rational for the conclusion must be disclosed.

Reasonable Effects

Lastly, Section 15126.6(f)(2)(C) provides that "An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative." As noted here, this limits alternatives to what can be reasonably determined, and does not require alternatives to be created for the sake of creating alternatives, especially when their implementation is "remote and speculative."

PROJECT OBJECTIVES

As described in Chapter 1 (Introduction) of the EIR, the following Project Objectives have been established as the rationale for the Proposed Project. These objectives aid the Lead Agency in the review of the project and associated alternatives and their related environmental impacts:

- To provide for orderly development of the City, including additional housing development;
- To comply with the General Plan and other relevant adopted planning documents and implementing ordinances (e.g., Land Use Code);
- Assist the City with implementation of the General Plan Housing Element goals by providing more housing units for students and returning single-family homes for ownership opportunities;
- Maximize student housing development within walking distance of Humboldt State University to reduce impacts of traffic and parking on local roads and significantly reduce carbon footprint;
- Remove urban blight and unsafe, unpermitted facilities with modern, energy-efficient residential buildings;
- Get the most out of infill development opportunities to reduce urban sprawl and create sustainable communities;
- Make the best use of student housing development to sites in close proximity to Humboldt State University in order to create linkages between residential and educational spaces;
- Create a strong sense of community through open space and indoor and outdoor recreational facilities within the development;
- Boost student performance and success rates through a purpose-built and programmed student housing community;
- Alleviate the added demand on Arcata housing stock resulting from Humboldt State University's projected enrollment growth and projected housing demands;
- Assist the City with the implementation of the Community Greenhouse Gas Reduction Plan by constructing energy-efficient buildings and promoting alternative modes of transportation through pedestrian and bicycle improvements;
- Expand opportunities to increase ridership of the Arcata and Mad River Transit System;
- Improve connectivity to the existing City trail system, parks, neighborhoods, and schools.

ALTERNATIVES ELIMINATED FROM FURTHER CONSIDERATION

Alternatives discussed in this section were identified but were eliminated from further review because they do not meet several of the basic requirements of CEQA; Section 15126.6(c) states "The EIR should also identify any alternatives that were considered . . . . but were rejected as infeasible during the scoping process . . . .Among the factors that may be used to eliminate alternatives from detailed consideration in the EIR are: (i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts."

OFFSITE LOCATION

The Offsite Location Alternative was evaluated and eliminated from further consideration because its fatal flaw is that there is not a similar sized property in close proximity to Humboldt State University that would allow convenient pedestrian and bicycle access between the project site and HSU. The proposed project site is an underutilized industrial property that is surrounded on three sides by residential development, has sufficient land and services available for development of the proposed project, and is 0.5 miles from HSU.

An offsite location would not necessarily meet some of the most basic project objectives of (1) provide off-campus student housing adjacent to existing residential neighborhoods; (2) redevelopment of an underutilized former lumber mill site for residential uses; (3) develop trails connecting the project site to the existing City trail system, parks, neighborhoods, and schools. Additionally, an offsite location would not necessarily avoid significant environmental impacts as it is likely vacant or underutilized property within the City's Planning Area would contain environmental constraints and may actually result in other unknown significant impacts that would themselves be avoided by the proposed project. Based on this evaluation, the Offsite Location Alternative was eliminated from further review.

LOW DENSITY RESIDENTIAL DEVELOPMENT

The Low Density Residential Development Alternative would develop the project site for the maximum density allowed under the City of Arcata planned designation/zoning of Residential Low Density (RL) which allows residential densities up to 7.25 units per acre. This alternative would allow a maximum of 77 residential units on the 11-acre project site that would provide housing for approximately 162 residents.

This alternative would provide typical single-family residential development and would not meet several of the key project objectives including, but not limited to: 1) assisting the City with implementation of the General Plan Housing Element which identifies a significant lack of student housing in the City; 2) maximizing student housing within walking distance of Humboldt State University; 3) get the most out of infill development opportunities to reduce urban sprawl and create sustainable communities; and 4) boost student performance and success rates through

a purpose-built and programmed student housing community. This alternative would also not provide the indoor and outdoor amenities that are proposed as part of the project. This alternative may reduce traffic and wastewater impacts, but not to the degree that transportation improvements and upgrades to the City's wastewater treatment plant would no longer be necessary. Based on this evaluation, the Low Density Residential Development Alternative was eliminated from further review.

MEDIUM DENSITY RESIDENTIAL DEVELOPMENT

The Medium Density Residential Development alternative would develop the project site for the maximum density allowed under the Residential Medium Density (RM) which allows residential densities of 7.26 to 15 units per acre. This alternative would allow a maximum of 160 residential units on the 11-acre project site that would provide housing for approximately 336 residents.

This alternative would provide typical single-family and limited multi-family residential development and would not meet several of the key project objectives including, but not limited to: 1) assisting the City with implementation of the General Plan Housing Element which identifies a significant lack of student housing in the City; 2) maximizing student housing within walking distance of Humboldt State University; 3) get the most out of infill development opportunities to reduce urban sprawl and create sustainable communities; and 4) boost student performance and success rates through a purpose-built and programmed student housing community. This alternative would also not provide the indoor and outdoor amenities that are proposed as part of the project. This alternative may reduce traffic and wastewater impacts, but not to the degree that transportation improvements and upgrades to the City's wastewater treatment plant would no longer be necessary. Based on this evaluation, the Medium Density Residential Development Alternative was eliminated from further review.

DESCRIPTION AND EVALUATION OF ALTERNATIVES

In addition to the Proposed Project, the alternatives analyzed in the EIR are the following:

- **Alternative 1: No Project**
- **Alternative 2: Existing Zoning**
- **Alternative 3: Reduced Size**
- **Alternative 4: Traditional Multi-Family Development**

The project alternatives are described and evaluated below.

Alternative 1: No Project Alternative

DESCRIPTION

As the name implies, the No Project Alternative is an alternative in which there is no project. As such, no changes would occur and the project parcels would remain in their current state and use (i.e., Craftsman's Mall, outdoor storage, and several residential units).

IMPACT EVALUATION

This section provides an evaluation of the potential environmental impacts of the No Project Alternative as compared against the Proposed Project. There are numerous differences in the types and levels of impacts for each alternative. Where there is a change in the degree of severity of an impact (more or less severe) as compared to the Proposed Project, it is described as greater or lesser. Impacts which are relatively equal as compared to the Proposed Project are described as similar.

Land Use and Planning

The Proposed Project was found to have Less than Significant Impacts related to Land Use and Planning. Under the No Project Alternative, the project parcels would keep their existing Industrial Limited (IL) and Residential Low Density (RL) land use designations, and would not be reclassified as Residential High Density (RH). The developed IL lots would continue to be inconsistent with surrounding residential development, but consistent with the existing General Plan. Currently there are several existing non-conforming uses and violations of the City's Land Use Code and Building Code at the Craftsman's Mall, and these uses and violations would continue.

Compared to the Proposed Project, the No Project Alternative would have ***greater*** impacts related to Land Use and Planning. However, since the uses occurring on the project parcels, excluding violations, are consistent with the City's General Plan designations (IL and RL), the No Project Alternative would have Less Than Significant Impacts related to Land Use and Planning.

Population and Housing

The Proposed Project was found to have Less than Significant Impacts related to Population and Housing. The No Project Alternative would preserve the permitted housing units on the project parcels, but would not provide additional off-campus student housing that would assist the City in meeting the goals of the General Plan Housing Element. This alternative would not displace approximately four persons from the project site parcels.

Compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Population and Housing. As such, the No Project Alternative would have Less Than Significant Impacts related to Population and Housing.

Public Services

The Proposed Project was found to have Less than Significant Impacts related to Public Services. The No Project Alternative would not result in an increase in service calls to the Fire or Police Departments. However, it would also not include new buildings that are equipped with modern fire protection features such as alarms and sprinklers. The No Project Alternative would not impact schools or enrollment, the use of existing parks or recreation facilities, or the use of other public facilities.

Compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Public Services. As such, the No Project Alternative would have Less Than Significant Impacts related to Public Services.

Recreation

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Recreation. The No Project Alternative would not result in the development of housing that would locate new residents in the Sunset Area of Arcata. As such, this alternative would not result in an increased use of nearby parks or result in new construction of onsite or offsite parks or recreational facilities.

Compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Recreation. As such, the No Project Alternative would have Less Than Significant Impacts related to Recreation.

Cultural Resources

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Cultural Resources. As indicated in the Cultural Resources Investigation (Appendix E), the project parcels do not contain any known historical or archaeological resources. The No Project Alternative would not result in any ground disturbance and therefore would not have the potential to inadvertently discover cultural resources during construction activities.

Compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Cultural Resources. As such, the No Project Alternative would have Less Than Significant Impacts related to Cultural Resources.

Aesthetics

The Proposed Project was found to have Less than Significant Impacts related to Aesthetics. Under the No Project Alternative the site would remain as an underutilized industrial site in a blighted condition that is aesthetically inconsistent with surrounding residential neighborhoods. On the other hand, the No Project Alternative would not result in construction of large, modern, four-story buildings that will provide a greater scale of development than surrounding uses and alter views to and from the site. The Proposed Project will be designed to minimize potential impacts on surrounding residential development through increased setbacks, landscaping improvements, and varied architectural elements. The Proposed Project will ultimately improve the overall condition of the site and provide greater land use and aesthetic consistency with surrounding residential neighborhoods.

Compared to the Proposed Project, the No Project Alternative would have ***greater*** impacts related to Aesthetics. However, since the majority of the project site has been in industrial use for over 65 years, the No Project Alternative would have Less Than Significant Impacts related to Aesthetics.

Air Quality

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Air Quality. The No Project Alternative would not result in any emissions from construction or new operation emissions. Existing operation emissions from the light industrial and residential uses on the project parcels would continue, which are significantly lesser than the emissions that would be generated by the Proposed Project.

Compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Air Quality. As such, the No Project Alternative would have Less Than Significant Impacts related to Air Quality.

Greenhouse Gas Emissions

The Proposed Project was found to have Less than Significant Impacts related Greenhouse Gas (GHG) Emissions. The No Project Alternative would not result in any GHG emissions from construction or new operation GHG emissions. Existing operation GHG emissions from the light industrial and residential uses on the project parcels would continue, which are significantly less than the GHG emissions that would be generated by the Proposed Project . However, the No Project Alternative would not result in the construction of buildings designed to LEED Silver standards or high-density student housing close to educational and employment centers. It also would not result in payment of a fair-share contribution to improvements that would increase traffic flow efficiency. Under the No Project Alternative, students would continue to reside in more traditional housing options.

Compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Greenhouse Gas Emissions. As such, the No Project Alternative would have Less Than Significant Impacts related to Greenhouse Gas Emissions.

Noise

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Noise. The No Project Alternative would not result in temporary construction noise impacts, nor would it result in increased noise from additional traffic and high-density residential use. Existing noise at the site is primarily generated by light industrial activity including the use of manufacturing equipment. The site is also used by several local contractors for the storage of heavy equipment and construction materials. Elevated noise levels are generated when this equipment and materials are transported to and from the site. The noise currently generated at the project site intermittently exceeds noise levels that would be generated by the Proposed Project. Noise at the site would continue to be dominated by traffic on Hwy 101, which exceeds any noise that would be generated by the No Project Alternative or the Proposed Project.

Compared to the Proposed Project, the No Project Alternative would have ***greater*** impacts related to Noise. However, there is no indication that the noise levels generated by existing uses at the project site exceed the City's noise standards for stationary and transportation noise sources. As such, the No Project Alternative would have Less Than Significant Impacts related to Noise.

Hazards and Hazardous Materials

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Hazards and Hazardous Materials. The No Project Alternative would not result in the project parcels being redesignated/rezoned from Industrial Limited (IL) and Residential Low Density (RL) to Residential High Density (RH). Under the No Project Alternative, light industrial uses would continue at the project site, which typically have a greater potential to use and generate hazardous materials than residential uses, but are more heavily regulated. In addition, the warehouse buildings remaining from past lumber mill uses, which may contain lead- and asbestos-containing materials, will not be demolished and removed.

Compared to the Proposed Project, the No Project Alternative would have ***greater*** impacts related to Hazards and Hazardous Materials. However, since the current uses at the project site are subject to existing regulatory requirements concerning the generation, transportation, use, and disposal of hazardous materials, the No Project Alternative would have Less Than Significant Impacts related to Hazards and Hazardous Materials.

Utilities and Service Systems

The Proposed Project was found to have Less than Significant Impacts related Utilities and Service Systems. The No Project Alternative would not result in increased water consumption, wastewater discharge, stormwater runoff, and solid waste generation. No improvements to existing water and sewer facilities at the project site would occur and no water and sewer connection fees would be paid to the City. Similar to the Proposed Project, implementation of the City's Long-Term Drainage Maintenance Program would occur under this alternative, which would improve the City's existing drainage infrastructure on the western portion of the site to ensure it has adequate capacity.

Compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Utilities and Service Systems. As such, the No Project Alternative would have Less Than Significant Impacts related to Utilities and Service Systems.

Tribal Cultural Resources

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Tribal Cultural Resources. As indicated in the Cultural Resources Investigation (Appendix E), the project parcels do not contain any known tribal cultural resources. The No Project Alternative would not result in any ground disturbance and therefore would not have the potential to inadvertently discover tribal cultural resources during construction activities.

Compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Tribal Cultural Resources. As such, the No Project Alternative would have Less Than Significant Impacts related to Tribal Cultural Resources.

Transportation/Traffic

The Proposed Project was found to have Less than Significant Impacts with the Incorporation of Mitigation related to Transportation/Traffic. The Proposed Project may also include adoption of a Statement of Overriding Considerations related to traffic impacts since the future transportation improvement recommended in the W-Trans Traffic Study (Appendix L) may not be constructed for several years.

The No Project Alternative would not result in an increase in vehicle trips generated from the site and would not reduce the level of service at nearby intersections. The No Project Alternative would also not require mitigation for the payment of a fair share contribution to improve nearby intersections or mitigation requiring the construction of onsite pedestrian and bicycle access

improvements to provide connectivity with surrounding trail systems. In addition, the No Project Alternative will not result in high-density student housing near to education and employment centers, which contributes towards reducing vehicles miles traveled on a per capita basis.

Overall, compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Transportation/Traffic. As such, the No Project Alternative would have Less Than Significant Impacts related to Transportation/Traffic.

Geology and Soils

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Geology and Soils. The No Project Alternative would not result in soil disturbance and construction of new residential structures. The No Project Alternative would not result in the removal of unengineered fill at the project site and replacement with engineered fill materials. The existing permitted and unpermitted structures/improvements at the site would remain, and it is unknown if these structures/improvements were constructed to withstand geologic hazards including strong seismic ground shaking.

Overall, compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Geology and Soils. As such, the No Project Alternative would have Less Than Significant Impacts related to Geology and Soils.

Hydrology and Water Quality

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Hydrology and Water Quality. The No Project Alternative would not produce additional wastewater, which is estimated to be 24,800 gallons per day or less for the Proposed Project. Although, this alternative would not pay sewer capital connection fees that would be used to make improvements to the City's wastewater treatment system and ultimately improve water quality in Humboldt Bay.

The No Project Alternative would not result in an increase in impervious surfaces and stormwater runoff. However, this alternative would not construct stormwater improvements that would reduce the rate and volume of stormwater runoff from the site. As such, existing stormwater runoff would continue to contribute to erosion and flooding on the western portion of the project site. In addition, existing industrial uses at the site have the potential to contribute pollutants to stormwater runoff, which can impact water quality in Janes Creek and ultimately the Bay. Similar to the Proposed Project, implementation of the City's Long-Term Drainage Maintenance Program would occur under this alternative, which would improve the City's existing drainage infrastructure on the western portion of the site to ensure it has adequate capacity.

Compared to the Proposed Project, the No Project Alternative would have ***greater*** impacts related to Hydrology and Water Quality. However, since the current uses at the project site are subject to existing regulatory requirements concerning the protection of water quality and the

maintenance of stormwater infrastructure, the No Project Alternative would have Less Than Significant Impacts related to Hydrology and Water Quality.

Biological Resources

The Proposed Project was found to have Less than Significant Impacts with the Incorporation of Mitigation related to Biological Resources. As indicated in the Biological Review (Appendix O) and Wetland Delineation (Appendix P) completed for the project site, the western portion of the site contains two- and three-parameter wetlands and potential seasonal habitat for amphibians and nesting birds. Otherwise, the majority of the project site is an existing disturbed area with industrial and residential uses.

The No Project Alternative would not result in new development on the project site. Since no new development would occur under the No Project Alternative, the potential to impact the wetlands and protected wildlife species on the western portion of the project site would be significantly reduced.

Compared to the Proposed Project, the No Project Alternative would have ***lesser*** impacts related to Biological Resources. As such, the No Project Alternative would have Less Than Significant Impacts related to Biological Resources.

Agriculture and Forestry Resources

The Proposed Project was found to have Less than Significant Impacts related to Agriculture and Forestry Resources. As indicated in Section 4.4 (Agriculture and Forestry Resources) of the EIR, the project parcels do not contain agricultural or forest land. The No Project Alternative would continue the existing light industrial and residential uses at the site.

Because there are no existing or potential agriculture or forestry resources onsite, compared to the Proposed Project, the No Project Alternative would have ***similar*** impacts related to Agriculture and Forestry Resources. As such, the No Project Alternative would have Less Than Significant Impacts related to Agriculture and Forestry Resources.

Mineral Resources

The Proposed Project was found to have Less than Significant Impacts related to Mineral Resources. As indicated in Section 4.5 (Mineral Resources) of the EIR, the project parcels do not contain mineral resources. The No Project Alternative would continue the existing light industrial and residential uses at the site.

Because there are no existing or potential mineral resources onsite, compared to the Proposed Project, the No Project Alternative would have ***similar*** impacts related to Mineral Resources. As such, the No Project Alternative would have Less Than Significant Impacts related to Mineral Resources.

Alternative 2: Existing Zoning

DESCRIPTION

The Existing Zoning Alternative assumes that the project parcels would be developed according to the City of Arcata General Plan and Land Use Code. This would allow the development of uses allowed within the Industrial Limited (IL) zoning district for six of the seven project site parcels. This would also allow the development of uses allowed within the Residential Low Density (RL) zoning district for parcel 503-372-006. It is assumed that the existing light industrial and residential buildings on the project parcels would remain and new buildings would be constructed on the vacant or underutilized portions of the project parcels.

The greatest potential for additional light industrial development at the site exists on parcels 505-022-011 (2905 St. Louis Rd) and 503-372-004 (2725 St. Louis Rd). Parcel 505-022-011 is approximately 5.42 acres in size and could be developed with at least one additional acre of light industrial structures. Parcel 503-372-004, which is currently vacant, is approximately 13,000 square feet and could be developed with at least a 5,000 square foot structure. The only parcel currently zoned for low density residential development on the project site exists is parcel 503-372-006 (no address assigned). Parcel 503-372-006 is approximately 1.17 acres and could be developed with up to eight single-family residences and eight accessory dwelling units. This additional residential development could provide housing for approximately 33 residents.

For this alternative, it is assumed that discretionary approvals would be required from the City of Arcata and the project would not be Categorically Exempt from the California Environmental Quality Act (CEQA). Requirements applicable to the Proposed Project that would also be required for the Existing Zoning Alternative include, but are not limited to, the following:

- Fair share contribution to the near-term and future transportation improvements recommended in the W-Trans Traffic Study (Appendix L);
- Payment of standard sewer capital connection fees for light industrial and residential development, which will be used to fund some of the proposed improvements to the City's wastewater treatment system;
- Payment of Recreation Fees per Section 9.70.050 of the Arcata Land Use Code based on the valuation of the new light industrial and residential structures;
- Compliance with inadvertent discovery protocols during construction activities for the protection of historical, archaeological, paleontological, and tribal cultural resources including human remains;
- Compliance with local and State stormwater regulations requiring the onsite management of stormwater runoff through low impact development site design measures;
- Compliance with the City's standard condition for controlling dust emissions during construction activities (Arcata General Plan Policy AQ-2f); and

- Compliance with the City's standard condition for minimizing noise impacts during construction activities (Arcata Land Use Code Section 9.30.050.D.2).

The Existing Zoning Alternative would still include some of the improvements that would occur from the Proposed Project including, but not limited to:

- Onsite trails and sidewalks connecting the project site to the nearby trail systems including the Arcata Rail with Trail and Janes Creek Meadows Open Space area;
- Landscaping planted in the portions of the project parcels developed with new light industrial and residential uses; and
- Emergency access to Eye Street.

Improvements that would not occur as part of the Existing Zoning Alternative includes the following:

- Merger of the seven project parcels into one parcel;
- Abandonment of St. Louis Road to be used for access and parking;
- Indoor and outdoor recreation facilities; and
- Landscaping planted in existing developed areas of the project parcels.

IMPACT EVALUATION

This section provides an evaluation of the potential environmental impacts of the Existing Zoning Alternative as compared against the Proposed Project. There are numerous differences in the types and levels of impacts for each alternative. Where there is a change in the degree of severity of an impact (more or less severe) as compared to the Proposed Project, it is described as greater or lesser. Impacts which are relatively equal as compared to the Proposed Project, are described as similar.

Land Use and Planning

The Proposed Project was found to have Less than Significant Impacts related to Land Use. The Existing Zoning Alternative would result in new light industrial and residential development on the project parcels consistent with existing uses on the site and with the existing General Plan and Land Use Code regulations. However, the existing and new light industrial development would continue to be inconsistent with surrounding residential neighborhoods. Currently there are several existing non-conforming uses and violations of the City's Land Use Code and Building Code at the Craftsman's Mall, and these uses and violations would continue.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***greater*** impacts related to Land Use and Planning. However, since the existing development and new light industrial and residential uses that would occur under this alternative, excluding violations, are

consistent with the City's General Plan designations (IL and RL), the Existing Zoning Alternative would have Less Than Significant Impacts related to Land Use and Planning.

Population and Housing

The Proposed Project was found to have Less than Significant Impacts related to Population and Housing. The Existing Zoning Alternative would preserve the permitted housing units on the project parcels, and would develop parcel 503-372-006 with up to eight single-family residential units and up to eight accessory dwelling units. The additional residential units under this alternative would only provide housing for approximately 33 residents, compared to the Proposed Project which would provide housing for 800 residents. The Existing Zoning Alternative would increase the City of Arcata's resident population (18,374 persons) by approximately 0.18 percent, as compared to the 4.4 percent that would occur from the Proposed Project. This alternative would not displace approximately four persons from the project site parcels. However, this alternative would not provide additional off-campus student housing, in close proximity to Humboldt State University that would assist the City in meeting the goals of the General Plan Housing Element.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Population and Housing. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Population and Housing.

Public Services

The Proposed Project was found to have Less than Significant Impacts related to Public Services. The Existing Zoning Alternative would result in the development of new light industrial and residential uses on the project parcels. The Existing Zoning Alternative would result in additional residents and employees on the project site parcels that would result in a small increase in the demand for public services. The increase in demand would be significantly less than would occur from the Proposed Project.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Public Services. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Public Services.

Recreation

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Recreation. The Existing Zoning Alternative would result in the development of new light industrial and residential uses on the project parcels, but would not propose new onsite recreational facilities. The additional residents and employees have the potential to increase the use of nearby recreational facilities, but to a significantly lesser extent than would occur from the Proposed Project. Similar to the Proposed Project, this alternative would be required to pay Recreation Fees to the City of Arcata that would be used for either park acquisition or the improvement of existing parks in the project area.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Recreation. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Recreation.

Cultural Resources

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Cultural Resources. As indicated in the Cultural Resources Investigation (Appendix E), the project parcels do not contain any known historical or archaeological resources. The Existing Zoning Alternative would result in ground disturbance similar to the Proposed Project. However, ground disturbance would only occur in vacant or underutilized portions of the project site. Similar to the Proposed Project, inadvertent discovery protocols for the protection of cultural resources would apply to any construction activity involving ground disturbance.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Cultural Resources. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Cultural Resources.

Aesthetics

The Proposed Project was found to have Less than Significant Impacts related to Aesthetics. The Existing Zoning Alternative would result in the development of light industrial and residential structures similar to those that already exist on the project parcels (e.g., large metal and wood industrial buildings and single-family residences). The Industrial Limited (IL) zoning would allow structures of a similar size and height to the four-story residential buildings planned by the Proposed Project. The Proposed Project will be designed to minimize potential impacts on surrounding residential development through increased setbacks, landscaping improvements, and varied architectural elements. The Proposed Project will ultimately improve the overall condition of the site and provide greater land use and aesthetic consistency with surrounding residential neighborhoods. Further development of the project parcels with light industrial structures, as proposed by the Existing Zoning Alternative, would maintain the visual inconsistentency with surrounding residential neighborhoods.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***greater*** impacts related to Aesthetics. However, since the majority of the project site has been in industrial use for over 65 years, the Existing Zoning Alternative would have Less Than Significant Impacts related to Aesthetics.

Air Quality

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Air Quality. The Existing Zoning Alternative would result in light industrial and single-family residential development that would result in additional emissions from construction and operation. Light industrial development has a greater potential

for generating operation emissions and odors than residential development. However, due to its smaller scale, the Existing Zoning Alternative is anticipated to generate significantly fewer vehicular emissions than the Proposed Project. Similar to the Proposed Project, this alternative would include onsite trails and sidewalks that would result in increased connectivity between the site and nearby trail systems. The increased connectivity has the potential to reduce vehicle trips and associated emissions.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Air Quality. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Air Quality.

Greenhouse Gas Emissions

The Proposed Project was found to have Less than Significant Impacts related to Greenhouse Gas (GHG) Emissions. The Existing Zoning Alternative would result in light industrial and single-family residential development that would result in additional GHG emissions from construction and operation. Light industrial development has a greater potential for uses that could generate GHG emissions. However, due to its smaller scale, the Existing Zoning Alternative is anticipated to generate significantly fewer vehicular emissions than the Proposed Project. The Existing Zoning Alternative would not result in high-density, infill development, but would result in pedestrian/bicycle connectivity that has the potential to reduce vehicle trips and associated emissions. This alternative would not be constructed to achieve the level of energy efficiency (e.g., LEED Silver rating) planned by the Proposed Project, but would produce significantly fewer GHG emissions overall.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Greenhouse Gas Emissions. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Greenhouse Gas Emissions.

Noise

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Noise. The Existing Zoning Alternative would result in light industrial and single-family residential development. Compliance with the City's standards for reducing construction noise levels would still apply to the proposed construction activity under this alternative. The Arcata General Plan PEIR (Pg. 5-54) concludes that implementation of Noise Element Policies N-5d (Construction site tool or equipment noise) and N-5e (Stationary and construction equipment noise), which are implemented through Section 9.30.050 (Noise Standards) of the City's Land Use Code, will reduce potential construction noise impacts to a less than significant level.

Light industrial development, as proposed under this alternative, has a greater potential for uses that could generate elevated noise levels during operation then the residential development planned by the Proposed Project. Noise at the site would continue to be dominated by traffic on Hwy 101, which exceeds any noise that would be generated by the Existing Zoning Alternative or the Proposed Project. The Existing Zoning Alternative would also develop the project parcels

with new residential uses that would be impacted by traffic noise on Highway 101. Similar to the Proposed Project, this alternative would require residential construction design that minimizes noise levels from Highway 101 to achieve compliance with the noise standards in the Arcata Land Use Code.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***greater*** impacts related to Noise. However, the new light industrial and residential uses that would be developed under this alternative will be required to be designed and operated to comply with the City's noise standards and industrial performance standards. Compliance with these existing standards will reduce impacts to a less than significant level. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Noise.

Hazards and Hazardous Materials

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Hazards and Hazardous Materials. As discussed in Section 2.10 (Hazards and Hazardous Materials) of the EIR, the project site (2905 St. Louis Road) is classified as a LUST Cleanup Site (T0602300075) with a cleanup status listed as "*Completed – Case Closed as of 01/17/2001*." The Phase 1 ESA (Appendix I) and Phase II Investigation (Appendix J) completed for the project site determined that contamination remaining on the site from past industrial uses is below regulatory screening levels for residential land use.

The Existing Zoning Alternative would not result in the project parcels being redesignated/rezoned from Industrial Limited (IL) and Residential Low Density (RL) to Residential High Density (RH). The Existing Zoning Alternative would result in the construction of new light industrial buildings that could contain uses that generate, transport, and use hazardous materials. However, these uses would be required to comply with existing regulatory requirements that would reduce any potential impacts to people or the environment from a release of hazardous materials. The warehouse buildings remaining from past lumber mill uses, which may contain lead- and asbestos-containing materials, will not be demolished and removed under this alternative.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***greater*** impacts related to Hazards and Hazardous Materials. However, since the current and proposed uses at the project site are subject to existing regulatory requirements concerning the generation, transportation, use, and disposal of hazardous materials, the Existing Zoning Alternative would have Less Than Significant Impacts related to Hazards and Hazardous Materials.

Utilities and Service Systems

The Proposed Project was found to have Less than Significant Impacts related to Utilities and Service Systems. The Existing Zoning Alternative would result in the development of new light industrial and residential uses that would result in increased water consumption, wastewater discharge, stormwater runoff, and solid waste generation. The utility and service demands for light industrial uses can be difficult to predict. Depending on the type of use, wastewater

discharge could potentially be of greater volume and strength than would occur from the residential uses. Regardless, new development at the site would be required to pay standard sewer capital connection fees which will be used to fund some of the proposed improvements to the City's wastewater treatment system. In addition, the proposed light industrial uses may also be required to provide pre-treatment of wastewater discharge to limit any potential impacts to the City's wastewater treatment system. Under this alternative, potential impacts related to water use and solid waste disposal are anticipated to be lesser than the Proposed Project.

Similar to the Proposed Project, the Existing Zoning Alternative would be required to comply with local and State stormwater regulations to ensure that stormwater runoff is properly managed onsite and does not exceed the capacity of the City's stormwater system. Similar to the Proposed Project, implementation of the City's Long-Term Drainage Maintenance Program would occur under this alternative, which would improve the City's existing drainage infrastructure on the western portion of the site to ensure it has adequate capacity.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Utilities and Service Systems. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Utilities and Service Systems.

Tribal Cultural Resources

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Tribal Cultural Resources. As indicated in the Cultural Resources Investigation (Appendix E), the project parcels do not contain any known tribal cultural resources. The Existing Zoning Alternative would result in ground disturbance similar to the Proposed Project. However, ground disturbance would only occur in vacant or underutilized portions of the project site. Similar to the Proposed Project, inadvertent discovery protocols for the protection of tribal cultural resources would apply to any construction activity involving ground disturbance.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Tribal Cultural Resources. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Tribal Cultural Resources.

Transportation/Traffic

The Proposed Project was found to have Less than Significant Impacts with the Incorporation of Mitigation related to Transportation/Traffic. The Proposed Project may include adoption of a Statement of Overriding Considerations related to traffic impacts since the future transportation improvement recommended in the W-Trans Traffic Study (Appendix L) may not be constructed for several years.

The Existing Zoning Alternative would result in the development of new light industrial and residential uses that would increase traffic levels to and from the project parcels. However, this alternative would result in significantly fewer residents, and so fewer vehicle trips would be generated. Similar to the Proposed Project, this alternative would require mitigation for the

payment of a fair share contribution to improve nearby intersections. However, the fair share contribution would be significantly less than the Proposed Project, due to the reduced number of vehicle trips that would be generated under this alternative. Since the Existing Zoning Alternative would generate additional vehicle trips in the Sunset Area of Arcata, it has the potential to contribute to cumulative traffic impacts in combination with the other approved/planned projects (i.e. Sunset Area housing projects) listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. However, the contribution of this alternative to cumulative traffic impacts would be significantly less than the Proposed Project.

Since the Existing Zoning Alternative would result in additional residents and employees on the project parcels, mitigation would also be required for the construction of onsite pedestrian and bicycle improvements to provide connectivity with surrounding trail systems. In addition, this alternative would improve circulation for emergency vehicles by providing emergency access to Eye Street.

Compared to the Proposed Project, the Existing Project Alternative would have ***lesser*** impacts related to Transportation/Traffic. Similar to the Proposed Project, the Existing Zoning Alternative would have Less Than Significant Impacts with the Incorporation of Mitigation related to Transportation/Traffic.

Geology and Soils

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Geology and Soils. The Existing Zoning Alternative would result in the development of new light industrial and residential buildings on vacant or underutilized portions of the project parcels. Similar to the Proposed Project, this alternative would result in the removal of unengineered fill at the project site and replacement with engineered fill materials. However, this would only occur in portions of the site where new structures would be located. Similar to the Proposed Project, all new buildings will be required to meet current building code standards for seismic hazards and local and State erosion control requirements. Under this alternative, the existing permitted and unpermitted structures/improvements at the site would remain, and it is unknown if these structures/improvements were constructed to withstand geologic hazards including strong seismic ground shaking.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Geology and Soils. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Geology and Soils.

Hydrology and Water Quality

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Hydrology and Water Quality. Similar to the Proposed Project, the Existing Zoning Alternative would be required to comply with local and State regulations relating to the protection of water quality and the prevention of erosion during construction and operation of the project.

The Existing Zoning Alternative proposes new light industrial and residential uses, which will increase wastewater discharge. The wastewater discharge from light industrial uses can be difficult to predict. Depending on the type of use, wastewater discharge could potentially be of greater volume and strength than would occur from the residential uses planned by the Proposed Project. Regardless, new development at the site would be required to pay standard sewer capital connection fees which will be used to fund some of the proposed improvements to the City's wastewater treatment system. These fees will be used to fund some of the proposed improvements to the City's wastewater treatment system, which will ultimately improve water quality in Humboldt Bay. In addition, the proposed light industrial uses may also be required to provide pre-treatment of wastewater discharge to limit any potential impacts to the City's wastewater treatment system.

Similar to the Proposed Project, the Existing Zoning Alternative would result in the development of new impervious surfaces which would increase stormwater runoff. Compliance with local and State stormwater regulations would be required for new development under this alternative, which would include the onsite management of stormwater runoff to ensure that pre-development runoff volumes are not exceeded. However, this alternative would not construct stormwater improvements in existing developed portions of the site that would reduce the existing rate and volume of stormwater runoff. As such, existing stormwater runoff from developed portions of the site would continue to contribute to erosion and flooding on the western portion of the project site. In addition, the current and proposed industrial uses at the site have the potential to contribute pollutants to stormwater runoff, which can impact water quality in Janes Creek and ultimately the Bay. Similar to the Proposed Project, implementation of the City's Long-Term Drainage Maintenance Program would occur under this alternative, which would improve the City's existing drainage infrastructure on the western portion of the site to ensure it has adequate capacity.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***greater*** impacts related to Hydrology and Water Quality. However, since the current and proposed uses at the project site are subject to existing regulatory requirements concerning the protection of water quality and the maintenance of stormwater infrastructure, the Existing Zoning Alternative would have Less Than Significant Impacts related to Hydrology and Water Quality.

Biological Resources

The Proposed Project was found to have Less than Significant Impacts with the Incorporation of Mitigation related to Biological Resources. As indicated in the Biological Review (Appendix O) and Wetland Delineation (Appendix P) completed for the project site, the western portion of the site contains two- and three-parameter wetlands and potential seasonal habitat for amphibians and nesting birds. Otherwise, the majority of the project site is an existing disturbed area with industrial and residential uses.

The Existing Zoning Alternative would result in the development of additional light industrial and residential buildings in vacant or underutilized portions of the site. These structures would be built on the upland, disturbed portion of the site which would avoid physical impacts to wetlands and riparian habitat on the lower elevation, western portion of the site. However, due

to potential impacts to protected wildlife species using habitat on the western portion of the project site during construction activities, this alternative would also include mitigation requiring biological surveys and operational restrictions, buffers, etc. if protected wildlife species are observed at the site.

Compared to the Proposed Project, the Existing Zoning Alternative would have ***lesser*** impacts related to Biological Resources. Similar to the Proposed Project, the Existing Zoning Alternative would have Less Than Significant Impacts with the Incorporation of Mitigation related to Biological Resources.

Agriculture and Forestry Resources

The Proposed Project was found to have Less than Significant Impacts related to Agriculture and Forestry Resources. As indicated in Section 4.4 (Agriculture and Forestry Resources) of the EIR, the project parcels do not contain agricultural or forest land. The Existing Zoning Alternative would result in the development of new light industrial and residential buildings on existing disturbed portions of the project parcels.

Because there are no existing or potential agriculture or forestry resources onsite, compared to the Proposed Project, the Existing Zoning Alternative would have ***similar*** impacts related to Agriculture and Forestry Resources. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Agriculture and Forestry Resources.

Mineral Resources

The Proposed Project was found to have Less than Significant Impacts related to Mineral Resources. As indicated in Section 4.5 (Mineral Resources) of the EIR, the project parcels do not contain mineral resources. The Existing Zoning Alternative would result in the development of new light industrial and residential buildings on existing disturbed portions of the project parcels.

Because there are no existing or potential mineral resources onsite, compared to the Proposed Project, the Existing Zoning Alternative would have ***similar*** impacts related to Mineral Resources. As such, the Existing Zoning Alternative would have Less Than Significant Impacts related to Mineral Resources.

Alternative 3: Reduced Size

DESCRIPTION

The Reduced Size Alternative would propose a similar development to the Proposed Project, but with three-story buildings instead of four-story buildings. This alternative would reduce the number of residential units by approximately 25 percent which would result in 180 units that would provide housing for approximately 600 students. Similar to the Proposed Project, this alternative would also propose the redesignation/rezoning of the project parcels to Residential High Density (RH). The resulting residential density for this alternative would be approximately 16.4 units per acre. The Reduced Size Alternative would still include most improvements that would occur from the Proposed Project including, but not limited to:

- Merger of the seven project parcels into one parcel;
- Abandonment of St. Louis Road to be used for access and parking;
- Onsite trails and sidewalks connecting the project site to the nearby trail systems including the Arcata Rail with Trail and Janes Creek Meadows Open Space area;
- Indoor and outdoor recreation facilities;
- Native landscaping planted throughout the site; and
- Emergency access to Eye Street.

Requirements applicable to the Proposed Project that would also be required for the Reduced Size Alternative include, but are not limited to, the following:

- Fair share contribution to the near-term and future transportation improvements recommended in the W-Trans Traffic Study (Appendix L);
- Payment of standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, which will be used to fund some of the proposed improvements to the City's wastewater treatment system;
- Payment of Recreation Fees per Section 9.70.050 of the Arcata Land Use Code based on the valuation of the new residential structures;
- Compliance with inadvertent discovery protocols during construction activities for the protection of historical, archaeological, paleontological, and tribal cultural resources including human remains;
- Compliance with local and State stormwater regulations requiring the onsite management of stormwater runoff through low impact development site design measures;
- Compliance with the City's standard condition for controlling dust emissions during construction activities (Arcata General Plan Policy AQ-2f);

- Compliance with the City's standard condition for minimizing noise impacts during construction activities (Arcata Land Use Code Section 9.30.050.D.2);
- Compliance with the City's noise standards and State building code requirements for exterior and interior noise levels; and
- Compliance with existing regulatory requirements for the identification of asbestos and lead-based materials prior to demolition activities and proper handling and disposal if these materials are present.

IMPACT EVALUATION

This section provides an evaluation of the potential environmental impacts of the Reduced Size Alternative as compared against the Proposed Project. There are numerous differences in the types and levels of impacts for each alternative. Where there is a change in the degree of severity of an impact (more or less severe) as compared to the Proposed Project, it is described as greater or lesser. Impacts which are relatively equal as compared to the Proposed Project, are described as similar.

Land Use and Planning

The Proposed Project was found to have Less than Significant Impacts related to Land Use and Planning. The Reduced Size Alternative would also result in rezoning the existing Industrial Limited (IL) and Residential Low-Density (RL) parcels to Residential High-Density (RH). It would also result in the development of high-density student housing, but with approximately 25 percent fewer units and residents. Similar to the Proposed Project, the development of the site for residential uses under this alternative would provide greater land use compatibility with surrounding residential uses than the existing light industrial uses at the site. This alternative would also include implementation of an Operations and Management Plan that would minimize potential impacts of the student housing community (e.g., noise from residents, additional service calls for law enforcement, etc.) and provide greater compatibility with surrounding residential neighborhoods than typical multi-family residential development.

Compared to the Proposed Project, the Reduced Size Alternative would have ***similar*** impacts related to Land Use and Planning. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Land Use and Planning.

Population and Housing

The Proposed Project was found to have Less than Significant Impacts on Population and Housing. The Reduced Size Alternative would result in a similar student housing development as compared to the Proposed Project, but with three-story structures that would provide housing for approximately 200 fewer students. The Reduced Size Alternative would increase the City of Arcata's resident population (18,374 persons) by approximately 3.3 percent, as compared to the 4.4 percent that would occur from the Proposed Project. This alternative would help the City of Arcata and HSU reach their housing goals, but additional student housing would still need to be accommodated elsewhere. Similar to the Proposed Project, this alternative would remove the

existing residential units on the project parcels, which would displace approximately four persons.

Compared to the Proposed Project, the Reduced Size Alternative would have ***lesser*** impacts related to Population and Housing. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Population and Housing.

Public Services

The Proposed Project was found to have Less than Significant Impacts related to Public Services. The Reduced Size Alternative would result in a similar student housing development, but with three-story structures that would provide housing for approximately 200 fewer students. This alternative would place an increased demand on public services in the project area, but to a lesser extent than the Proposed Project since it will only provide housing for 600 students. Similar to the Proposed Project, this alternative would not require the construction of additional public service facilities (e.g., police or fire stations).

This alternative would provide fewer onsite recreation facilities than the Proposed Project, that would be proportionate to the reduced size of the development. Similar to the Proposed Project, this alternative would be required to pay Recreation Fees to the City of Arcata that would be used for either park acquisition or the improvement of existing parks in the project area.

Compared to the Proposed Project, the Reduced Size Alternative would have ***lesser*** impacts related to Public Services. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Public Services.

Recreation

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Recreation. The Reduced Size Alternative would result in a similar, but smaller development with 25 percent fewer units and fewer onsite recreational facilities that are proportionate to the reduced size of the development. This alternative would increase the use of nearby recreation facilities, but to a lesser extent than the Proposed Project since it will only provide housing for 600 students. Similar to the Proposed Project, this alternative would be required to pay Recreation Fees to the City of Arcata that would be used for either park acquisition or the improvement of existing parks in the project area.

Compared to the Proposed Project, the Reduced Size Alternative would have ***lesser*** impacts related to Recreation. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Recreation.

Cultural Resources

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Cultural Resources. As indicated in the Cultural

Resources Investigation (Appendix E), the project parcels do not contain any known historical or archaeological resources. The Reduced Size Alternative would result in ground disturbance on a similar development footprint to the Proposed Project. Similar to the Proposed Project, inadvertent discovery protocols for the protection of cultural resources would apply to any construction activity involving ground disturbance.

Compared to the Proposed Project, the Reduced Size Alternative would have ***similar*** impacts related to Cultural Resources. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Cultural Resources.

Aesthetics

The Proposed Project was found to have Less than Significant Impacts related to Aesthetics. Similar to the Proposed Project, this alternative would replace the existing view of the site (underutilized, blighted industrial site) with views of a modern student housing development. The Reduced Size Alternative would result in a similar, but smaller development that would be three stories instead of four. The reduced height of the residential structures proposed under this alternative will result in the development being less visible from surrounding view sheds. The Reduced Size Alternative would also provide greater aesthetic compatibility with surrounding single-family residential neighborhoods.

Similar to the Proposed Project, this alternative would be designed to minimize potential impacts on surrounding residential development through increased setbacks, landscaping improvements, and varied architectural elements. Similar to the Proposed Project, this alternative would include outdoor lighting designed in compliance with the Arcata Land Use Code to minimize off-site lighting impacts.

Compared to the Proposed Project, the Reduced Size Alternative would have ***lesser*** impacts related to Aesthetics. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Aesthetics.

Air Quality

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Air Quality. The Reduced Size Alternative would result in high-density residential development similar to the proposed project, but with approximately 25 percent fewer residential units.

Due to its smaller scale, this alternative would result in fewer construction emissions and fewer vehicle emissions from operation. Similar to the Proposed Project, this alternative would include onsite trails and sidewalks that would result in increased connectivity between the site and nearby trail systems. The increased connectivity has the potential to reduce vehicle trips and associated emissions.

Compared to the Proposed Project, the Reduced Size Alternative would have ***lesser*** impacts related to Air Quality. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Air Quality.

Greenhouse Gas Emissions

The Proposed Project was found to have Less than Significant Impacts related to Greenhouse Gas (GHG) Emissions. The Reduced Size Alternative would result in high-density residential development similar to the proposed project, but with approximately 25 percent fewer residential units. Due to its smaller scale, this alternative would result in fewer GHG emissions from construction and operation. Similar to the Proposed Project, this alternative would also include onsite trails and sidewalks that would result in increased connectivity between the site and nearby trail systems. The increased connectivity has the potential to reduce vehicle trips and associated emissions. In addition, this alternative would be constructed to achieve the level of energy efficiency (e.g., LEED Silver rating) planned by the Proposed Project.

Compared to the Proposed Project, the Reduced Size Alternative would have ***lesser*** impacts related to Greenhouse Gas Emissions. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Greenhouse Gas Emissions.

Noise

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Noise. The Reduced Size Alternative would result in high-density residential development similar to the proposed project, but with approximately 25 percent fewer units. Compliance with the City's standards for reducing construction noise levels would still apply to the proposed construction activity under this alternative. The Arcata General Plan PEIR (Pg. 5-54) concludes that implementation of Noise Element Policies N-5d (Construction site tool or equipment noise) and N-5e (Stationary and construction equipment noise), which are implemented through Section 9.30.050 (Noise Standards) of the City's Land Use Code, will reduce potential construction noise impacts to a less than significant level.

Similar to the Proposed Project, this alternative proposes residential development, which is typically considered to be a noise-sensitive land use, as opposed to a land use that generates significant noise levels. Potential noise sources generated during long-term operation of the Reduced Size Alternative are the same as the Proposed Project including noise produced by the residents (e.g., conversation, music, etc.) within and outside of the proposed structures, traffic noise, stationary equipment noise (e.g. HVAC units), and mobile equipment noise (e.g., lawn mowers). Due to the smaller scale of the development, noise generated during construction and operation of this alternative would be reduced as compared to the Proposed Project.

Under the Reduced Size Alternative, the future residents would also be exposed to the elevated noise levels on the site resulting from traffic on Highway 101. Similar to the Proposed Project, this alternative would require that the site and residential units be designed to ensure compliance with the City's noise standards and State building code requirements for exterior and interior

noise levels. It is anticipated that noise from traffic on Highway 101 would exceed any noise levels that would be generated by the Reduced Size Alternative or the Proposed Project.

Compared to the Proposed Project, the Reduced Size Alternative would have ***lesser*** impacts related to Noise. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Noise.

Hazards and Hazardous Materials

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Hazards and Hazardous Materials. As discussed in Section 2.10 (Hazards and Hazardous Materials) of the EIR, the project site (2905 St. Louis Road) is classified as a LUST Cleanup Site (T0602300075) with a cleanup status listed as "*Completed – Case Closed as of 01/17/2001*." The Phase 1 ESA (Appendix I) and Phase II Investigation (Appendix J) completed for the project site, determined that contamination remaining on the site from past industrial uses is below regulatory screening levels for residential land use.

The Reduced Size Alternative would result in a similar student housing development, but with approximately 25 percent fewer units. The Reduced Size Alternative, similar to the Proposed Project, proposes a residential development which is not typically associated with the use, transport, or disposal of significant quantities of hazardous materials. Similar to the Proposed Project, the warehouse buildings remaining from past lumber mill uses, which may contain lead- and asbestos-containing materials, will be demolished and removed under this alternative. Due to the proposed demolition of existing structures at the site, this alternative would also be required to comply with existing regulatory requirements concerning the proper identification and disposal of asbestos and lead-based materials.

Compared to the Proposed Project, the Reduced Size Alternative would have ***similar*** impacts related to Hazards and Hazardous Materials. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Hazards and Hazardous Materials.

Utilities and Service Systems

The Proposed Project was found to have Less than Significant Impacts related to Utilities and Service Systems. The Reduced Size Alternative would result in a similar high-density residential development, but with approximately 25 percent fewer units. Similar to the Proposed Project, this alternative would result in increased water consumption, wastewater discharge, stormwater runoff, and solid waste generation. However, the increases in water use, wastewater discharge, and solid waste generation would be reduced, as compared to the Proposed Project, since this alternative would provide housing for 200 fewer students. Similar to the Proposed Project, this alternative would also require the payment of standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, to fund some of the proposed improvements to the City's wastewater treatment system.

The Reduced Size Alternative would have a similar development footprint and would result in a similar increase in impervious surface and stormwater runoff as the Proposed Project. As such, this alternative would also be required to comply with local and State stormwater regulations to ensure that stormwater runoff is properly managed onsite and does not exceed the capacity of the City's stormwater system.

Compared to the Proposed Project, the Reduced Size Alternative would have ***lesser*** impacts related to Utilities and Service Systems. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Utilities and Service Systems.

Tribal Cultural Resources

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Tribal Cultural Resources. As indicated in the Cultural Resources Investigation (Appendix E), the project parcels do not contain any known tribal cultural resources. The Reduced Size Alternative would result in ground disturbance on a similar development footprint to the Proposed Project. Similar to the Proposed Project, inadvertent discovery protocols for the protection of tribal cultural resources would apply to any construction activity involving ground disturbance.

Compared to the Proposed Project, the Reduced Size Alternative would have ***similar*** impacts related to Tribal Cultural Resources. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Tribal Cultural Resources.

Transportation/Traffic

The Proposed Project was found to have Less than Significant Impacts with the Incorporation of Mitigation related to Transportation/Traffic. The Proposed Project may include adoption of a Statement of Overriding Considerations related to traffic impacts since the future transportation improvement recommended in the W-Trans Traffic Study (Appendix L) may not be constructed for several years.

The Reduced Size Alternative would result in a similar high-density residential development, but with approximately 25 percent fewer units. However, it would still significantly increase the number of residents on the project parcels and vehicle trips generated. This alternative would be expected to have a combined total daily trip generation of 1,183 trips, as compared to the 1,578 trips that would be generated by the Proposed Project.

Similar to the Proposed Project, this alternative would require mitigation for the payment of a fair share contribution to improve nearby intersections. However, the fair share contribution would be less than the Proposed Project, due to the reduced number of vehicle trips that would be generated under this alternative. Since the Reduced Size Alternative would generate additional vehicle trips in the Sunset Area of Arcata, it has the potential to contribute to cumulative traffic impacts in combination with the other approved/planned projects (i.e. Sunset Area housing projects) listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. However, the contribution of this alternative to cumulative traffic impacts would be less than the Proposed

Project. This alternative may also require adoption of a Statement of Overriding Considerations for traffic impacts due to the uncertainty of when some of the transportation improvements recommended in the W-Trans Traffic Study (Appendix L) will be constructed.

Since the Reduced Size Alternative would result in 600 residents on the project parcels, it would also include mitigation requiring the construction of onsite pedestrian and bicycle improvements to provide connectivity with surrounding trail systems. In addition, this alternative would improve circulation for emergency vehicles by providing emergency access to Eye Street.

Compared to the Proposed Project, the Reduced Size Alternative would have ***lesser*** impacts related to Transportation/Traffic. Similar to the Proposed Project, the Reduced Size Alternative would have Less Than Significant Impacts with the Incorporation of Mitigation related to Transportation/Traffic.

Geology and Soils

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Geology and Soils. The Reduced Size Alternative would result in a similar high-density residential development, but with approximately 25 percent fewer units. The Reduced Size Alternative would result in grading activity on a similar development footprint to the Proposed Project, and would remove unengineered fill at the project site and replace it with engineered fill materials. Similar to the Proposed Project, all new buildings will be required to meet current building code standards for seismic hazards and local and State erosion control requirements. In addition, most of the recommendations of the Geotechnical Investigation (Appendix M) completed for the Proposed Project would be applicable to this alternative.

Compared to the Proposed Project, the Reduced Size Alternative would have ***similar*** impacts related to Geology and Soils. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Geology and Soils.

Hydrology and Water Quality

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Hydrology and Water Quality. The Reduced Size Alternative would result in a similar high-density residential development, but with approximately 25 percent fewer units. Similar to the Proposed Project, the Reduced Size Alternative would be required to comply with local and State regulations relating to the protection of water quality and the prevention of erosion during construction and operation of the project.

The Reduced Size Alternative would generate additional wastewater discharge, but the volume would be reduced as compared to the Proposed Project since there would be 200 fewer residents. Similar to the Proposed Project, this alternative would require the payment of standard sewer capital connection fees and a fair share cash allocation negotiated through a Development Agreement with the City. These fees will be used to fund some of the proposed improvements to

the City's wastewater treatment system, which will ultimately improve water quality in Humboldt Bay.

The Reduced Size Alternative would have a similar development footprint and would result in a similar increase in impervious surface and stormwater runoff as the Proposed Project. As such, compliance with local and State stormwater regulations would be required for this alternative, which would include the onsite management of stormwater runoff to ensure that pre-development runoff volumes are not exceeded. Similar to the Proposed Project, implementation of the City's Long-Term Drainage Maintenance Program would occur under this alternative, which would improve the City's existing drainage infrastructure on the western portion of the site to ensure it has adequate capacity.

Compared to the Proposed Project, the Reduced Size Alternative would have ***similar*** impacts related to Hydrology and Water Quality. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Hydrology and Water Quality.

Biological Resources

The Proposed Project was found to have Less than Significant Impacts with the Incorporation of Mitigation related to Biological Resources. As indicated in the Biological Review (Appendix O) and Wetland Delineation (Appendix P) completed for the project site, the western portion of the site contains two- and three-parameter wetlands and potential seasonal habitat for amphibians and nesting birds. Otherwise, the majority of the project site is an existing disturbed area with industrial and residential uses.

The Reduced Size Alternative would result in a similar high-density residential development, but with approximately 25 percent fewer units. The proposed buildings would be built on the upland, disturbed portion of the site, similar to the Proposed Project, which would avoid physical impacts to wetlands and riparian habitat on the lower elevation, western portion of the site. Similar to the Proposed Project, grading activity and stormwater improvements would occur on the slope on the western portion of the site as part of this alternative. Due to potential impacts to protected wildlife species using habitat on the western portion of the project site, this alternative would also include mitigation requiring biological surveys and operational restrictions, buffers, etc. if protected wildlife species are observed at the site.

Compared to the Proposed Project, the Reduced Size Alternative would have ***similar*** impacts related to Biological Resources. As such, the Reduced Size Alternative would have Less Than Significant Impacts with the Incorporation of Mitigation related to Biological Resources.

Agriculture and Forestry Resources

The Proposed Project was found to have Less than Significant Impacts related to Agriculture and Forestry Resources. As indicated in Section 4.4 (Agriculture and Forestry Resources) of the EIR, the project parcels do not contain agricultural or forest land. The Reduced Size Alternative would result in grading activity over a similar development footprint to the Proposed Project, and would remove unengineered fill at the project site and replace it with engineered fill materials.

Because there are no existing or potential agriculture or forestry resources onsite, compared to the Proposed Project, the Reduced Size Alternative would have ***similar*** impacts related to Agriculture and Forestry Resources. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Agriculture and Forestry Resources.

Mineral Resources

The Proposed Project was found to have Less than Significant Impacts related to Mineral Resources. As indicated in Section 4.5 (Mineral Resources) of the EIR, the project parcels do not contain mineral resources. The Reduced Size Alternative would result in grading activity over a similar development footprint to the Proposed Project, and would remove unengineered fill at the project site and replace it with engineered fill materials.

Because there are no existing or potential mineral resources onsite, compared to the Proposed Project, the Reduced Size Alternative would have ***similar*** impacts related to Mineral Resources. As such, the Reduced Size Alternative would have Less Than Significant Impacts related to Mineral Resources.

Alternative 4: Traditional Multi-Family Development

DESCRIPTION

The Traditional Multi-Family Development Alternative would develop the project parcels for traditional two-story apartment-type residential development similar to the approved/planned projects discussed in Chapter 7 (Cumulative Impact Analysis) including Canyon Creek Apartments and Sunset Terrace. This alternative would be traditional in the sense that it would be operated as an apartment complex and not a purpose-built student housing community with onsite property managers, resident assistants, organized events, quiet hours, etc. Similar to the Proposed Project, this alternative would also propose the redesignation/rezoning of the project parcels to Residential High Density (RH). This alternative proposes a density of 16 units per acre which would result in 176 units on the 11-acre project site that would provide housing for approximately 370 residents. The Traditional Multi-Family Development Alternative would still include several of the improvements that would occur from the Proposed Project including:

- Merger of the seven project parcels into one parcel;
- Abandonment of St. Louis Road to be used for access and parking;
- Emergency access to Eye Street;
- Onsite trails and sidewalks connecting the project site to the nearby trail systems including the Arcata Rail with Trail and Janes Creek Meadows Open Space area; and
- Native landscaping planted throughout the site.

In order to achieve the proposed density with two-story structures, this alternative would not propose the indoor and outdoor recreation facilities and academic amenities planned by the Proposed Project.

Requirements applicable to the Proposed Project that would also be required for the Traditional Multi-Family Development Alternative include, but are not limited to, the following:

- Fair share contribution to the near-term and future transportation improvements recommended in the W-Trans Traffic Study (Appendix L);
- Payment of standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, which will be used to fund some of the proposed improvements to the City's wastewater treatment system;
- Payment of Recreation Fees per Section 9.70.050 of the Arcata Land Use Code based on the valuation of the new residential structures;
- Compliance with inadvertent discovery protocols during construction activities for the protection of historical, archaeological, paleontological, and tribal cultural resources including human remains;

- Compliance with local and State stormwater regulations requiring the onsite management of stormwater runoff through low impact development site design measures;
- Compliance with the City's standard condition for controlling dust emissions during construction activities (Arcata General Plan Policy AQ-2f);
- Compliance with the City's standard condition for minimizing noise impacts during construction activities (Arcata Land Use Code Section 9.30.050.D.2);
- Compliance with the City's noise standards and State building code requirements for exterior and interior noise levels; and
- Compliance with existing regulatory requirements for the identification of asbestos and lead-based materials prior to demolition activities and proper handling and disposal if these materials are present.

IMPACT EVALUATION

This section provides an evaluation of the potential environmental impacts of the Traditional Multi-Family Development Alternative as compared against the Proposed Project. There are numerous differences in the types and levels of impacts for each alternative. Where there is a change in the degree of severity of an impact (more or less severe) as compared to the Proposed Project, it is described as greater or lesser. Impacts which are relatively equal as compared to the Proposed Project, are described as similar.

Land Use and Planning

The Proposed Project was found to have Less than Significant Impacts related to Land Use and Planning. The Traditional Multi-Family Development Alternative would also result in rezoning the existing Industrial Limited (IL) and Residential Low-Density (RL) parcels to Residential High-Density (RH). However, this alternative would propose typical apartment-type multi-family development that would have fewer units (176 instead of 240) and amenities (no onsite recreational facilities) than the Proposed Project. Since this alternative would not be operated as a purpose-built student housing community with onsite management, resident assistants, quiet hours, etc., there is a greater potential for impacts (e.g., noise, additional service calls for law enforcement, etc.) than the Proposed Project. Similar to the Proposed Project, the development of the site for residential uses under this alternative would provide greater land use compatibility with surrounding residential uses than the existing light industrial uses at the site. However, this alternative would include two-story structures that would be more consistent with surrounding single-family residential structures than the Proposed Project.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***similar*** impacts related to Land Use and Planning. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Land Use and Planning.

Population and Housing

The Proposed Project was found to have Less than Significant Impacts related to Population and Housing. The Traditional Multi-Family Development Alternative would result in the same redesignation/rezoning and the development of multi-family housing, but with fewer units (176 instead of 240) that would provide housing for approximately 430 fewer residents. The Traditional Multi-Family Development Alternative would increase the City of Arcata's resident population (18,374 persons) by approximately 2.0 percent, as compared to the 4.4 percent that would occur from the Proposed Project.

The Traditional Multi-Family Development Alternative would help the City of Arcata to reach their housing goals, but would not be specifically designed to provide student housing. As such, this alternative would not contribute towards the housing goals of Humboldt State University to the extent that would occur from the Traditional Multi-Family Development Alternative and Proposed Project. Similar to the Proposed Project, this alternative would remove the existing residential units on the project parcels, which would displace approximately four persons.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***lesser*** impacts related to Population and Housing. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Population and Housing.

Public Services

The Proposed Project was found to have Less than Significant Impacts related to Public Services. The Traditional Multi-Family Development Alternative would propose typical apartment-type multi-family development with fewer units (176 instead of 240), that would provide housing for approximately 430 fewer residents than the Proposed Project. This alternative would place an increased demand on public services in the project area, but to a lesser extent than the Proposed Project since it will only provide housing for 370 residents. Similar to the Proposed Project, this alternative would not require the construction of additional public service facilities (e.g., police or fire stations).

This alternative would not provide onsite recreation facilities in order to provide the proposed density of 16 units per acre with two-story buildings. Similar to the Proposed Project, this alternative would be required to pay Recreation Fees to the City of Arcata that would be used for either park acquisition or the improvement of existing parks in the project area. This alternative may be required to pay increased Recreation Fees to the City, since no onsite recreation facilities would be provided.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***lesser*** impacts related to Public Services. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Public Services.

Recreation

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Recreation. The Traditional Multi-Family Development Alternative would propose typical apartment-type multi-family development with fewer units (176 instead of 240), that would provide housing for approximately 430 fewer residents than the Proposed Project.

This alternative would not provide onsite recreation facilities in order to provide the proposed density of 16 units per acre with two-story buildings. Similar to the Proposed Project, this alternative would be required to pay Recreation Fees to the City of Arcata that would be used for either park acquisition or the improvement of existing parks in the project area. This alternative may be required to pay increased Recreation Fees to the City, since no onsite recreation facilities would be provided.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***lesser*** impacts related to Recreation. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Recreation.

Cultural Resources

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Cultural Resources. As indicated in the Cultural Resources Investigation (Appendix E), the project parcels do not contain any known historical or archaeological resources. The Traditional Multi-Family Development Alternative would result in ground disturbance on a similar development footprint to the Proposed Project. Similar to the Proposed Project, inadvertent discovery protocols for the protection of cultural resources would apply to any construction activity involving ground disturbance.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***similar*** impacts related to Cultural Resources. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Cultural Resources.

Aesthetics

The Proposed Project was found to have Less than Significant Impacts related to Aesthetics. Similar to the Proposed Project, the Traditional Multi-Family Development Alternative would replace existing views of the site (underutilized, blighted industrial site) with views of a multi-family housing development. However, this alternative would be less visible from surrounding viewsheds since it proposes structures that would be two stories instead of four stories. Two-story apartment structures would provide greater aesthetic compatibility with surrounding single-family residential development than the structure planned by the Proposed Project.

Similar to the Proposed Project, this alternative would include native landscaping throughout the site and lighting designed in compliance with the Arcata Land Use Code to minimize off-site

lighting impacts. Since this alternative would not include onsite recreation facilities, the central portion of the site would not have the same visual appeal as the Proposed Project.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***lesser*** impacts related to Aesthetics. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Aesthetics.

Air Quality

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Air Quality. The Traditional Multi-Family Development Alternative would propose typical apartment-type multi-family development with fewer units (176 instead of 240) than the Proposed Project.

Due to its smaller scale, this alternative would result in fewer construction emissions and fewer vehicle emissions from operation. Similar to the Proposed Project, this alternative would include onsite trails and sidewalks that would result in increased connectivity between the site and nearby trail systems. The increased connectivity has the potential to reduce vehicle trips and associated emissions.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***lesser*** impacts related to Air Quality. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Air Quality.

Greenhouse Gas Emissions

The Proposed Project was found to have Less than Significant Impacts related to Greenhouse Gas Emissions. The Traditional Multi-Family Development Alternative would propose typical apartment-type multi-family development with fewer units (176 instead of 240) than the Proposed Project. Due to its smaller scale, this alternative would result in fewer GHG emissions from construction and operation. Similar to the Proposed Project, this alternative would also include onsite trails and sidewalks that would result in increased connectivity between the site and nearby trail systems. The increased connectivity has the potential to reduce vehicle trips and associated emissions. However, this alternative would not be constructed to achieve the level of energy efficiency (e.g., LEED Silver rating) planned by the Proposed Project.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***lesser*** impacts related to Greenhouse Gas Emissions. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Greenhouse Gas Emissions.

Noise

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts to Noise. The Traditional Multi-Family Development Alternative would propose typical apartment type multi-family development with

fewer units (176 instead of 240) than the Proposed Project. Compliance with the City's standards for reducing construction noise levels would still apply to the proposed construction activity under this alternative. The Arcata General Plan PEIR (Pg. 5-54) concludes that implementation of Noise Element Policies N-5d (Construction site tool or equipment noise) and N-5e (Stationary and construction equipment noise), which are implemented through Section 9.30.050 (Noise Standards) of the City's Land Use Code, will reduce potential construction noise impacts to a less than significant level.

Similar to the Proposed Project, this alternative proposes residential development, which is typically considered to be a noise-sensitive land use, as opposed to a land use that generates significant noise levels. Potential noise sources generated during long-term operation of the Traditional Multi-Family Development Alternative are the same as the Proposed Project, including noise produced by the residents (e.g., conversation, music, etc.) within and outside of the proposed structures, traffic noise, stationary equipment noise (e.g. HVAC units), and mobile equipment noise (e.g., lawn mowers). Due to the smaller scale of the development, noise generated during construction and operation of this alternative would be reduced as compared to the Proposed Project.

Under the Traditional Multi-Family Development Alternative, the future residents would also be exposed to the elevated noise levels on the site resulting from traffic on Highway 101. Similar to the Proposed Project, this alternative would require that the site and residential units be designed to ensure compliance with the City's noise standards and State building code requirements for exterior and interior noise levels. It is anticipated that noise from traffic on Highway 101 would exceed any noise levels that would be generated by the Traditional Multi-Family Alternative or the Proposed Project.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***lesser*** impacts related to Noise. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Noise.

Hazards and Hazardous Materials

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Hazards and Hazardous Materials. As discussed in Section 2.10 (Hazards and Hazardous Materials) of the EIR, the project site (2905 St. Louis Road) is classified as a LUST Cleanup Site (T0602300075) with a cleanup status listed as "*Completed – Case Closed as of 01/17/2001*." The Phase 1 ESA (Appendix I) and Phase II Investigation (Appendix J) completed for the project site, determined that contamination remaining on the site from past industrial uses is below regulatory screening levels for residential land use.

The Traditional Multi-Family Development Alternative would propose typical apartment-type multi-family development with fewer units (176 instead of 240) than the Proposed Project. The Traditional Multi-Family Development Alternative, similar to the Proposed Project, proposes a residential development which is not typically associated with the use, transport, or disposal of significant quantities of hazardous materials. Similar to the Proposed Project, the warehouse

buildings remaining from past lumber mill uses, which may contain lead- and asbestos-containing materials, will be demolished and removed under this alternative. Due to the proposed demolition of existing structures at the site, this alternative would also be required to comply with existing regulatory requirements concerning the proper identification and disposal of asbestos and lead-based materials.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***similar*** impacts related to Hazards and Hazardous Materials. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Hazards and Hazardous Materials.

Utilities and Service Systems

The Proposed Project was found to have Less than Significant Impacts related to Utilities and Service Systems. The Traditional Multi-Family Development Alternative would propose typical apartment-type multi-family development with fewer units (176 instead of 240) than the Proposed Project. Similar to the Proposed Project, this alternative would result in increased water consumption, wastewater discharge, stormwater runoff, and solid waste generation. However, the increases in water use, wastewater discharge, and solid waste generation would be reduced, as compared to the Proposed Project, since this alternative would provide housing for 430 fewer residents. Similar to the Proposed Project, this alternative would also require the payment of standard sewer capital connection fees for residential development, as well as a fair share cash allocation negotiated through a Development Agreement with the City, to fund some of the proposed improvements to the City's wastewater treatment system.

The Traditional Multi-Family Development Alternative would have a similar development footprint and would result in a similar increase in impervious surface and stormwater runoff as the Proposed Project. As such, this alternative would also be required to comply with local and State stormwater regulations to ensure that stormwater runoff is properly managed onsite and does not exceed the capacity of the City's stormwater system.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***lesser*** impacts related to Utilities and Service Systems. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Utilities and Service Systems.

Tribal Cultural Resources

The Proposed Project, in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Tribal Cultural Resources. As indicated in the Cultural Resources Investigation (Appendix E), the project parcels do not contain any known tribal cultural resources. The Traditional Multi-Family Development Alternative would result in ground disturbance on a similar development footprint to the Proposed Project. Similar to the Proposed Project, inadvertent discovery protocols for the protection of tribal cultural resources would apply to any construction activity involving ground disturbance.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***similar*** impacts related to Tribal Cultural Resources. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Tribal Cultural Resources.

Transportation/Traffic

The Proposed Project was found to have Less than Significant Impacts with the Incorporation of Mitigation related to Transportation/Traffic. The Proposed Project may include adoption of a Statement of Overriding Considerations related to traffic impacts since the future transportation improvement recommended in the W-Trans Traffic Study (Appendix L) may not be constructed for several years.

The Traditional Multi-Family Development Alternative would propose typical apartment-type multi-family development with fewer units (176 instead of 240) than the Proposed Project. However, it would still significantly increase the number of residents on the project parcels and vehicle trips generated. This alternative would be expected to have a combined total daily trip generation of 1,156 trips, as compared to the 1,578 trips that would be generated by the Proposed Project.

Similar to the Proposed Project, this alternative would require mitigation for the payment of a fair share contribution to improve nearby intersections. However, the fair share contribution would be less than the Proposed Project, due to the reduced number of vehicle trips that would be generated under this alternative. Since the Traditional Multi-Family Development Alternative would generate additional vehicle trips in the Sunset Area of Arcata, it has the potential to contribute to cumulative traffic impacts in combination with the other approved/planned projects (i.e. Sunset Area housing projects) listed in Chapter 7 (Cumulative Impact Analysis) of the EIR. However, the contribution of this alternative to cumulative traffic impacts would be less than the Proposed Project. This alternative may also require adoption of a Statement of Overriding Considerations for traffic impacts due to the uncertainty of when some of the transportation improvements recommended in the W-Trans Traffic Study (Appendix L) will be constructed.

Since the Traditional Multi-Family Development Alternative would result in approximately 370 residents on the project parcels, it would also include mitigation requiring the construction of onsite pedestrian and bicycle improvements to provide connectivity with surrounding trail systems. In addition, this alternative would improve circulation for emergency vehicles by providing emergency access to Eye Street.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***lesser*** impacts related to Transportation/Traffic. Similar to the Proposed Project, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts with the Incorporation of Mitigation related to Transportation/Traffic.

Geology and Soils

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Geology and Soils. The Traditional Multi-Family Development Alternative would propose typical apartment type multi-family development with fewer units (176 instead of 240) than the Proposed Project. The Traditional Multi-Family Development Alternative would result in grading activity on a similar development footprint to the Proposed Project, and would remove unengineered fill at the project site and replace it with engineered fill materials. Similar to the Proposed Project, all new buildings will be required to meet current building code standards for seismic hazards and local and State erosion control requirements. In addition, most of the recommendations of the Geotechnical Investigation (Appendix M) completed for the Proposed Project, would be applicable to this alternative.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***similar*** impacts related to Geology and Soils. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Geology and Soils.

Hydrology and Water Quality

The Proposed Project, as designed and in compliance with existing regulatory requirements, was found to have Less than Significant Impacts related to Hydrology and Water Quality. The Traditional Multi-Family Development Alternative would propose typical apartment-type multi-family development with fewer units (176 instead of 240) than the Proposed Project. Similar to the Proposed Project, the Traditional Multi-Family Development Alternative would be required to comply with local and State regulations relating to the protection of water quality and the prevention of erosion during construction and operation of the project.

The Traditional Multi-Family Development Alternative would generate additional wastewater discharge, but the volume would be reduced as compared to the Proposed Project since there would be approximately 430 fewer residents. Similar to the Proposed Project, this alternative would require the payment of standard sewer capital connection fees and a fair share cash allocation negotiated through a Development Agreement with the City. These fees will be used to fund some of the proposed improvements to the City's wastewater treatment system, which will ultimately improve water quality in Humboldt Bay.

This alternative would not provide onsite recreation facilities in order to provide the proposed density of 16 units per acre with two-story buildings. As such, the central portion of the site would be developed with additional structures instead of recreation facilities and landscaping. The additional structures proposed by this alternative would result in greater impervious surface than the Proposed Project, which would generate a greater volume of stormwater runoff. Similar to the Proposed Project, compliance with local and State stormwater regulations would be required for this alternative, which would include the onsite management of stormwater runoff to ensure that pre-development runoff volumes are not exceeded. Similar to the Proposed Project, implementation of the City's Long-Term Drainage Maintenance Program would occur under this

alternative, which would improve the City's existing drainage infrastructure on the western portion of the site to ensure it has adequate capacity.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***similar*** impacts related to Hydrology and Water Quality. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Hydrology and Water Quality.

Biological Resources

The Proposed Project was found to have Less than Significant Impacts with the Incorporation of Mitigation related to Biological Resources. As indicated in the Biological Review (Appendix O) and Wetland Delineation (Appendix P) completed for the project site, the western portion of the site contains two- and three-parameter wetlands and potential seasonal habitat for amphibians and nesting birds. Otherwise, the majority of the project site is an existing disturbed area with industrial and residential uses.

The Traditional Multi-Family Development Alternative would propose typical apartment-type multi-family development with fewer units (176 instead of 240) than the Proposed Project. The proposed buildings would be built on the upland, disturbed portion of the site, similar to the Proposed Project, which would avoid physical impacts to wetlands and riparian habitat on the lower elevation, western portion of the site. Similar to the Proposed Project, grading activity and stormwater improvements will occur on the slope on the western portion of the site as part of this alternative. Due to potential impacts to protected wildlife species using habitat on the western portion of the project site, this alternative would also include mitigation requiring biological surveys and operational restrictions, buffers, etc. if protected wildlife species are observed at the site.

Compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***similar*** impacts on Biological Resources. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts with the Incorporation of Mitigation related to Biological Resources.

Agriculture and Forestry Resources

The Proposed Project was found to have Less than Significant Impacts related to Agriculture and Forestry Resources. As indicated in Section 4.4 (Agriculture and Forestry Resources) of the EIR, the project parcels do not contain agricultural or forest land. The Traditional Multi-Family Development Alternative would result in grading activity over a similar development footprint to the Proposed Project, and would remove unengineered fill at the project site and replace it with engineered fill materials.

Because there are no existing or potential agriculture or forestry resources onsite, compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***similar*** impacts related to Agriculture and Forestry Resources. As such, the Traditional Multi-Family

Development Alternative would have Less Than Significant Impacts related to Agriculture and Forestry Resources.

Mineral Resources

The Proposed Project was found to have Less than Significant Impacts related to Mineral Resources. As indicated in Section 4.5 (Mineral Resources) of the EIR, the project parcels do not contain mineral resources. The Traditional Multi-Family Development Alternative would result in grading activity over a similar development footprint to the Proposed Project, and would remove unengineered fill at the project site and replace it with engineered fill materials.

Because there are no existing or potential mineral resources onsite, compared to the Proposed Project, the Traditional Multi-Family Development Alternative would have ***similar*** impacts related to Mineral Resources. As such, the Traditional Multi-Family Development Alternative would have Less Than Significant Impacts related to Mineral Resources.

COMPARISON OF ALTERNATIVES ANALYZED

In addition to the Proposed Project, the alternatives analyzed in the EIR are the following:

- **Alternative 1: No Project**
- **Alternative 2: Existing Zoning**
- **Alternative 3: Reduced Size**
- **Alternative 4: Traditional Multi-Family Development**

Table 6-1 summarizes the environmental advantages and disadvantages associated with the Proposed Project and the four alternatives analyzed above. Impacts that are greater than the Proposed Project are indicated with a "+" sign, impacts that are lesser are indicated with a "-" sign, and impacts that are similar are indicated with a "=" sign.

Table 6-1

Comparison of Project Alternatives

Environmental Factors	Proposed Project	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Land Use and Planning	Less Than Significant	+	+	=	=
Population and Housing	Less Than Significant	-	-	-	-
Public Services	Less Than Significant	-	-	-	-
Recreation	Less Than Significant	-	-	-	-
Cultural Resources	Less Than Significant	-	-	=	=
Aesthetics	Less Than Significant	+	+	-	-
Air Quality	Less Than Significant	-	-	-	-
Greenhouse Gas Emissions	Less Than Significant	-	-	-	-
Noise	Less Than Significant	+	+	-	-
Hazards and Hazardous Materials	Less Than Significant	+	+	=	=

Table 6-1

Comparison of Project Alternatives

Environmental Factors	Proposed Project	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Utilities and Service Systems	Less Than Significant	-	-	-	-
Tribal Cultural Resources	Less Than Significant	-	-	=	=
Transportation and Traffic	Less Than Significant With Mitigation	-	-	-	-
Geology and Soils	Less Than Significant	-	-	=	=
Hydrology and Water Quality	Less Than Significant	+	+	=	=
Biological Resources	Less Than Significant With Mitigation	-	-	=	=
Agriculture and Forestry Resources	Less Than Significant	=	=	=	=
Mineral Resources	No Impact	=	=	=	=

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The environmentally superior alternative is that alternative that causes the least damage to the environment and best protects community and natural resources. For development projects, the environmentally superior alternative is usually the alternative with the least amount of surface disturbance, especially disturbance in areas where there are potential impacts on unique or prime agricultural soils, sensitive plant and animal species, or historic and archaeological resources. Surface disturbance also generally equates with noise and dust generation during construction.

In addition to the direct and indirect impacts from surface disturbance, the environmentally superior alternative is determined by considering human factors, such as an action's compatibility with existing and planned land uses, aesthetics, and recreation opportunities. Non-environmental factors, such as engineering, cost, schedule, and contract issues are not considered, even though they may be important to the development of the project.

Of the five scenarios presented for The Village Student Housing Project (i.e. the Proposed Project and the four alternatives); Alternative 1 (No Project Alternative) would have the least environmental impacts. CEQA Guidelines Section 15126.6(e)(2) states, "If the environmentally superior alternative is the No#Project alternative, then the EIR shall also identify an environmentally superior alternative from among the other alternatives." The No Project Alternative would have the least impacts; however, it would fail to meet most of the project objectives.

Among the other alternatives, Alternative 2 (Existing Zoning Alternative) would be the next Environmentally Superior Alternative. Alternative 2 (Existing Zoning Alternative) would have lesser impacts compared to the Proposed Project, and would not redesignate/rezone the project parcels as Residential High-Density (RH) to allow high-density residential development. This alternative would ultimately result in a lesser scale of development then the other alternatives. However, similar to the No Project Alternative, Alternative 2 would fail to meet most of the project objectives.

Alternative 2 would still require biological surveys prior to any new development at the site and operational restrictions, buffers, etc. if protected wildlife species are observed (see Mitigation Measure 4.3.1a in Section 4.3 [Biological Resources] of the EIR). This alternative would also require similar mitigations for Traffic/Transportation impacts as the Proposed Project including: 1) paying a fair share contribution for traffic impacts proportionate to the level of development proposed and the estimated additional vehicle trips that would be generated (see Mitigation Measure 3.1a in Chapter 3 [Transportation/Traffic] of the EIR); and 2) constructing onsite pedestrian and bicycle improvements to provide connectivity with surrounding trail systems (see Mitigation Measure 3.1b in Chapter 3 [Transportation/Traffic] of the EIR).

Alternative 2 would most likely result in fewer vehicle trips, less greenhouse gas emissions, less use of nearby recreational facilities, and a reduced demand for public services. However, Alternative 2 would develop some of the project parcels with uses allowed in the Industrial Limited (IL) zone, and may have a greater potential for impacts to residential uses surrounding

the project site. The manufacturing and commercial type uses allowed in the IL zone involve activities and use equipment that have the potential to generate greater noise levels, odors, and dust than the proposed project. These uses also often require outdoor lighting of a greater intensity than what is needed for residential development. In addition, these uses would generate greater levels of truck and equipment traffic to and from the project site and may have a greater potential to result in aesthetic inconsistency with surrounding residential neighborhoods. Despite this, it is not anticipated that additional mitigation would be required, beyond that required for the Proposed Project, to reduce the impacts of Alternative 2 to a less than significant level.

As discussed in Chapters 2 through 4 of the EIR, the impacts resulting from the Proposed Project can all be satisfactorily mitigated to less than significant levels based on applicable impact thresholds. The one exception is Transportation/Traffic, due to the fact that some of the proposed transportation infrastructure improvements may not be constructed for several years. As discussed in Chapter 7 (Cumulative Impact Analysis) of the EIR, cumulative impacts may occur if the approved/planned projects in the Sunset Area of Arcata become operational prior to the construction of the needed transportation improvements. However, this potential cumulative traffic impact could occur for any of the project alternatives, except for the No Project Alternative.

CHAPTER 7.

CUMULATIVE IMPACT ANALYSIS

The following Sections are included in this Chapter:

Introduction
Other Projects
Proposed Project Cumulative Impacts
References

CHAPTER 7 CUMULATIVE IMPACT ANALYSIS

INTRODUCTION

CEQA Guidelines Section 15130 requires an EIR to "…*discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable, as defined in Section 15065 (a)(3).*" The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone.

CEQA defines cumulative impacts as two or more individual effects, when considered together, are considerable or which compound or increase other environmental impacts (Section 15130). Conversely, when the cumulative impacts are determined to not to be significant, CEQA only requires that the rationale be briefly discussed. Additionally, CEQA defines the following elements that are necessary for an adequate discussion of significant cumulative impacts (Section 15130(b)):

Significant cumulative effects may be discussed in an EIR with either:

A. A list of past, present, and probable future projects producing related or cumulative impacts; or

B. A summary of projections contained in an adopted general plan, or a related planning document, or in a prior certified environmental document which addressed conditions contributing to the cumulative impact.

The EIR for The Village Student Housing Project project utilizes the "list of past, present, and probable future projects" approach. The cumulative impacts analysis is based on the list of related projects identified below under "Other Projects."

OTHER PROJECTS

Past, Planned, or Probable Future Projects

The following discussion reflects information (available at the City of Arcata) as well as observed development trends in the general area of the proposed project. The following list summarizes potential projects and observed trends, which, along with the proposed project, may

contribute to cumulative impacts. This list contains information provided by the City of Arcata and projects from the State Office of Planning and Research CEQANet Database. Each project's responsible agency is indicated in parentheses.

- Planned: 2004 Master Plan for Humboldt State University - Campus master plan to accommodate an increase of 4,000 full-time students from 8,000 to 12,000 over 30-40 years. Includes approximately 750,000 gr. sq. ft. net increased building and student housing area, and 4,200 new vehicle parking spaces (California State University Trustees).
- Planned [**Project Revised**]: Canyon Creek Apartments – ~~74~~ 89-unit multi-family residential development on Todd Court adjacent to Larson Park (City of Arcata).
- ~~Planned~~ [**Project Relocated**]: Open Door Community Health Center – A community health center between Foster Avenue and Sunset Avenue (City of Arcata).
- Approved: Sunset Terrace – 142 unit (1 bedroom) multi-family residential development between Foster Avenue and Sunset Avenue (City of Arcata).
- Approved: Twin Parks – 40 unit multi-family residential project on the corner of Foster Avenue and Alliance Road (City of Arcata).
- Planned: Creekside Homes – 32 single-family residential units and 32 second units, 25 senior-restricted cottage units, and a 100-bed assisted living facility project on the western edge of City limits on Foster Avenue (City of Arcata).

Figure 7A below shows the proximity of most of the approved/planned projects listed above, with the exception of the 2004 Master Plan for HSU, to The Village Student Housing Project site.

Figure 7A Location of Sunset Area Approved/Planned Projects (City of Arcata, 2017)

PROPOSED PROJECT CUMULATIVE IMPACTS

AMCAL Equities, LLC, (AMCAL) is proposing The Village (Project), a student housing community on the property located at 2905 St. Louis Road (Assessor Parcel Numbers (APNs) 505-022-011, -012 and 503-372-002, -003, -004, - 005, -006). According to the applicant, the Project will be *"Arcata's first state of the art, purpose-built, off-campus student housing community. It is planned both physically and operationally to provide a healthy, safe and mentoring environment for students attending Humboldt State University (HSU)."* As currently proposed by the applicant, the project is a new, purpose-built, student housing community comprised of approximately 240 units / 800 beds in four 4-story buildings. Refer to Chapter 1 (Introduction) for a complete description of the proposed project. Construction of the proposed student housing community would occur over an approximately 20 month period. Operation of the Proposed Project, as designed and mitigated, is not expected to result in cumulative impacts.

The one resource area that has the potential for significant cumulative environmental impacts is Transportation/Traffic. The City of Arcata commissioned W-Trans to conduct a comprehensive traffic study (Appendix L) to address the cumulative impacts associated with the potential development of the approved/planned projects shown in Figure 7A (Location of Sunset Area Approved/Planned Projects). The Traffic Study concluded with recommendations for several near-term and future transportation infrastructure improvements that would reduce the impacts of the projects to a less than significant level. Mitigation has been included in Chapter 3 (Transportation/Traffic) of the EIR requiring the applicant to pay a fair share proportion of the transportation improvements recommended in the Traffic Study or as required by the City of Arcata.

As discussed in Chapter 3 (Transportation/Traffic) of the EIR, the recommended future transportation improvements in the W-Trans Traffic Study may not be constructed for several years. During this time, there is the potential that several of the approved/planned projects listed under "Other Projects" may be constructed and become operational. If this scenario were to happen, there is the potential for significant cumulative traffic impacts to occur until the transportation improvements are installed. For this reason, the City may adopt a Statement of Overriding Considerations for the Proposed Project related to traffic impacts.

Chapter 2 – Community Environment

Land Use and Planning (Section 2.1)

As shown in Figure 7A (Location of Sunset Area Approved/Planned Projects), the Sunset Area housing projects consist of infill residential development that will not physically divide a community. Each of these projects will be required to comply with the Arcata General Plan and Land Use Code, and will be subject to review under the California Environmental Quality Act (CEQA). There are no Habitat Conservation Plans or Natural Community Conservation Plans that apply to the City of Arcata.

As such, the cumulative impacts related to land use and planning are considered less than significant.

Population and Housing (Section 2.2)

The Sunset Area housing projects will provide 700 units of a variety of housing types including single-family residential, apartments, senior housing, and student housing. These projects will provide housing for approximately 1,478 residents. In relation to the City of Arcata's residential population of 18,374 (DOF, 2017), the increase from these projects (~1,478 persons) would provide a moderate increase in population (~8.0%). These projects will be developed over the next several years and are not anticipated to induce substantial population growth in the City of Arcata. Arcata has a significant demand for additional housing, and these projects will assist the City in implementation of the Housing Element by providing needed housing types including senior housing, student housing, and single-family residential units.

Most of the Sunset Area housing projects are proposed to occur on vacant properties, with the exception of the Village Student Housing project. The Village site contains existing industrial and residential structures that are proposed to be demolished. Demolition of the residential structures is estimated to eliminate housing for approximately four persons. This does not constitute a substantial number of people and it is anticipated that these residents would be able to find housing elsewhere in the surrounding communities.

Workers associated with the Sunset Area housing projects would come from local communities and from out of the area. Any new workers to the area are presumed to find housing in surrounding communities.

As such, the cumulative impacts related to population and housing are considered less than significant.

Public Services (Section 2.3)

The Sunset Area housing projects will provide 700 units of a variety of housing types for approximately 1,478 residents. As indicated by comments from the representatives of the various public service agencies in the City, the development of the Sunset Area housing projects would impact their ability to provide services, but would not result in the need for new or physically-altered governmental facilities (such as new fire or police stations), the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services.

The Arcata General Plan PEIR (2000, Pg. 3-34) states that buildout under the General Plan will require additional personnel and equipment for local service providers, but will not require additional facilities. This is attributed to the fact that the projected growth in the General Plan is primarily infill development within the City's Urban Services Boundary. In addition, the PEIR (2000, Pg. 3-34) states that no significant decrease in response time is expected since the distance to public facilities is not expected to increase for the majority of the projected population.

As such, the cumulative impacts related to public services are considered less than significant.

Recreation (Section 2.4)

The development of the Sunset Area housing projects will place additional demand on the nearby recreational facilities in the City of Arcata. Some of these projects will provide onsite recreational facilities that would reduce the impact on nearby offsite facilities. The City of Arcata requires the payment of recreation fees or park-in-lieu fees for new construction and/or subdivisions, which may be reduced by the provision of onsite facilities. For projects that do not provide adequate onsite recreational facilities, the City will collect recreation fees or park-in-lieu fees from the applicant, depending on the type of project, which will be used for either park acquisition or the improvement of existing parks in the project area in accordance with the City's Parks and Recreation Master Plan. As such, with the contribution of fees by these projects for the development of offsite parkland, there will be adequate recreational facilities to meet the needs of the future residents.

CEQA review will be required for all of the Sunset Area housing projects. If potentially significant impacts are identified due to the construction of onsite recreational facilities from these projects, mitigation will be required to reduce impacts to less than significant levels.

The future development of offsite recreational facilities in the Sunset Area is not analyzed in the EIR, as it is currently unknown how the fees provided by these projects will be used, and this future development will be subject to subsequent CEQA analysis conducted by the City.

As such, the cumulative impacts related to recreation are considered less than significant.

Cultural Resources (Section 2.5)

All of the Sunset Area housing projects will be subject to local, State, and federal laws requiring the protection of cultural resources. Many of the projects will require the preparation of cultural resource investigations. Inadvertent discovery protocols will apply to any ground disturbance that occurs as part of these projects.

As such, the cumulative impacts related to cultural resources are considered less than significant.

Aesthetics (Section 2.6)

The Sunset Area housing projects are proposed to occur on properties that are vacant or underutilized and are adjacent to residential neighborhoods. Several of these properties were used for industrial activities in the past and are currently in a blighted condition. The removal of remnants of former industrial uses, and the development of these properties with new residential structures, will improve the overall aesthetic character of the Sunset Area. All of the approved/planned projects will provide greater aesthetic compatibility with existing residential neighborhoods in the Sunset Area and will be required to comply with the Arcata General Plan

Design Element Policies. All of these projects will occur within existing developed areas of the City of Arcata and will not create islands of development in the natural environment.

As described in Section 2.6 (Aesthetics) of the EIR, there are no scenic designated highways in the vicinity of the Sunset Area housing projects. Highways 101 and 299 are listed as "Eligible State Scenic Highways-Not Officially Designated" (Caltrans, 2016). It is not anticipated that the development of these projects will have an impact on any future potential designation (e.g., designated state scenic highway) for these roadways.

All of the Sunset Area housing projects will be required to install lighting in compliance with Section 9.30.070 (Outdoor Lighting) of the Arcata Land Use Code, and the recommendations of the International Dark-Sky Association (IDA), which includes standards for fixtures, shielding, wattage, placement, height, and illumination levels. To comply with these requirements, lighting for the projects will be the minimum lumens necessary, directed downward, shielded, and pedestrian level when feasible. This will ensure lighting is contained within these properties and does not cause significant lighting and glare impacts for surrounding land uses.

As such, the cumulative impacts related to aesthetics are considered less than significant.

Air Quality (Section 2.7)

No single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards for regional criteria pollutants. Air pollution, by nature, is mostly a cumulative impact. The analysis applicable to the construction and operational aspects of a project represent the levels at which a project's individual emissions of criteria pollutants and precursors would result in a cumulatively considerable contribution to the region's air quality conditions.

As described in Section 2.7 (Air Quality) of the EIR, the North Coast Air Basin does not meet the State ambient air quality standards for PM_{10}. The Air Basin is considered in attainment or unclassified for all other criteria air pollutants. During both construction and operation, the Sunset Area housing projects have the potential to generate additional particulate matter in the project area. The City's standard condition for controlling dust emissions during construction (General Plan Policy AQ-2f (1-10), Pg. 4-47) will be included by the City of Arcata as a condition of approval for all of these projects. Compliance with these dust control measures during construction will reduce the generation of particulate matter during construction to a less than significant level. Based on the analysis contained in Section 2.7 (Air Quality) of this EIR, the Proposed Project will not exceed the air quality standards for particulate matter during both construction and operation. It is not anticipated that any of projects in the Sunset Area will individually exceed air quality standards for particulate matter.

There are no known existing stationary sources or reasonably foreseeable projects, which would include stationary sources, within 1,000 feet of the Sunset Area that could contribute to a cumulative health risk impact.

Residential development is not a type of land use that would generate objectionable odors during long-term operation. The Sunset Area is not located within close proximity (< 0.5 miles) to any

land uses generating significant odors such as a wastewater treatment plant, landfill, feedlot, asphalt batch plant, fish processing plant, or rendering plant. The Creek Side Homes project will be located adjacent to agricultural operations that have the potential to generate odors that could be objectionable to future residents. However, this would primarily impact one project that will be designed to minimize these potential impacts.

As such, the cumulative impacts related to air quality are considered less than significant.

Greenhouse Gas Emissions (Section 2.8)

Greenhouse gas (GHG) emissions, by their nature, represent a cumulative impact. No single project could generate enough GHG emissions to noticeably change the global average temperature. Instead, GHG emissions contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. Therefore, the project analysis presented in Section 2.8 (Greenhouse Gas Emissions) of the EIR represents the cumulative impact analysis for impacts from GHG emissions. The project analysis in Section 2.8 (Greenhouse Gas Emissions) of the EIR found that impacts to GHG emissions would be less than significant.

It is not anticipated that any of projects in the Sunset Area will individually produce significant quantities of GHG emissions. There are several features of these projects that will reduce potential GHG emissions. All of these projects will be infill residential development that is located within walking and biking distance of nearby commercial, employment, and educational centers. Several of the projects propose new pedestrian/bicycle pathways that will provide connectivity to other trail systems in the City. All of the projects will be required to comply with California's Energy Efficiency Standards for Residential Buildings and most of the projects are proposing water efficient landscaping.

As described in Section 2.8 (Greenhouse Gas Emissions) of the EIR, electricity service for the City of Arcata was transitioned to the Redwood Coast Energy Authority (RCEA) Community Choice Energy (CCE) program in May 2017. The CCE program procures approximately 40% of its power from renewable and carbon-free sources, which is approximately 5% more renewable energy than the power sources previously provided by PG&E (RCEA, 2017). The Sunset Area housing projects will be automatically enrolled in the RCEA CCE program and will contribute towards increasing the amount of renewable power placed on California's grid, which has the effect of reducing greenhouse gas emissions and stimulating new renewable development in our region and State.

As such, the project will not have a considerable contribution to the cumulative impacts related to GHG emissions.

Noise (Section 2.9)

For noise and vibration, the geographic scope of potential cumulative impacts is limited to the immediate vicinity of the Sunset Area housing projects and areas adjacent to any routes designated for access and hauling.

Long-term operation of the residential units proposed by these projects is not expected to generate significant noise levels that will exceed the Arcata General Plan Noise Element standards or generate significant cumulative noise impacts. The proposed projects would contribute to an overall increase in traffic noise levels in the City of Arcata. However, based on the estimated traffic levels in the W-Trans Traffic Study (Appendix L), potential noise impacts would likely not be considered cumulatively considerable. Some of the Sunset Area housing projects are located close to Highway 101 and could potentially be subject to elevated transportation noise levels. However, this would occur on a project-specific basis and would not result in cumulative impacts.

As analyzed in Section 2.9 (Noise) of the EIR, noise-related impacts would be potentially significant during construction activities. There is the potential for a cumulative impact if all of the Sunset Area housing projects were constructed at the same time. However, that scenario is unlikely and the projects will be conditioned to comply with the requirements of Section 9.30.050(D)(2) of the Arcata Land Use Code. This section of the Land Use Code places restrictions on the hours and days of construction activities and requires the proper maintenance of construction equipment. Compliance with these requirements will result in less than significant cumulative noise impacts from construction activities.

As such, the cumulative impacts related to noise impacts are considered less than significant.

Hazards and Hazardous Materials (Section 2.10)

The Sunset Area housing projects propose a type of land use that is not typically associated with the routine transport, use, or disposal of hazardous materials during long-term operation. During construction activities associated with these projects, the storage, use, disposal, and transport of hazardous materials could result in potential spills and accidents. All construction activities for these projects would be subject to compliance with existing hazardous materials regulations. Future development would be required to evaluate their respective hazards and hazardous materials impacts on a project-by-project basis. Compliance with all federal, State, and local regulations during the construction and operation of new developments would ensure that there are no cumulatively considerable significant hazards to the public or the environment associated with the routine transportation, use, disposal, or release of hazardous materials.

Several of the Sunset Area housing projects are proposed to occur on properties that were used for industrial activities in the past and may contain residual hazardous materials contamination. Any remaining hazardous materials must be remediated to the satisfaction of regulatory agencies prior to completion of construction and occupancy of the proposed residential units.

As such, the cumulative impacts related to hazards and hazardous materials are considered less than significant.

Utility and Service Systems (Section 2.11)

The geographic area for cumulative utility and service systems impacts consists of the service area of the City of Arcata. The Sunset Area housing projects will be served by the City of Arcata public potable water system and wastewater treatment plant.

During the review of the Sunset Area housing projects, the City of Arcata has indicated that they have ample water supply capacity to serve the City through the buildout projected in the General Plan and beyond. This includes the upzoning and annexation that is proposed by the Sunset Area housing projects.

In June 2017, the City of Arcata completed an analysis of the capacity of the wastewater treatment system (Appendix K), which determined there is sufficient capacity for the current potential and approved/planned residential development projects in the City. The analysis included the proposed Sunset Area housing projects listed above under "Other Projects." However, the facilities must be improved to meet the demand of both current and future population. The Sunset Area housing projects, which include upzoning and annexation, will be required to pay capital connection fees and may be required to pay additional fees negotiated through Development Agreements with the City. The fees generated from these projects will be used to fund some of the proposed improvements to the City's wastewater treatment system. With these improvements to the City of Arcata wastewater treatment system, sufficient capacity will exist to serve the Sunset Area housing projects.

All of the Sunset Area housing projects will be subject to State and local stormwater regulations which will require the construction of onsite facilities for the management of stormwater runoff. The installation of the onsite stormwater drainage facilities would result in physical impacts to the surface and subsurface of the project sites. These impacts are considered to be part of the construction phase for these projects. CEQA review will be required for all of the Sunset Area housing projects. If potentially significant impacts are identified due to the construction of onsite stormwater facilities from these projects, mitigation will be required to reduce impacts to less than significant levels.

All of the Sunset Area housing projects will be served by the same landfills which have sufficient capacity to accommodate the current and future solid waste disposal needs of the City of Arcata. Based on current local efforts to reduce solid waste generation and encourage recycling, the City of Arcata is in compliance with State waste diversion requirements. All of the multi-family units proposed by these projects will be required to provide adequate areas for collecting and loading recyclable materials, which will contribute to meeting the City's waste diversion goals.

As such, the cumulative impacts related to utility and service systems are considered less than significant.

Tribal Cultural Resources (Section 2.12)

All of the Sunset Area housing projects will be subject to local, State, and federal laws requiring the protection of tribal cultural resources. Many of the projects will require the preparation of cultural resource investigations. Inadvertent discovery protocols will apply to any ground disturbance that occurs as part of these projects.

As such, the cumulative impacts related to tribal cultural resources are considered less than significant.

Chapter 3 – Transportation/Traffic

Transportation/Traffic

The City of Arcata commissioned W-Trans to conduct a comprehensive traffic study (Appendix L) to address the cumulative impacts associated with the potential development of the five Sunset Area housing projects. The geographic scope for the analysis of cumulative impacts on transportation/traffic consists of the study intersections and road segments included in the W-Trans Central Arcata Areawide Traffic Study. As determined in the Traffic Study, the Sunset Area housing projects would generate an estimated 4,613 additional trips per day. Of this amount, the Village Student Housing project is estimated to generate approximately 34 percent of these additional trips, or 1,578 trips per day.

As described in Chapter 3 (Transportation/Traffic) of the EIR, the Traffic Study concluded that potential cumulative impacts may occur from these projects, and recommended several near-term and future transportation infrastructure improvements that would reduce the impacts of the projects to a less than significant level. The "near-term" improvements were completed in Summer 2017. The "future" transportation improvements may not be constructed for a decade or longer since the design of some of these improvements need to be coordinated with Caltrans and/or Humboldt State University. All of the Sunset Area housing projects will be required to pay a fair share proportion of the transportation improvements recommended in the Traffic Study or as required by the City of Arcata.

Since the Village Student Housing Project is estimated to generate approximately 34 percent of the additional trips that would be generated by the Sunset Area housing projects, the contribution of the Proposed Project to this traffic impact would be cumulatively considerable. To address this impact, Mitigation Measure 3.1a has been included in Chapter 3 (Transportation/Traffic) of the EIR for the Proposed Project, requiring the applicant to pay a fair share proportion of the near-term and future transportation improvements.

As discussed in Chapter 3 (Transportation/Traffic) of the EIR, two of the recommended transportation improvements in the W-Trans Traffic Study may not be constructed for several years. These improvements include the roundabout at the Sunset Ave/LK Wood Blvd intersection and the roundabout at the Foster Ave/Alliance Road intersection (Appendix L). During this time, there is the potential that several of the Sunset Area housing projects may be

constructed and become operational. If this scenario were to happen, there is the potential for significant cumulative traffic impacts to occur until the two roundabouts are installed. For this reason, the City may adopt a Statement of Overriding Considerations for the Proposed Project related to traffic impacts. This may also be required for some of the other projects.

The W-Trans Traffic Study also reviewed potential impacts to pedestrian, bicycle, and transit facilities. The Study concluded that existing facilities are not adequate to accommodate several of the Sunset Area housing projects. Recommendations were made for improvements that would ensure that these projects will not decrease the performance or safety of public transit, bicycle, and pedestrian facilities (Appendix L). These projects will be required to construct the improvements recommended in the Traffic Study, or as required by the City of Arcata, to minimize potential impacts on alternative modes of transportation. The recommendations for onsite pedestrian/bicycle improvements at the project site have been included as Mitigation Measure 3.1b for the Proposed Project.

The Sunset Area housing projects will be required to comply with City of Arcata policies and regulations concerning designing access improvements for efficient vehicular and non-vehicular circulation and emergency access, and preventing hazardous design features. As summarized in Chapter 3 (Transportation/Traffic) of the EIR, project construction and operational activities would not conflict with applicable plans, ordinances and polices related to circulation in the City of Arcata, would not increase hazards due to a design feature or incompatible use, and would not interfere with emergency response to the project site or surrounding areas.

As such, cumulative impacts related to transportation/traffic will be less than significant upon construction of the future transportation improvements identified in the W-Trans Traffic Study.

Chapter 4 – Natural Environment

Geology and Soils (Section 4.1)

The City of Arcata is located in a seismically active region with multiple nearby seismic sources. Therefore, the region is likely to experience strong seismic shaking during the lifespan of the Sunset Area housing projects.

The nature of geologic impacts is largely site-specific. Therefore, geologic hazards do not accumulate as do impacts on other resources. These projects are proposed to be located on properties that are relatively flat, are not subject to landslide or significant erosion, and are not located within Alquist-Priolo Zones or on unstable geologic units. According to Figure PS-a (*Hazards Map*) of the Arcata General Plan, portions of the Sunset Area of Arcata are located in moderate liquefaction zones. Similar to all development in the City of Arcata, these projects would comply with State and local regulations and policies, including California Building Code standards, which would reduce the risk to life and property from potential geologic hazards.

As such, the cumulative impacts related to geology and soils are considered less than significant.

Hydrology and Water Quality (Section 4.2)

All of the Sunset Area housing projects will be connected to the City's wastewater treatment system. The City is required to adhere to the discharge requirements of the North Coast Regional Water Quality Board (NCRWQCB) for its wastewater treatment plant. In 2012, the City's wastewater treatment system began operating under a new National Pollution Discharge Elimination System (NPDES) permit that specifically addressed several long-term issues regarding disinfection, treatment units, and outfalls. The new permit enabled changes to be made to improve wastewater treatment, protect beneficial uses, increase energy efficiency, reduce chemical usage, and reduce the potential for permit violations. As described in Section 2.11 (Utilities and Service Systems) of the EIR, the City initiated a Facility Plan and Plant Improvement Project (2016), which proposes a variety of improvements to the wastewater treatment system, to increase treatment capacity and prevent the exceedance of discharge limitations.

In June 2017, the City of Arcata completed an analysis of the capacity of the wastewater treatment system (Appendix K), which determined there is sufficient capacity for the current potential and approved/planned residential development projects in the City. The analysis included the proposed Sunset Area housing projects listed above under "Other Projects." However, the facilities must be improved to meet the demand of both current and future population. The Sunset Area housing projects, which include upzoning and annexation, will be required to pay capital connection fees and may be required to pay additional fees negotiated through Development Agreements with the City. The fees generated from these projects will be used to fund some of the proposed improvements to the City's wastewater treatment system. Improvements to the City of Arcata wastewater treatment plant will reduce the occurrence of exceedances of discharge limitations and ultimately improve water quality in the Bay.

All of the Sunset Area housing projects will be subject to State and local stormwater regulations which will require the construction of onsite facilities for the management of stormwater runoff. In compliance with these requirements, stormwater runoff will be adequately managed on the project site and will not exceed the capacity of the City's stormwater system, cause significant erosion, or substantially degrade water quality.

Some of the Sunset Area housing project sites have existing seasonal flooding conditions that will be addressed through implementation of the City's Long-Term Drainage Maintenance Program. This City program proposes maintenance and drainage improvements on some of the project sites that will reduce existing flooding conditions. A Mitigated Negative Declaration was adopted by the City of Arcata for the Drainage Maintenance Program in March 2017 (SCH# 2017022003). Any improvements proposed to reduce existing flooding on the Sunset Area housing project sites, will not be analyzed in the CEQA documents prepared for these projects. Subsequent CEQA analysis may be required for the drainage improvements, if they were not previously analyzed in the Mitigated Negative Declaration adopted for the Drainage Maintenance Program. With the proposed onsite stormwater systems and improvements to the City existing stormwater infrastructure, these projects will not result in additional on or offsite flooding.

Some of the Sunset Area housing projects are located near stream courses including Janes Creek and Jolly Giant Creek. However, none of the projects propose to locate new structures within the 100-year special flood hazard area for these creeks.

Several of the projects are located within the inundation area for the failure of Matthews Dam. Arcata General Plan Policy PS-2f (*Failure of Matthews Dam*) (Pgs. 6-7) requires development of an early warning system and evacuation plan for all new buildings designed for human occupancy that are located in the area of potential inundation resulting from a catastrophic failure of Matthews Dam. The Arcata General Plan PEIR notes that compliance with General Plan Policy PS-2f will ensure no significant adverse impacts will result.

As such, the cumulative impacts related to hydrology and water quality are considered less than significant.

Biological Resources (Section 4.3)

The Sunset Area housing projects have the potential to impact protected species, degrade plant and animal habitat, fill wetlands, remove native vegetation, and introduce non-native plant species. Several of these projects are proposed to occur on properties that were used for industrial activities in the past and are therefore in a disturbed condition with limited remaining habitat area. However, some of the project sites are located along Janes Creek or have wetlands, which are identified by the City as Environmentally Sensitive Habitat Areas (ESHAs).

Project sites with these sensitive habitat areas will be required to comply the Arcata General Plan and Land Use Code which contains policies and standards for the protection of biological resources including, but not limited to, setback requirements, a “no net loss” policy for impacts to wetlands, and mitigation requirements for impacts to riparian areas and wetlands. These projects will be required to delineate ESHAs in special studies and on the project plans and comply with the City’s creek and wetland setbacks or mitigation requirements if physical impacts will occur to these areas. Biological surveys will also be required to determine whether protected plant and wildlife species exist on the project sites. If protected species are detected on any of the sites, operational restrictions, buffers, etc. will be required to ensure they are not significantly impacted by construction activities. Some of the projects may include mitigation measures requiring biological surveys to be conducted at a seasonally appropriate time or prior to construction activities. In addition, outdoor lighting proposed by these projects will be designed in compliance with the Arcata Land Use Code to minimize lighting spillover onto ESHAs such as the Janes Creek riparian corridor. Compliance with the requirements of the City’s General Plan and Land Use Code, as well the existing regulatory requirements of other State and federal agencies, will ensure that less than significant impacts to biological resources occur from the Sunset Area housing projects.

As described in Section 4.3 (Biological Resources) of the EIR, the majority of the project site is a disturbed former mill site with light industrial, manufacturing, and residential uses currently occurring. As indicated in the Biological Review (Appendix O) and Wetland Delineation (Appendix P) completed for the project site, the western portion of the site contains two- and three-parameter wetlands and potential seasonal habitat for amphibians and nesting birds. In

addition, Janes Creek occurs directly north of the site. The proposed residential structures will be located on the upland, disturbed portion of the site which will avoid physical impacts to the wetland and riparian habitat on the lower elevation, western portion of the site. However, grading activity and stormwater improvements will occur on the slope on the western portion of the site.

Due to potential impacts to protected wildlife species using habitat on the western portion of the project site, the Proposed Project will be mitigated to require biological surveys and operational restrictions, buffers, etc. if protected wildlife species are observed at the site. The project is also required by the Arcata Land Use Code to maintain setbacks from Janes Creek and the on-site wetland area. In addition, outdoor lighting proposed by the project will be designed in compliance with the Arcata Land Use Code to minimize lighting spillover onto wetland and riparian areas adjacent to the project. The project design, mitigation measures, and City requirements will ensure that the project protects the wetland and riparian areas on the site, avoids impacts to protected wildlife species, and protects sensitive habitat.

As such, the cumulative impacts related to biological resources are considered less than significant.

Agriculture and Forestry Resources (Section 4.4)

Most of the Sunset Area housing projects are located on properties that are not zoned for agricultural and forestry production and do not contain prime agricultural land or forestland. However, the Creek Side Homes project will permanently convert prime agricultural land. This project will be required to dedicate a conservation easement on adjacent agricultural land, owned by the applicant, as mitigation. None of the other Sunset Area housing projects are proposed to occur on prime agricultural land.

As such, the cumulative impacts related to agriculture and forestry resources are considered less than significant.

Mineral Resources (Section 4.5)

The Sunset Area of Arcata is not known to have minerals of importance to the region or the State of California, and these projects do not propose to develop the properties for mineral-related production. The mineral resources in the City of Arcata planning area are primarily aggregate deposits found along the Mad River and in the Arcata Bottom.

As such, potential impacts related to mineral resources are not expected to be cumulatively considerable.

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CHAPTER 8.

OTHER CEQA CONSIDERATIONS

The following Sections are included in this Chapter:

Growth Inducing Impacts
Significant Irreversible Environmental Changes
Significant Environmental Effects Which Cannot Be Avoided
References

CHAPTER 8 OTHER CEQA CONSIDERATIONS

This chapter addresses other CEQA considerations related to:

- Growth Inducing Impacts
- Significant Irreversible Environmental Changes
- Significant Environmental Effects Which Cannot Be Avoided

GROWTH INDUCING IMPACTS

A proposed project's growth inducing impacts are analyzed in accordance with the following CEQA Guideline:

> 15126.2 (d) Growth Inducing Impacts of the Proposed Project. Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant, might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

The project proposes an off-campus student housing development on an underutilized industrial site within 0.5 miles of Humboldt State University (HSU). Student housing is identified as a needed housing type in the City of Arcata 2014 Housing Element and the HSU 2004 Master Plan. Humboldt State University (HSU) reports they currently have 2,100 dormitory housing units that are estimated by the CA Department of Finance (DOF) to provide housing for approximately 2,283 students (Appendix K, Pg. 3). As of Fall 2016, HSU had 8,503 students enrolled with 8,020 of these being Full-Time Equivalent Students (HSU, 2016). As such, the dormitory housing units on-campus provide housing for less than 30% of the student population. This project would provide modern, purpose-built housing for 800 students that will help to meet the demand for student housing in the City.

The project does not propose to provide housing for non-student residents in the City or the surrounding area that could induce population growth. The project will not result in an increase

in student enrollment at HSU, but may attract students to this area of the City of Arcata who have been living outside City limits due to existing housing constraints in the City. Providing additional student housing in the City may also help to relieve pressure on the single-family housing market in the area. In relation to the City of Arcata's resident population of 18,374 (DOF, 2017), the potential increase from the proposed project (~800 persons) would not be substantial (~4.4%).

The project includes all necessary improvements to the existing infrastructure, and no excess capacity that could induce growth will be provided. As indicated by comments from the representatives of the various public service agencies in the project area, the development of the proposed project would not result in the need for new or physically altered governmental facilities (such as new fire or police stations). There are no features of the project that would be expected to cause secondary or growth-inducing impacts. Therefore, the proposed project would not be growth-inducing.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

A proposed project's significant irreversible effects are analyzed in accordance with the following CEQA Guideline:

> 15126.2 (c) Significant Irreversible Environmental Changes Which Would be Caused by the Proposed Project Should it be Implemented. 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 which 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.

Implementation of the Village Student Housing Project will commit non-renewable resources during construction and operation. During construction, the use of building materials (e.g., lumber and forest products, sand and gravel, asphalt, cement, steel, glass, etc.) and energy resources (e.g., gasoline, diesel fuel, electricity) largely would be irreversible and irretrievable. Energy will be consumed in processing building materials and for transporting these materials and construction workers to the project site. The project facilities can be expected to have a life span of approximately 50 years. Resources consumed during construction of the project, (such as fuel and building materials) will be used in quantities proportional to similar housing development in the State and are not considered a wasteful use of resources. The nonrenewable resources consumed for this project are comparable to the use of resources for student housing at other universities and colleges throughout the region and the country.

SIGNIFICANT ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

A proposed project's significant environmental effects which cannot be avoided are analyzed in accordance with the following CEQA Guideline:

> 15126.2 (b) Significant Environmental Effects Which Cannot be Avoided if the Proposed Project is Implemented. Describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described.

Under the proposed project, most project related actions will result in either "No Impact" or "Less Than Significant Impacts" to the various resource areas investigated. Detailed mitigation measures have been identified in Chapters 3 (Transportation/Traffic) and 4 (Natural Environment) of the EIR and are intended to mitigate project effects to the extent feasible. These mitigation measures are identified in Tables 1-3 and 1-4 of Chapter 1 (Introduction) of the EIR.

The City of Arcata commissioned W-Trans to conduct a comprehensive Traffic Study (Appendix L) to address the cumulative impacts associated with the potential development of the approved/planned projects shown in Figure 7A (Location of Sunset Area Approved/Planned Projects) of Chapter 7 (Cumulative Impact Analysis) of the EIR. The City of Arcata refers to these projects as the "Sunset Area housing project." The Traffic Study concluded with recommendations for several near-term and future transportation infrastructure improvements that would reduce the impacts of the projects to a less than significant level. Mitigation has been included in Chapter 3 (Transportation/Traffic) of the EIR requiring the applicant to pay a fair share proportion of the transportation improvements. The future transportation improvements recommended in the Traffic Study may not be constructed prior to the operation of several of the Sunset Area housing projects. Some of the projects may be delayed in obtaining all necessary entitlement for several years. Nonetheless, there is the potential that significant traffic impacts may occur until these transportation improvements are in place.

Because the EIR identifies traffic as an impact that cannot be reduced to a less than significant level until the transportation improvements recommended in the W-Trans Traffic Study (Appendix L) are constructed, a Statement of Overriding Considerations may be adopted by the City of Arcata for the Village Student Housing Project.

REFERENCES

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CHAPTER 9.

MITIGATION MONITORING & REPORTING PROGRAM (MMRP)

The following Sections are included in this Chapter:

Introduction
Mitigation Measures

CHAPTER 9 MITIGATION MONITORING & REPORTING PROGRAM

INTRODUCTION

Where the lead agency requires implementation of mitigation measures as a condition of approval, it is required to adopt a mitigation monitoring and reporting program when it prepares its findings on significant effects identified in the EIR. The program must address how it will monitor all the mitigation measures that were adopted or made conditions of project approval (Pub. Res. Code Section 21081.6(a); CEQA Guidelines Section 15091(d), 15097).

This section provides the mitigation measures identified to reduce or eliminate potentially significant environmental effects of the proposed project and its alternatives.

MITIGATION MEASURES

Chapter 3 – Transportation/Traffic

Mitigation Measure 3.1a. Transportation Improvements.
To minimize the traffic impacts of the proposed project, the applicant will be responsible for paying a fair share proportion for the following near-term and future transportation improvements to the City of Arcata:

- Sunset Avenue/LK Wood Boulevard Re-Striping (Near-term)
- Re-Stripe Alliance Road & Foster Avenue Approaches (Near-term)
- Roundabout at Sunset Avenue/LK Wood Boulevard Intersection (Future)
- Roundabout at Foster Avenue/Alliance Road Intersection (Future)

The “near-term” improvements were completed in Summer 2017. The “future” transportation improvements may not be constructed for a decade or longer since the design of some of these improvements need to be coordinated with Caltrans and/or Humboldt State University. In order to fund these transportation improvement projects, a Traffic Impact Mitigation Fee Collection Program or equivalent will be established by the City of Arcata. The anticipated total cost of these improvements will be approximately $3,627,700. The amount of the total cost of the improvements that will be funded by the Traffic Impact Mitigation Fee Collection Program is $911,900. Of this amount, the Village Student Housing Community project is estimated to be

responsible for approximately 37%. Detailed information about the traffic impact mitigation fees is included on Pgs. 67-69 and in Appendix E of the W-Trans Central Arcata Areawide Traffic Study (Appendix L).

Timing for Implementation/Compliance: Prior to the issuance of the building permit
Person/Agency Responsible for Monitoring: City of Arcata
Monitoring Frequency: Prior to construction activities
Evidence of Compliance: Issuance of the building permit by the City of Arcata

Mitigation Measure 3.1b. On-site Pedestrian/Bicycle Improvements.
To comply with Policy T-5 (Bicycle and Pedestrian Facilities) of the Arcata General Plan Transportation Element, the Arcata Pedestrian & Bicycle Master Plan (2010), and the recommendations of the W-Trans Central Arcata Areawide Traffic Study (Appendix L), the proposed project will construct new on-site pedestrian/bicycle improvements throughout the development. This includes the following pedestrian/bicycle trails:

- An approximate 675-foot section of the Arcata Rail with Trail along the eastern edge of the project site from the northeast corner of the site to the southeast corner.
- An approximate 500-foot section of trail along the north property line of the project site from the northeast corner of the site to the northern central portion of the site. This trail will connect to the City-owned Janes Creek Meadows Open Space Area and ultimately provide access to Maple Lane.
- Sidewalk and pedestrian trails throughout the project site as illustrated on the Preliminary Landscape Plan prepared by KLA Landscape Architecture.

Timing for Implementation/Compliance: Prior to the issuance of the certificate of occupancy
Person/Agency Responsible for Monitoring: City of Arcata
Monitoring Frequency: During construction activities
Evidence of Compliance: Issuance of the certificate of occupancy by the City of Arcata

Section 4.3 – Biological Resources

Mitigation Measure 4.3.1a. Biological Survey.
The applicant shall have a qualified biologist conduct a focused survey for the protected wildlife species identified in the NRM Biological Review (Appendix O; Pg. 4, Table 1) as having potential habitat on the 1.4 acre western portion of the project site, including amphibians and nesting birds. If protected wildlife species are observed at or directly adjacent to the project site, the qualified biologist shall design appropriate project activity buffer widths and operational restrictions. The survey shall be completed and submitted to the City of Arcata Community Development Department prior to issuance of the building permit for the project.

Timing for Implementation/Compliance: Prior to the issuance of the building permit
Person/Agency Responsible for Monitoring: City of Arcata

Monitoring Frequency: Prior to construction activities
Evidence of Compliance: Issuance of the building permit by the City of Arcata

CHAPTER 10.

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Geocon Consultants, Inc.
Geotechnical Investigation

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Architectural Elevations

KLA Landscape Architecture/Planning
Preliminary Landscape Plan

Manhard Consulting
Conceptual Engineering Plan
Preliminary Stormwater Management Report
Topographic Survey

Natural Resources Management Corporation
Biological Review
Wetland Delineation

William Rich & Associates
Cultural Resources Investigation

W-Trans
Central Arcata Areawide Traffic Study