INITIAL STUDY

RESIDENCES AT NAPA JUNCTION PROJECT

(PL22-0011)

Prepared for:

CITY OF AMERICAN CANYON

Community Development Department
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American Canyon, CA 94503

Prepared by:

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Date: July 2023

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INTRODUCTION AND BACKGROUND

Purpose of Initial Study

The project applicant, American Canyon Ventures, LLC, is proposing a Design Permit to develop a 453-unit rental housing complex (Residences at Napa Junction Project, or "the Project") with a resident community center and a commercial childcare center. The site is located within the Broadway District Specific Plan in the City of American Canyon, in Napa County, California.

The project includes a fifty percent (50%) Density Bonus pursuant to State Density Bonus Law (SDBL) by providing 15% very-low-income affordable units at 50% Area Median Income (AMI). This will allow an increase of density from 302 dwelling units (20 units per acre) to 453 dwelling units, with 46 of these to be affordable- to very-low-income residents (SDBL Section 65915(f)(2)).

SDBL also allows for an unlimited number of waivers of development standards to achieve the allowable density (SDBL Section 65915(e)). These include:

1. Reduce minimum side yard setback from 10'-0" to 3'-0"; ref. SDBL Section 65915(e).
2. Reduce minimum rear yard setback from 10'-0" to 3'-0"; ref. SDBL Section 65915(e).

   Reduce minimum setback between building face (front and rear) from 35'-0" to 30'-0"; ref. SDBL Section 65915(e).
3. Increase maximum number of stories from 3 stories to 4 stories; ref. SDBL Section 65915(e).
4. Increase maximum building height from 42'-0" to 50'-0"; ref. SDBL Section 65915(e).
5. Reduction of parking requirements from 964 to 609; this is not a waiver, but an allowable per Section 65915(p)(1).

While no historic, cultural, or tribal resources were identified on the project site in the BDSP EIR, an archaeological and historic resource assessment at the project site and identified one feature (the railroad berm) that is eligible for listing on the state and federal historic registers. There are no other historic or cultural resources on the project site. We are currently evaluating potential project impacts to that feature and determining appropriate mitigation measures. An Historic Property Survey that addresses historical traces of former railroad uses on the site will be submitted separately, with other CEQA documents, when it is completed; it addresses historical traces of former railroad uses on the site.

The Design Permit includes an increase in dwelling units allocated to the Downtown Core Sub-Area from 180 dwelling units to 453 dwelling units in accordance with the BDSP Implementation Chapter which permits maximum dwelling units and commercial square footage for any Subarea may be adjusted

through approval of a discretionary development application provided the maximum building intensity for the entire Broadway District Specific Plan is not exceeded.

The State-licensed commercial Childcare facility would accommodate up to 46 children with both indoor and outdoor facilities. The community center would include a clubhouse, pool house, childcare center, lap pool, rock (leisure) pool, and a variety of outdoor spaces.

This Initial Study and attached supporting documents have been prepared to determine whether and to what extent the City of American Canyon (City) BDSP Environmental Impact Report (EIR) is sufficient to address the potential environmental impacts resulting from the proposed Design Permit approval, including the waivers and incentives requested by the project applicant.

Initial Study/Environmental Checklist

Pursuant to Public Resources Code (PRC) Section 21166, and California Environmental Quality Act (CEQA) Guidelines Sections 15162 and 15164, subd. (a), the attached Initial Study has been prepared to evaluate the proposed Project. The attached Initial Study uses the standard environmental checklist categories provided in Appendix G of the CEQA Guidelines but provides answer columns for evaluation consistent with the considerations listed under CEQA Guidelines Section 15162, subd. (a).

CEQA Review Process and Relationship to BDSP EIR

Once an Environmental Impact Report (EIR) has been certified for a project, no subsequent EIR or Negative Declaration (ND), with or without mitigation measures, is required under CEQA unless, based on substantial evidence:

> 1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or ND . . . due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;1
>
> 2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or ND . . . due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
>
> 3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, or the ND was adopted . . . shows any of the following:

a. The project will have one or more significant effects not discussed in the previous EIR or ND;

b. Significant effects previously examined will be substantially more severe than shown in the previous EIR or ND;

c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR or ND would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative (CEQA Guidelines, Section 15162, subd. (a); see also PRC, Section 21166).

CEQA Guidelines Section 15164, subd. (a) further provides that the lead agency or a responsible agency shall prepare an Addendum to a previously certified EIR or Negative Declaration (ND) if some changes or additions are necessary but none of the conditions described in CEQA Guidelines Section 15162 calling for preparation of a subsequent EIR or ND have occurred (CEQA Guidelines, Section 15164, subd. (a)).

This checklist and attached documents provide the City with required documentation under CEQA to support the conclusion whether preparation of a supplemental or subsequent EIR or ND is required prior to approval of the above-referenced discretionary actions, or whether an Addendum to the BDSP EIR is sufficient.

Findings

This Initial Study has identified the potential for significant impacts that cannot be clearly reduced to a less-than-significant level through mitigation measures. Therefore, the City has determined that a Supplemental Environmental Impact Report will be prepared (supplementing the BDSP EIR).

ENVIRONMENTAL DETERMINATION

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

	Aesthetics	X	Hazards/Hazardous Materials		Recreation
	Agriculture Resources	X	Hydrology/Water Quality		Tribal Cultural Resources
	Air Quality		Land Use/Planning		Transportation/ Traffic
X	Biological Resources		Mineral Resources		Utilities/Service Systems
X	Cultural Resources	X	Noise		Wildfire Hazards
X	Geology/Soils		Population/Housing		Mandatory Findings of Significance
	Greenhouse Gas Emissions		Public Services		

DETERMINATION: On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.	
I find that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	X
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Brent Cooper, Community Development Director

6/30/23
Date

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
ACMC	American Canyon Municipal Code
ADWF	average dry weather flow
BAAQMD	Bay Area Air Quality Management District
BDSP	Broadway District Specific Plan
BMP	Best Management Practice
CARB	California Air Resources Board
CGP	Construction General Permit (State)
CLRRA	California Land Reuse and Revitalization Agreement
CPT	cone penetration tests
CNDDB	California Natural Diversity Database
CO	carbon monoxide
CO2E	carbon dioxide equivalent
CWA	Clean Water Act
District	American Canyon Fire Protection District
DPR	California Department of Parks and Recreation
DTSC	Department of Toxic Substances Control
ESA	Environmental Site Assessment
GHG	greenhouse gas
gpd	gallons of wastewater per day
HERO	human and ecological risk office
HHRA	Human Health Risk Assessment
HPS	Historical properties survey
LID	Low Impact Design
LOS	level of service
MBTA	Migratory Bird Treaty Act
MDL	most likely descendant
mgd	million gallons per day
NAHC	Native American Heritage Commission
NCALUCP	Napa County Airport Land Use Compatibility Plan
NHPA	National Historic Preservation Act
NO_x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NSD	Napa Sanitation District
NWIC	Northwest Information Center
O_3	ozone

PM_{10}	particulate matter less than 10 microns
$PM_{2.5}$	particulate matter less than 2.5 microns
RWQCB	Regional Water Quality Control Board
SCH	State Clearinghouse
SDBL	State Density Bonus Law
SFBAAB	San Francisco Bay Area Air Basin
SFBRWQCB	San Francisco Bay Regional Water Quality Control Board
SO_x	sulfur dioxide
SR-29	State Route 29
SWP	State Water Project
SWPPP	Stormwater Pollution Prevention Plan
TAC	toxic air contaminant
TMDL	Total Maximum Daily Load
USACE	U.S. Army Corps of Engineers
UWMP	Urban Water Management Plan
VMT	vehicle miles traveled
VOC	volatile organic compound
WWTP	wastewater treatment plant

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INITIAL STUDY: THE RESIDENCES AT NAPA JUNCTION PROJECT (PL 22-0011)

This Initial Study (IS) has been prepared by the City of American Canyon, Community Development Department, 4381 Broadway, Ste. 201, American Canyon, CA 94503, pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 *et seq.*), CEQA Guidelines (Title 14, Section 15000 *et seq.* of the California Code of Regulations).

Organization of the Initial Study

This Initial Study is organized into the following sections:

SECTION I – SUMMARY: Provides summary background information about the project.

SECTION II – PROJECT DESCRIPTION: Includes project background and detailed description of the proposed project and required permits.

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

SECTION IV – INITIAL STUDY CHECKLIST AND DISCUSSION: Reviews the proposed project for potentially significant environmental effects, and identifies mitigation measures to reduce potentially significant impacts to less-than-significant levels, where feasible.

SECTION V – MANDATORY FINDINGS OF SIGNIFICANCE: Determines whether environmental effects associated with development of the proposed project are significant, including cumulative impacts.

SECTION VI – REFERENCES CITED: Identifies source materials that have been consulted in the preparation of the Initial Study.

SECTION VII – REPORT PREPARERS: Identifies persons preparing the study.

APPENDICES - Includes applicable technical studies, comments and responses on the Draft Initial Study, and Mitigation Monitoring and Reporting Program (MMRP) (in the Final IS/MND).

I. SUMMARY

Project Name and File Number:	The Residences at Napa Junction Project (Application PL22 - 0011)
Project Location:	Napa Junction Road in the City of American Canyon. APN 059-020-037.
Project Applicant:	American Canyon Ventures, LLC. c/o Scott Mendelsohn 516 Oak Vista Court Santa Rosa, CA 95409 (415) 879-0909 evergmc@aol.com
Project Planner:	William He, Senior Planner; City of American Canyon 4381 Broadway, Ste. 201 American Canyon, CA 94503 (707) 647-4336
Property Owner:	Union Pacific Railroad c/o Daniel Parker 1400 Douglas St Omaha, NE 6817-1690
General Plan Designation:	Broadway District Specific Plan, Downtown Core Subarea
Zoning:	Business Park (BP)
Project Approvals:	Design Permit which includes a Density Bonus to increase density per State Density Bonus Law (SDBL) by 50% (from 20 units/acre to 30 units/acre)
Date Initial Study Completed:	July__, 2023

II. PROJECT DESCRIPTION

Background

Broadway District Specific Plan[1]

The Broadway District Specific Plan (BDSP) planning area encompasses 235 acres along both sides of the Broadway corridor (State Route 29 [SR-29]) from the American Canyon/Vallejo City limit (Napa/Solano County line) to the northern city limit (see Figures 1 and 2). The plan area is bounded by a variety of residential uses (west), unincorporated Napa County (north), the Union Pacific rail line (east), and the City of Vallejo (south).

The BDSP was prepared to guide development of up to 1,200 net new dwelling units and up to 840,000 square feet of net new non-residential uses within the plan area. The BDSP also contemplates several mobility enhancements, including reduction in SR-29 speed limits from 50 and 55 miles per hour (mph) to 35 mph, street extensions, bicycle and pedestrian facilities, and streetscape improvements. Based on the key issues identified during the stakeholder outreach process, the BDSP's objectives are identified in Section 2.3 of the certified BDSP Program EIR to include:

1. Positively contribute to the local economy via new capital investment, expansion of the tax base, the development of new housing opportunities, and the creation of new employment opportunities.
2. Create a planning framework that promotes the development of highest- and-best uses on undeveloped and underutilized properties within the Broadway District.
3. Enhance safety on the SR-29 corridor by lowering the speed limit, developing bicycle and pedestrian facilities, and creating parallel routes for local trips.
4. Nurture an environment where the Broadway District can become a destination for American Canyon.
5. Leverage citywide economic benefits from the Broadway District Specific Plan.
6. Increase the number and type of housing opportunities in the Broadway District.
7. Encourage variety in the scale and design of new development.
8. Foster improved community health.
9. Provide new public spaces that includes parks, plazas, private recreational facilities, and other gathering places.

[1] https://www.cityofamericancanyon.org/Home/ShowDocument?id=17886

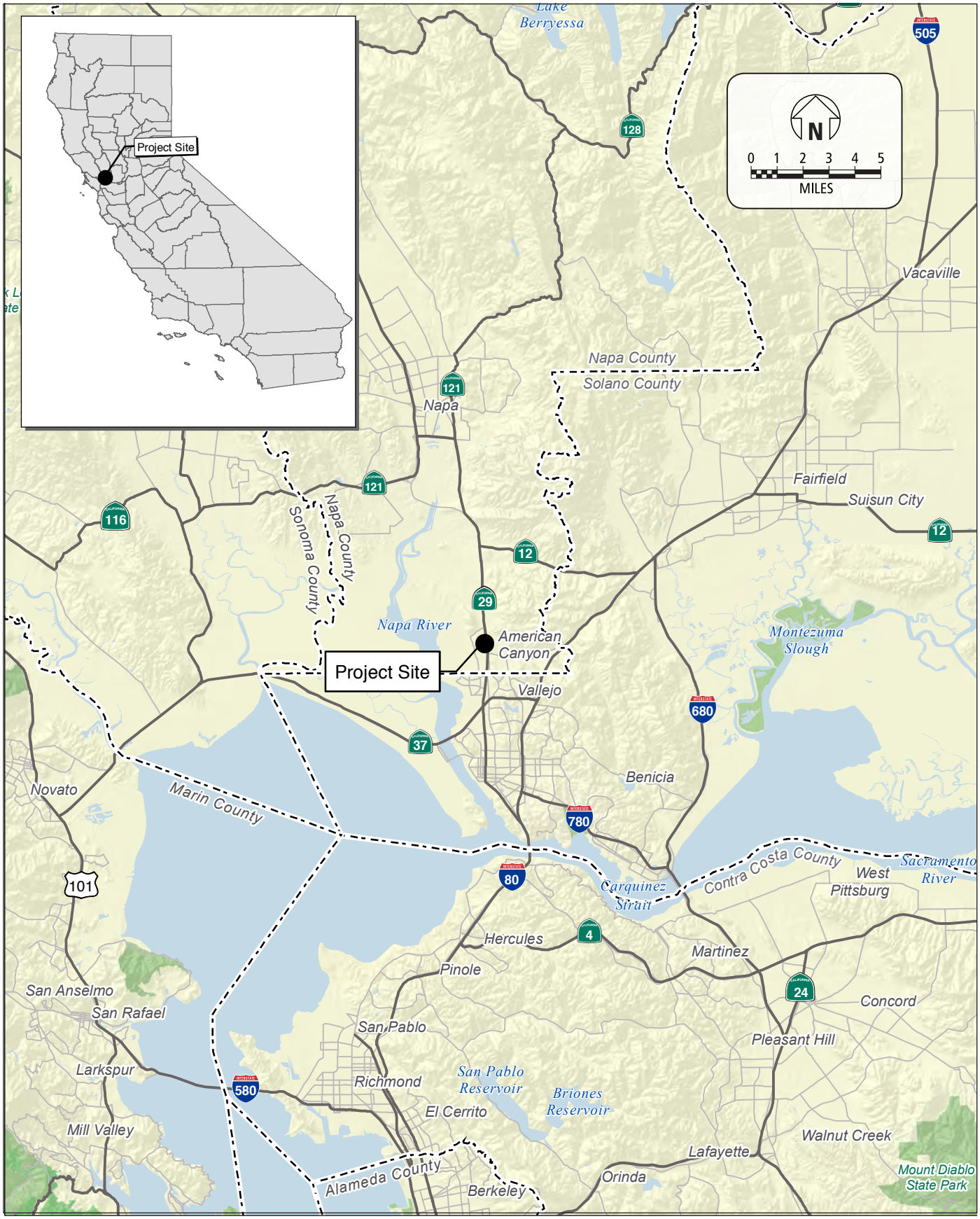


Figure 1
Project Location

Source: City of American Canyon, Broadway District Specific Plan

Figure 2
Project Vicinity

Source: City of American Canyon, Broadway District Specific Plan

There are nine subareas within the BDSP: Downtown Core, Broadway Residential, Business Park, Medium Density Residential, Home Improvement, Northern Gateway, Southern Gateway, Southeast Area Specific Plan, and Local Serving Mixed-Use. Each subarea is further divided into zoning districts to identify specific land uses that are allowed within the subareas and to establish standards that govern future development.

The project site is within the Downtown Core subarea of the BDSP. The Downtown Core is the largest subarea and already hosts mixed-use development with retail, hotel, and residential uses. The intent of the Downtown Core is to create a safe and vibrant destination for American Canyon residents and visitors. The centerpiece of the district will be a family-friendly Main Street design, which provides safe pedestrian interaction with slow moving vehicles. Uses within the Downtown Core will improve economic vitality. The Downtown Core will include pedestrian, bicycle, and vehicle connections.

The BDSP set forth commercial and residential development capacity for both the entire BDSP area as well as for each subarea. Total residential dwelling units within the BDSP area was stated at 1,200 units. For the Downtown Core, the BDSP stated a limit of 180 dwelling units, unless adjusted by the City through the approval of a discretionary development application (provided the maximum building intensity for the entire BDSP area is not exceeded, in which case an amendment to the BDSP would be required). As explained below, the project proposes to develop 453 residential units on the property, which exceeds the 180 units stated for the Downtown Core in the BDSP. While the residential unit cap in the BDSP is superseded by the Housing Crisis Act of 2019, the potential environmental impacts associated with the development of more than 180 units on the property are evaluated in this Initial Study. Residential development that has occurred to date under the BDSP is set forth in Table PD-1, below.

Broadway District Specific Plan Environmental Impact Report (BDSP EIR)

The American Canyon City Council certified the 2019 BDSP EIR (State Clearinghouse [SCH] No. 2017042025) on June 18, 2019. The BDSP EIR was prepared in accordance with CEQA to evaluate the potential environmental impacts associated with the implementation of the BDSP. The EIR evaluated the following Plan components:

- The development of up to 1,200 new dwelling units.
- The development of up to 840,000 square feet of new non-residential uses within an approximately 300-acre area along SR-29 within the City of American Canyon.
- The development of number of mobility enhancements, including roadway extensions and improvements, and new bicycle and pedestrian facilities.

Table PD-1. Broadway District Specific Plan (Bdsp) Approved DensitiesaAnd Existing Residential Development

Subzone	Land Use	ITE Code	Units	BDSP Approved Quantity	Existing Developed Residential Units
Downtown Core	Apartment	230	DU	**180**	**--**
	Shopping Center	820	KSF	150	--
	Hotel	310	ROOMS	100	--
Broadway Residential	Apartment	220	DU	275	66
	Shopping Center	820	KSF	53	--
Business Park	Apartment	220	DU	224	**--**
	Shopping Center	820	KSF	63	--
	General Office Building	710	KSF	200	--
Medium Density Residential	Townhome	230	DU	276	--
Home Improvement District	Home Improvement	862	KSF	80	--
Local Serving Mixed Use	Apartment	220	DU	86	--
	Shopping Center	820	KSF	127.5	--
Northern Gateway	General Office Building	110	KSF	16.5	--
*Using state density bonus law, the project proposes to increase density 50%, from 302 units (20 du/ac) to 453 units (30 du/ac)					
ITE = Institute of Traffic Engineers					
DU = Dwelling Units					
KSF = 1,000 Square Feet					

Most of the environmental impacts identified in the BDSP EIR were determined to be less than significant or were reduced to a level considered less than significant through either the adoption of mitigation measures or the incorporation of project revisions that would avoid or substantially lessen potential impacts[2]. However, even with implementation of all available mitigation, certain impacts related to air quality and transportation/traffic were identified as significant and unavoidable impacts in the BDSP EIR; for those environmental impacts, the American Canyon City Council adopted a Statement of Overriding Considerations[3]. At that same time, the City Council also adopted a Mitigation Monitoring and Reporting Program.[4]

[2] City of American Canyon. 2019. Broadway District Specific Plan Environmental Impact Report.
[3] City of American Canyon. 2019. Resolution No. 2019-51.
[4] City of American Canyon, 2019. Resolution No. 2019-52.

In connection with its subsequent amendment of the BDSP in September 2020, the City prepared an environmental checklist that found that the proposed amendments would not have any new or substantially more severe environmental impacts and that the City therefore could approve the BDSP amendments as being within the scope of the BDSP EIR and no new environmental document was required. That checklist was attached to City Council Ordinance No. 2020-05 as Exhibit B.

Project Site General Plan, Specific Plan, and Zoning Designations

Each BDSP subarea is divided into distinct zoning districts, several of which were newly established in the BDSP. The American Canyon General Plan designates the property as "Business Park (BD-BP)", which is intended to encourage professional uses, a limited range of retail and service commercial uses oriented to the day-to-day needs of local residents, and multifamily residential uses, especially in conjunction with a commercial use. Permitted uses within the Business Park zone include multifamily residential and townhouses, with densities of up to 20 dwelling units per gross acre ("du/acre").

Development standards include:

- Maximum building height is 24 feet when setback at least 15 feet from a public right of way, or 42 feet when setback at least 30 feet from a public right of way.
- There is no maximum building coverage.
- Minimum site size is one acre. Residential private open space is required at the following specifications:
    - ground floor patios 100 square feet minimum, 8 feet deep;
    - balconies 50 square feet minimum, 6 feet deep.
- Setbacks are as follows:
    - minimum setback from Broadway, 30 feet unless otherwise approved;
    - minimum setback from arterial, 20 feet;
    - minimum front yard building setback, 15 feet;
    - minimum garage setback, 20 feet;
    - minimum side yard, 10 feet; street side of corner lot, 15 feet;
    - minimum rear yard, 10 feet;
    - setback between building faces and building side (front or rear), 25 feet.

- Parking requirements for multifamily uses are provided in the City's Municipal Code, as follows:
    - Studio, one covered space;
    - One-bedroom, one covered space plus 0.5 uncovered spaces;
    - Two-bedroom, one covered space plus one uncovered space;
    - One guest space per every four units.

As noted below, the project requests reduced parking ratios under the State Density Bonus Law.

The property is located within the vicinity of the Napa County Airport and is subject to the Napa County Airport Land Use Commission (ALUC) Airport Land Use Compatibility Plan (ALUCP). Four areas of land use compatibility typically are assessed for development within the airport planning area: (i) noise; (ii) safety; (iii) airspace protection; and (iv) overflight annoyance.

The ALUCP designates five "Airport Compatibility Zones" that correspond to certain geographic areas near the Napa County Airport. A portion of the property is located within Airport Compatibility Zone D and Zone E. Residential uses typically are considered incompatible within Airport Compatibility Zone D and compatible in Zone E. the residential units located in the ALUC E zone may be required to record an avigation easement. Nonresidential uses are considered acceptable if they do not attract more than 100 persons per acre within structures or 150 persons total on the site per acre.

Consistent with the ALUCP, no residential units are proposed within Airport Compatibility Zone D. Project-related uses within Zone D would be limited to residential parking and project amenities, including the community center, as well as wetland areas. All the residential units would be located within Airport Compatibility Zone E. The project's consistency with ALUCP compatibility policies is discussed in the Land Use section of this Initial Study.

Proposed Project Description

Project Location

The proposed project, The Residences at Napa Junction, is a 453-rental-unit residential housing development proposed on a 15.051-acre parcel (APN: 059-020-037; herein referred to as "the property") located at the east end of Napa Junction Road in American Canyon, California (Figures 2 and 3). The balloon-shaped property is currently owned by the Union Pacific Railroad and is accessed from Napa Junction Road at the south end of the property, approximately 1,000 feet east of the intersection with Highway 29.

Site Conditions

The mostly undeveloped property is covered with native/weedy vegetation, some wetland areas, and some historic railroad features (relic berms, old railroad ties, metal items, etc.). Active railroad tracks border the property to the north and east. Remnants of a railroad alignment (railroad bed and berm), two small concrete pads, and several debris stockpiles/scatters also occupy the site. The remnant railroad berm along the western edge of the site was formerly part of a track "balloon loop" (a historic railroad switching feature discussed further in the Cultural Resources section of this document). The topography

of the site is variable; the site interior is generally flat, with the raised railroad berm running along the west side of the property and depressions (former borrow pits from railroad berm construction) running through the interior.

The site also contains areas of ruderal seasonal wetlands and seasonal wetland ditches. Two small stands of Freemont's cottonwood trees occur on the property – one in the south and one in the west. Wetland features and trees are discussed further in the Biological Resources section of this Initial Study.

Some areas of the site have soils with concentrations of metals that exceed California Department of Toxic Substances Control (DTSC) human health screening levels and/or regional background levels (AllWest 2022). The contaminated soils are primarily located along the site perimeter in the vicinity of the current and former railroad tracks and are likely due to the historic railroad uses of the site. This is discussed in the Hazards and Hazardous Materials section of this Initial Study.

Surrounding Land Uses

Active railroad tracks border the property to the north and east (Figure 3). The property is bordered to the south by multifamily residential and commercial development; and to the west by a City-owned wetlands and stormwater detention parcel adjacent to Highway 29. Beyond Highway 29 to the west lie industrial, commercial, and recreational facilities. To the east of the property, beyond the operational rail line, is residential development under construction in the Watson Ranch Specific Plan (WRSP).

Proposed Project

The applicant proposes to construct a residential housing development on 13.44 acres of the 15.05-acre property, close to shopping, restaurants, public open spaces, and employment centers. Close proximity to Highway 29 would provide residents with regional access to both the north and south. As discussed above, the Project would consist of 453 residential rental units, a community center with both indoor and outdoor amenities, and associated circulation and parking infrastructure, as further described below. The remaining 1.61 acres of the property would be retained as open space to preserve existing seasonal wetlands, create additional seasonal wetlands to partially mitigate Project wetland impacts, and provide passive, nature-based recreation amenities for residents of the development. The proposed site plan is shown in Figures 4 and 5.

Figure 3
Project Site and Vicinity

Source: Evans & DeShazo Archaeology and Historic Preservation

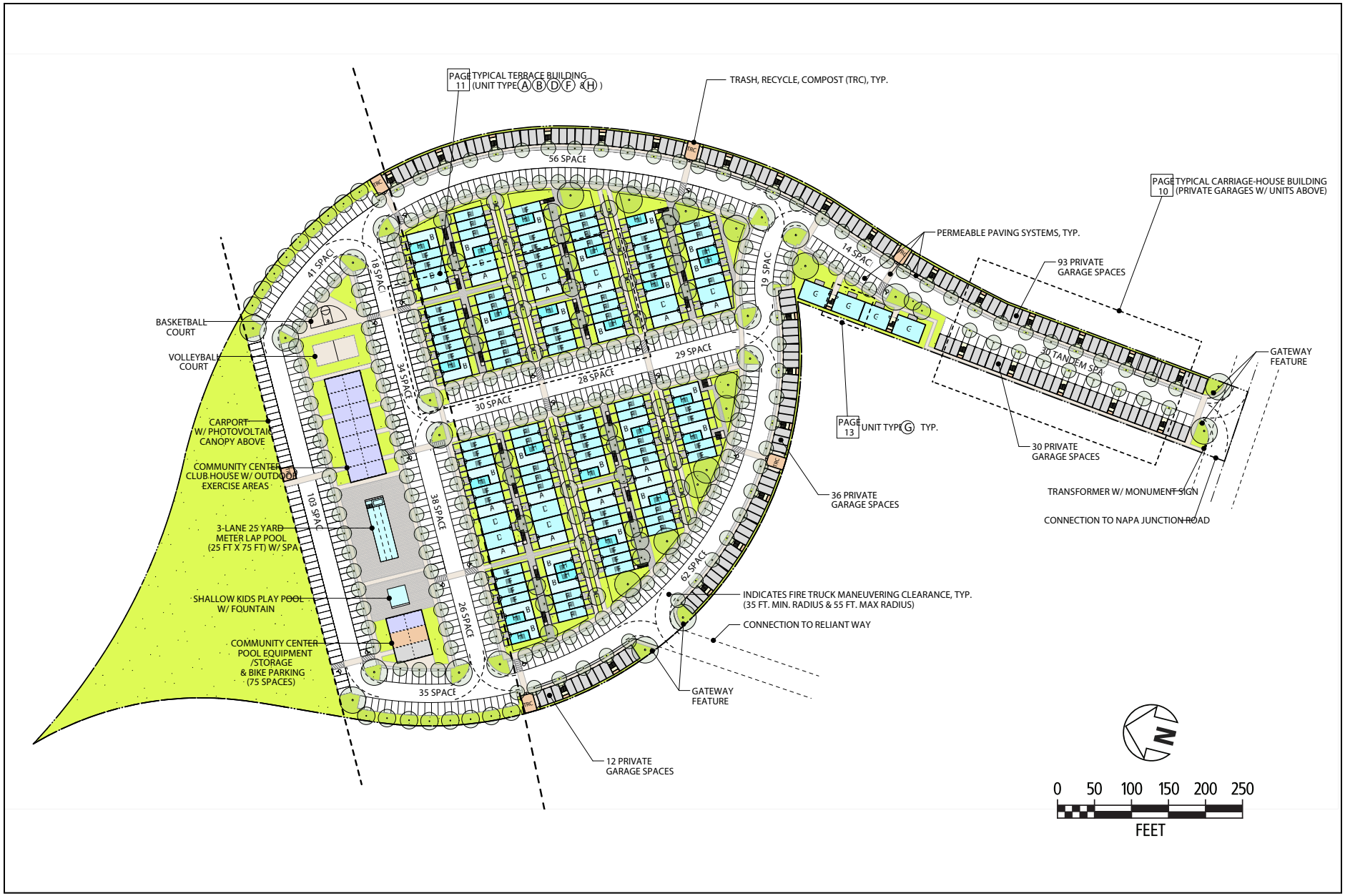


Figure 4
Proposed Site Plan

Source: Macy Architecture, Inc.

Figure 5
Proposed Project Rendering

Source: Macy Architecture, Inc.

Forty-six of the 453 rental units would be rented at rates affordable to very-low-income households, with the other units offered at market rates. The project's 46 very low- income units would comprise just over 15 percent of the project's 301 "base" units (i.e., the maximum number of units that could be developed on the property given the 20 units per acre allowed under the General Plan and BDSP). Through use of the California State Density Bonus Law, the project includes a 50-percent density bonus, which would allow 453 total units. The 46 very-low-income affordable units would be constructed concurrently with the market rate units and would be evenly distributed throughout the project site. The design and appearance of the inclusionary units would be compatible with the design of the overall housing development.

By making 15 percent of the "base" units available to very-low-income households, the project is entitled to request up to three "incentives or concessions" under the State Density Bonus Law. The project also can request a "waiver" of any City development standard that would have the effect of physically precluding the construction of the proposed development at the density or with the incentives or concessions permitted by the State Density Bonus Law. The project includes the following specific waiver requests by the applicant:

- Reduce minimum rear yard setback from 10'-0" to 3'-0"
- Reduce minimum side yard setback from 10'-0" to 3'-0"
- Reduce minimum setback between building face (front or rear within project site) from 35'-0" to 30'-0"
- Reduce minimum setback between building face (front or rear at property line) from 35'-0" to 23'-0"
- Increase maximum number of stories from 3 stories to 4 stories
- Increase maximum building height from 42'-0" to 50'-0"

The project also would request reduced vehicular parking ratios as provided for under the State Density Bonus Law, inclusive of parking for guests and persons with a disability, as follows: zero to one bedroom, one parking space; two to three bedrooms, one and one-half parking spaces.

Residential Units

The proposed 453 residential units includes 141 one-bedroom, 252 two-bedroom, and 60 three-bedroom apartments. The units would be composed of varied types, including three-story "carriage-house" buildings (dwellings above private garages) around the perimeter of the developed area, and three- and four-story terrace buildings up to a maximum height of 50 feet in the interior of the site. The perimeter carriage house buildings would be arranged in a "balloon" shape, follow the surrounding active and former railway track alignments. This built-up perimeter also would provide a train noise sound barrier for the interior neighborhood.

The carriage houses proposed on the east side of the property would be located within 50 feet of the active railroad and would be designed with appropriate noise-mitigating features to meet or exceed requirements in existing building codes. These features include isolated heating and cooling heating, ventilation, and air conditioning (HVAC) systems (heat pumps) and sound-insulating walls, doors, and windows. An acoustical consultant would determine the noise reduction features based on field measurements and testing. Per BDSP requirements, the buildings would be designed in the Modern Industrial Style.

The residential buildings would be paired around landscaped courtyards and separated by landscaped laneways, which provide pedestrian circulation throughout the site. The ground-level dwellings would be accessed directly from the streets and laneways and would each have their own front and rear yards defined by garden walls and gates. The upper-level dwellings would be accessed from within the courtyards via stairways serving a continuous open-air gallery. Each dwelling unit would have a private outdoor space in the form of a covered balcony.

Community Center

The community center, located at the northwestern end of the development, would include a clubhouse, pool house, childcare center, lap pool, rock (leisure) pool, and a variety of outdoor spaces. The two-story clubhouse would contain indoor/outdoor exercise and lounge areas and other "flex spaces". The first story would feature a chef's kitchen with adjacent barbecue facilities and eating spaces, a mail/parcel room, and the property management office. The second story would provide a flexible layout for a variety of uses, including co-working and remote working spaces. Adjacent to the clubhouse are the lap pool, rock pool, and surrounding pool decks. The pool house would serve the rock pool area and would contain indoor and outdoor party rooms with kitchen and barbecue facilities and the pool mechanical equipment. The childcare center would accommodate up to 46 children with both indoor and outdoor facilities. The community center features are proposed within Airport Compatibility Zone D.

Access, Parking, and Circulation

The project also would improve Reliant Way accessing the site. The width of the street would be 42' from back of sidewalk to back of sidewalk and the extension would be approximately 65' long. There are no proposed utilities running along the length of Reliant Way but there is a 48" RCP and 6'x4' box culvert crossing the road.

The proposed development would be accessed from Napa Junction Road and Reliant Way, at the existing terminus of each road. The applicant would secure an easement on Reliant Way from Union Pacific Railroad. The development would be organized along a fine-grained network of interior streets, laneways,

courtyards, and passageways. The streets would be shared by pedestrians and vehicles, and all automotive and bike parking would be accommodated within seven "bicycle sheds" and accessed along the streets. The laneways, courtyards, and passageways would be exclusively pedestrian. Signage for the development would be integrated into the walkway features spanning both entrance locations – there would be no independent free-standing signs advertising or otherwise naming the development.

As discussed above, the applicant is proposing to use the State Density Bonus Law to decrease the overall number of parking spaces otherwise required under the City's Municipal Code (from 949 spaces to 753 spaces).

The proposed Project would meet the California Green Building Standards Code Tier 2 Voluntary Measures for electric vehicle charging infrastructure. The proposed Project also would provide approximately 200 bicycle parking spaces within seven "bicycle sheds".

Landscaping and Lighting

The landscaping plan focuses on the use of native, low water use species and re-establishment of native habitat types (Figure 6). The project proposes a re-oaking strategy to re-establish this important habitat type and would involve the creation of a greenbelt of native coast live oaks surrounding the site, providing a greenway for the perimeter driveways and a canopy buffer along the property edges. Additional native tree species and selected deciduous flowering species would accentuate the main circulation paths and enhance the pedestrian and vehicular connection to the community center area. Small, landscaped pocket parks are proposed at the southeast corner of the development utilizing a variety of native and adapted planting species. The spaces between the buildings would be landscaped with a variety of native shade-tolerant species using an informal planting approach to create individual, intimate landscape pockets. Over 50% of the species proposed for the project are native and 95% of the species are considered low water use. The remaining 5% of species are considered medium water use and are proposed for the shaded courtyard areas. Figure 6 shows the proposed Landscape Plan.

Exterior site lighting would be building-mounted whenever possible. All proposed exterior lighting would meet ACMC requirements for both minimum light levels and light pollution control.

Grading and Drainage

Grading of the property would require both excavation (cut) and fill to create the desired grades for the development. Much of the excavation would occur along the margins of the property and within the footprint of the former railroad berm, while filling would occur primarily within the site interior. The maximum elevation alteration from existing grade from cutting or filling of the site soils would be

approximately seven to eight feet. The preliminary grading plan shows approximately 11,165 cubic yards (CY) of cut and 45,145 CY of fill, resulting in 32,980 CY net fill, across 13.56 acres.

Some areas of the site contain soils with metals concentrations that exceed established screening levels for human health. Soils with contaminant concentrations that exceed established screening levels would be either relocated onsite into areas under proposed buildings and roads, capped with an adequate depth of clean fill, or hauled to an appropriate landfill for disposal. Under a worst-case scenario, all the excavated soil would be exported to a landfill, and clean fill needed to achieve the design grades would be imported.

The Project's stormwater management, street design, and landscape design incorporate Low Impact Development strategies by limiting impermeable paving and maximizing permeable paving, using native and drought tolerant plantings, and creating bioretention areas with planted edges. All stormwater from the developed areas of the site would be pre-treated using a combination of bioretention cells and flow-through planters before being discharged to existing receiving wetlands and waters, thereby meeting or exceeding existing Regional Water Quality Control Board (RWQCB) design guidelines to prevent adverse impacts to receiving waters (Figure 7).

Stormwater from the majority of the site (12.59 acres) would be directed into a large tormwater detention/treatment basin at the north end of the development, where it would be pre-treated (by sediment settlement and soil filtering) before being discharged to the existing wetlands to the north. The basin would be a pond where stormwater runoff is "treated" naturally as it infiltrates into the soil. Stormwater from a 0.79-acre area of the southern panhandle would be directed into flow-through planters before being discharged to the existing storm drain system along Napa Junction Road. Stormwater from areas to the east of the site that currently flows through the panhandle in a ditch would be directed into a new culvert following a similar alignment across the panhandle and would discharge into the existing drainage ditch along the western project boundary.

Proposed modifications along the western property boundary will reduce stormwater capacity within an existing ditch. To prevent flooding onto adjacent properties to the east during storm events (100-year recurrence interval) runoff that typically sheet-flows across the panhandle would bypass the reduced-capacity ditch with a new stormwater pipe that would discharge into a ditch downstream of reduced-capacity segment, near the proposed Reliant Way extension.

Utilities

The project will include both recycled and potable water mains throughout the site to allow for dual plumbing of the buildings and recycled water for irrigation use. The development would connect to existing utility services (sanitary sewer, storm sewer, water, recycled water, electricity, and other

Figure 6
Landscaping Plan

Source: Macy Architecture, Inc.

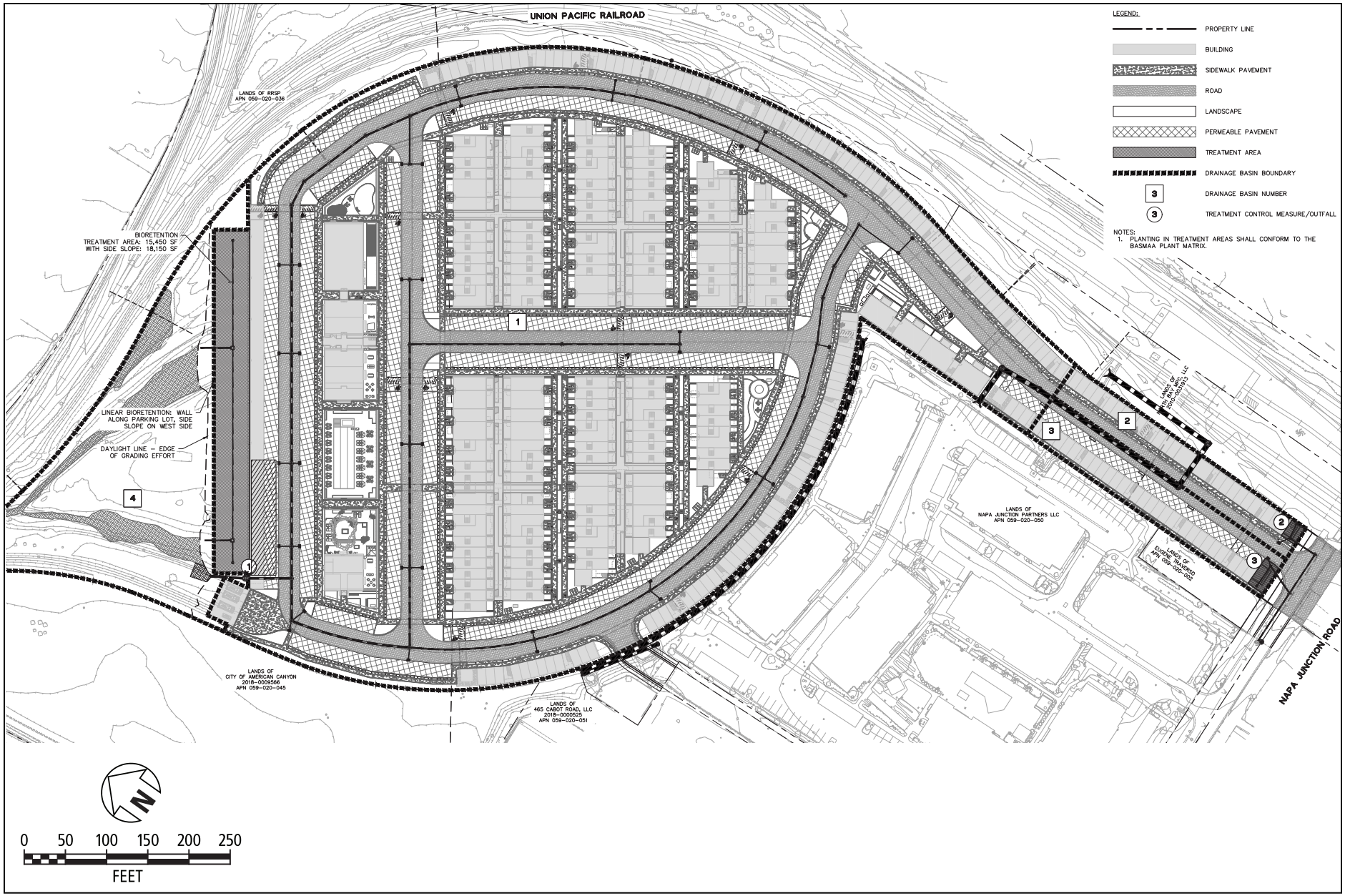


Figure 7
Preliminary Stormwater Control Plan

Source: Macy Architecture, Inc. and BKF Engineers

infrastructure) along Napa Junction Road at the southern end of the property. As described above, only stormwater from a 0.79-ac portion of the southern panhandle area of the property would be diverted to the existing Napa Junction Road stormwater system. The remainder would be treated and discharged on-site at the north end of the development.

The city is currently reviewing the water and sewer analysis prepared by the applicant's engineers and will make the final determination as to whether utility expansions are required. The project engineers' initial findings indicate that no utility expansions would be required directly as a result of this project but the city has stated that the sewer to which the project would connect has deficiencies, and a planned capital improvement project is in place to address those deficiencies.

Consistent with the discussion and analysis in the BDSP EIR, the proposed project would be served by the existing potable water service provided by the City of American Canyon. American Canyon obtains its water supply from a variety of sources, all of which (except for recycled water) are from outside the American Canyon.

All American Canyon's imported water comes through the North Bay Aqueduct (NBA) system. American Canyon obtains State Water Project (SWP) water through its participation in the Napa Flood Control and Water Conservation District (Napa FCWCD), which is the State Water Contractor for SWP.

Additionally, in 1996, American Canyon entered into an agreement with the City of Vallejo for the purchase and delivery of an additional water supply to American Canyon (1996 Agreement). However, American Canyon's SWP and other water supplies are sufficient to serve the project. Therefore, as proposed, the project will not be supplied water under the 1996 Agreement with Vallejo, nor will it require a new service connection under that agreement. Moreover, because the project will not rely on water supplies provided under the 1996 Agreement, there are no project-related environmental consequences associated with potential limitations of the water supplied by Vallejo under the 1996 Agreement, such as curtailment.

Building Energy Efficiency

Consistent with BDSP standards, the proposed project would achieve 15% better than the Building Efficiency Standards established in Title 24 of the California Energy Code (T24) due to the design measures proposed to reduce energy consumption. These measures include architectural strategies such as passive solar orientation of the residences to minimize east and west facing glazing and utilization of exterior solar shading throughout south facing glazing. This would significantly reduce cooling loads versus the performance baseline and thus cooling energy. Architectural strategies involving insulation and glazing assembly U-value would also be pursued. This would help reduce both heating and cooling loads versus the performance baseline and thus both cooling and heating energy. The residences are designed to take

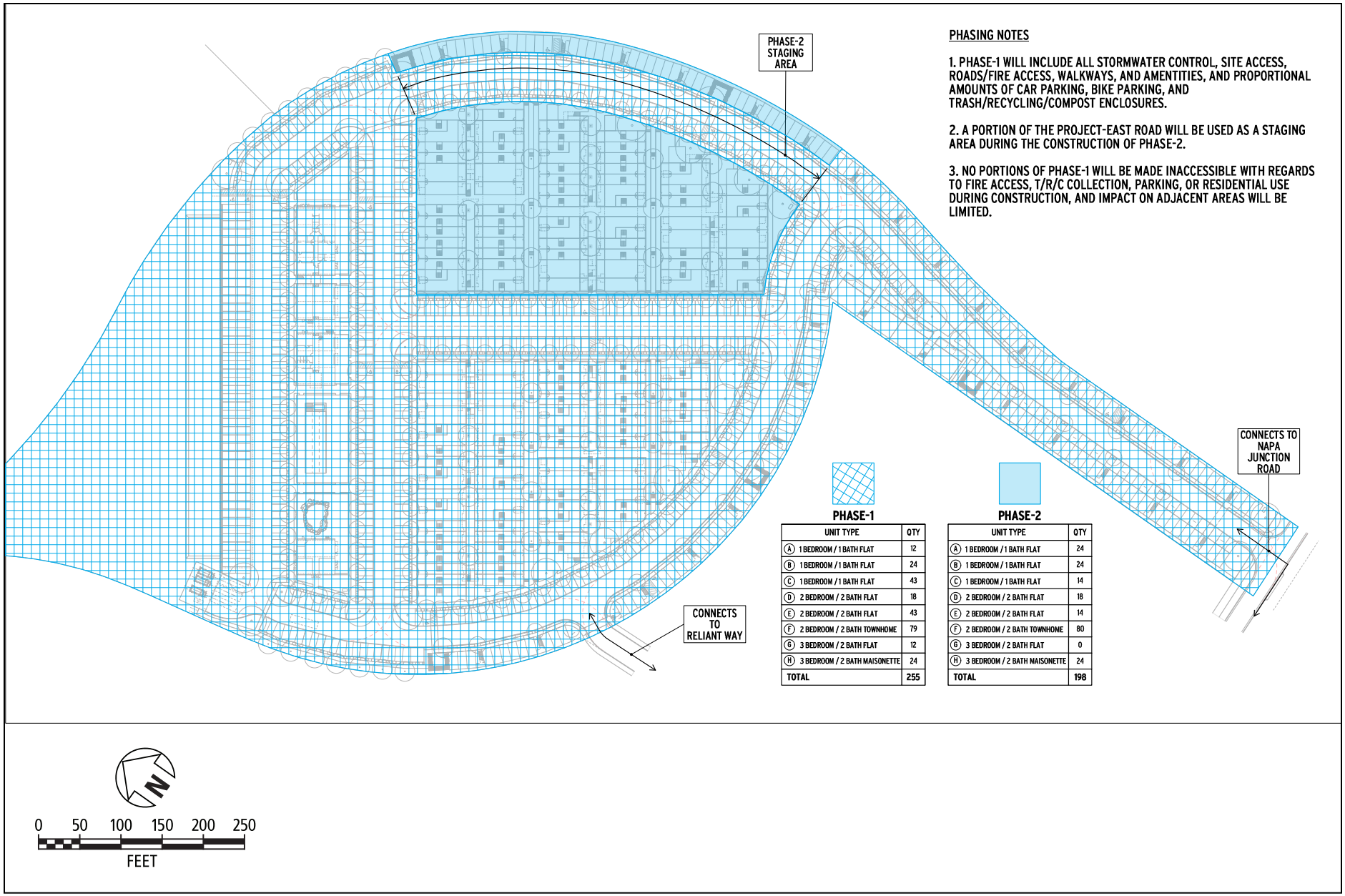
advantage of the natural ventilation to reduce cooling needs. High-efficiency electric heat pump equipment would reduce energy needed for space heating and cooling, and domestic water heating. The shared community spaces also would employ all the above strategies regarding architecture and mechanical systems. The swimming pools would be heated by a combination of solar thermal collectors on the roof and an air-to-water heat pump. Some of the surface parking would be covered with carport photovoltaic panels.

Construction Activities and Schedule

Construction of the project is proposed to occur in a single phase. However, a two-phase construction approach may be pursued depending on current market absorption rates as construction nears (see Figure 8). Under a two-phase approach, phase one would involve site grading, construction of 255 of the 453 housing units (~56%) along with the community center, all stormwater control features, site access and roads, along with proportional car and bike parking, trash/recycling facilities, and landscaping. Phase two would include construction of the remaining 198 units and associated walkways, parking, trash/recycling facilities, and landscaping. Preliminary site preparation, initial site grading, and installation of all major utility lines for the entire development would occur in phase one.

Construction would proceed in the following general sequence:

1. *Preconstruction Biological Protection Measures and Stormwater Control.* All preconstruction biological surveys, habitat protection measures, and worker training required in the project permits and all stormwater and sediment management measures required in the project Stormwater Pollution Prevention Plan (SWPPP) would be implemented prior to any ground disturbance.
2. *Clearing and Grubbing.* All existing trees within the proposed grading footprint would be removed along with all existing vegetation, concrete pads, and debris piles. Concrete, debris, large tree trunks, and weedy grubbed vegetation would be off-hauled to a suitable landfill or recycling facility for disposal while tree limbs, branches, and large shrubs would be chipped and used for mulch on-site.
3. *Initial Site Grading.* The site would be graded and fill would be imported and compacted to reach initial desired grades. Contaminated soils excavated in this process would be hauled to a suitable landfill for disposal. Testing to identify soils exceeding established screening levels for reuse on-site would be performed according to DTSC protocols.
4. *Utility Installation.* Subgrade utilities (water, sanitary/storm sewers, electrical, etc.) would be installed within the development footprint.



PHASE-1	
UNIT TYPE	QTY
(A) 1 BEDROOM / 1 BATH FLAT	12
(B) 1 BEDROOM / 1 BATH FLAT	24
(C) 1 BEDROOM / 1 BATH FLAT	43
(D) 2 BEDROOM / 2 BATH FLAT	18
(E) 2 BEDROOM / 2 BATH FLAT	43
(F) 2 BEDROOM / 2 BATH TOWNHOME	79
(G) 3 BEDROOM / 2 BATH FLAT	12
(H) 3 BEDROOM / 2 BATH MAISONETTE	24
TOTAL	255

PHASE-2	
UNIT TYPE	QTY
(A) 1 BEDROOM / 1 BATH FLAT	24
(B) 1 BEDROOM / 1 BATH FLAT	24
(C) 1 BEDROOM / 1 BATH FLAT	14
(D) 2 BEDROOM / 2 BATH FLAT	18
(E) 2 BEDROOM / 2 BATH FLAT	14
(F) 2 BEDROOM / 2 BATH TOWNHOME	80
(G) 3 BEDROOM / 2 BATH FLAT	0
(H) 3 BEDROOM / 2 BATH MAISONETTE	24
TOTAL	198

Figure 8
Potential Phasing Plan

Source: Macy Architecture, Inc.

5. *Final Grading.* Final grading and fill placement/compaction would be done to construct the building pads and roadway beds to accommodate the surface improvements.
6. *Surface Improvement Construction.* The surface features of the development (buildings, roads, pools, lighting, etc.) would be constructed and landscaping elements would be installed. This work may be completed in two phases, as described above.

Project construction is currently proposed to start in winter 2025 and take approximately 30 months (2 ½ years) to complete, if constructed in a single phase. A two-phase construction approach would have approximately the same total duration, split across the two phases (See Figure 9).

Project construction hours would be from 7:00 am to 6:00 pm Monday through Friday, No work is proposed on weekends or holidays. If weekend or holiday work becomes necessary to meet the permit or other essential timelines, any such work would be negotiated with the City on an as-needed basis.

Construction Equipment and Workers

Typical construction equipment used at the site would include self-loading dirt scraper, bulldozer, excavator, loader, backhoe, compactor, roller, water truck, cement truck, trencher, drilling auger, paving machine, laser screed, tractor, crane, forklift, generator, man lift, scissor lift, welding machine, and light tower. During the construction phase, it would be typical for 12 to 24 workers to be on- site, but that number could be as high as 100 workers during final build out of the dwelling interiors.

Land Use Entitlements and other Agency Approvals

City of American Canyon

The project would require a Design Permit from the City of American Canyon. As explained above, the project would utilize the State Density Bonus Law to achieve the proposed project density, and it would be entitled to request incentives, concessions, and waivers.

Other Agency Approvals

The project may require the following approvals from other agencies:

- **U.S. Army Corps of Engineers, San Francisco District**. Clean Water Act Section 404 Individual Permit
- **State Water Resources Control Board, San Francisco Bay Region**. Clean Water Act Section 401 Water Quality Certification; Clean Water Act Section 402 Construction General Permit

- **California Department of Fish and Wildlife**. California Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement
- **U.S. Fish and Wildlife Service**. Federal Endangered Species Act Section 7 Consultation - Biological Opinion (triggered by the Clean Water Act Section 404 permit).
- **California Department of Social Services:** Childcare facility licensing.

III. INITIAL STUDY CHECKLIST

The initial study checklist recommended by the CEQA Guidelines is used to describe the potential impacts of the proposed project on the physical environment.

I. Aesthetics

Would the project:

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

Background

The mostly undeveloped property consists primarily of open, sparsely vegetated lands with some small wetland areas and two small stands of cottonwood trees. Remnants of a defunct railroad alignment (railroad bed and berm), two small concrete pads, and several debris stockpiles/scatters also occupy the site. Active railroad tracks on berms border the property to the north and east. (see Figures 9, 10, and 11). The topography of the site is variable; the site interior is generally flat, with the raised railroad berm running along the west side of the property and depressions (former borrow pits from railroad berm construction) running through the interior, which contain wetland features. Aside from the railroad infrastructure described above, the site does not appear to have been developed in the past.

Figure 9: View from Eastern side of the project site, looking westward across the site.

Figure 10: View from the western side of the site looking east.

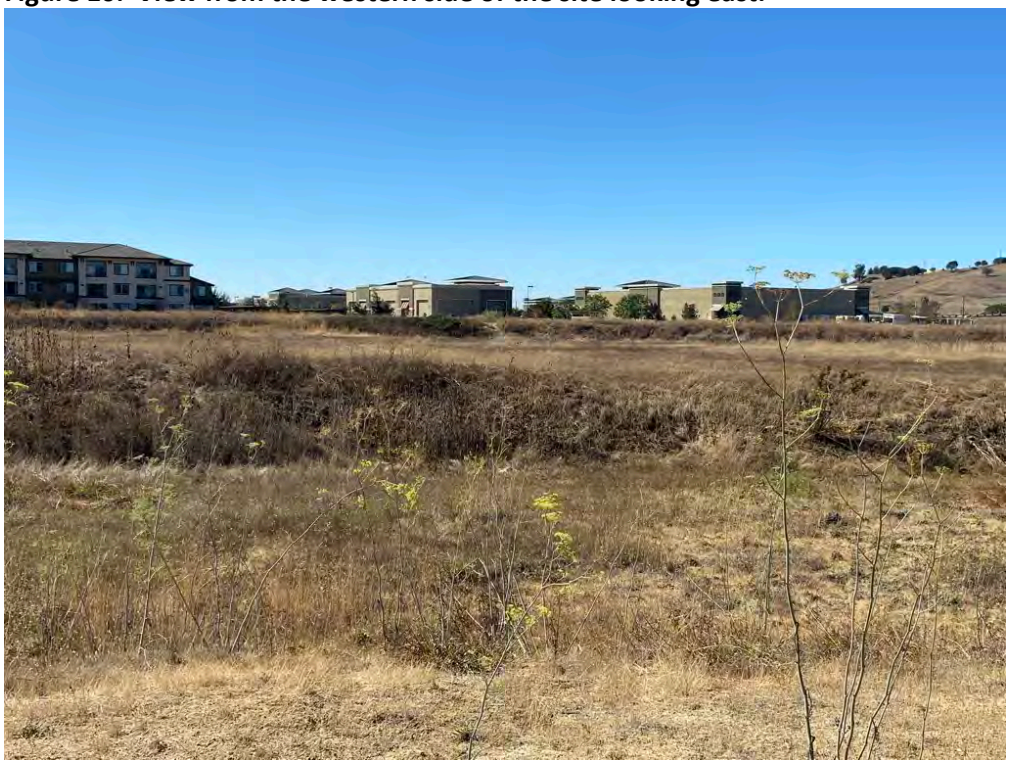


Figure 11: View across the site looking south towards existing BDSP developments.

The property is bordered to the south by multifamily residential and commercial development and to the west by an undeveloped parcel adjacent to Highway 29. Beyond Highway 29 to the west lie industrial, commercial, and recreational facilities. To the east of the property, beyond the operational rail line, are agricultural lands that are planned for a mixed residential and commercial development under the Watson Ranch Specific Plan (WRSP). A mix of commercial, semi-industrial, and low-density residential development lies to the north of the property.

Portions of the site (old railroad berms) are visible from SR 29, and more expansive views of the site are available from the terminuses of both Napa Junction Road and Reliant Way. The residential uses facing the site near the end of Reliant Way have full views of the site, which appears as mostly undeveloped open space. There are no publicly available views of the site from the north, which is part of an existing rail yard facility. Lands directly east of the site are open space planned for residential development. Currently there are no publicly available views from that area.

Discussion

a, c) **Summary of BDSP Analysis**

According to the BDSP EIR, buildout of the BDSP would not have a substantial adverse effect on scenic vista because the development would simply add to the existing development within the existing urban footprint and would not adversely affect views of any scenic vista from Oat Hill or from the former basalt plant/future Watson Ranch. The BDSP EIR concluded that impacts would be less than significant.

According to the BDSP EIR, buildout of the BDSP would not substantially degrade the existing visual character or quality of the site and its surroundings because the Specific Plan would guide the development of undeveloped properties and underutilized properties to support modern residential and non-residential uses that would be designed in accordance with the Specific Plan's development standards and design guidelines. This would improve appearance of the Broadway District by facilitating new development that provides visually appealing buildings, landscaping, underground utilities, and pedestrian/bicycle facilities.

Project-Specific Analysis

Implementation of the proposed project would replace the existing view of the mostly undeveloped, partially vegetated site with views of new large 3-4 story residential structures. In some senses, the project constitutes a visual extension of the existing residential and commercial development to the south. Overall, the project would change the visual character of the site from one of a large, undeveloped area to dense residential. Figures 12, 13, and 14 show views of the site with and without the project.

While this change would be substantial, it would not necessarily would be perceived as adverse. The current views from SR 29 are of a weedy, relatively flat open space with no distinguishing aesthetic characteristics. With the project, the curved site plan and colors of the proposed development would add some interest to the views. The modern integrated design, and variations in facades that would conform with BDSP design guidelines would not have an adverse aesthetic impact. The project would be a prominent feature in the foreground of distant views of the hills to the east of SR 29.

Open views across the site to the north from the residential development just south of the site south would be obstructed by the proposed buildings. The project would adversely affect these views. While this impact would be adverse, because the obstructed views would be private and limited in number, this impact would not be considered significant.

Existing

Proposed

Figure 11
View #3 - Standing Height from Highway 29, Looking Southeast

Source: Square One Productions

Existing

Proposed

Figure 12
View #1 - Aerial View Looking Southwest

Source: Macy Architecture, Inc.

Existing

Proposed

Figure 13
View #2 - Standing Height from Highway 29, Looking Southeast

Source: Macy Architecture, Inc.

Overall, the proposed project would not substantially degrade the visual character of the project site or its surroundings. Impacts to a scenic vista or existing visual character of the site would be ***less than significant***.

b) **Summary of BDSP Analysis**

According to the BDSP EIR, buildout of the BDSP would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway because the Specific Plan would promote improvements in the SR-29 viewshed consistent with the roadway's status as an "Eligible" State Scenic Highway.

Project-Specific Analysis

The project site is located in the City of American Canyon, east of SR-29. Highway SR-29 is designated as an Eligible State Scenic Highway by Caltrans. The City's General Plan specifies that the SR-29 corridor provides opportunities for enhancing the City's visual quality and includes a policy to preserve significant views from areas along major arterial roadways (City of American Canyon 1994, as amended through July 2020). The viewscape from SR-29 within American Canyon consists largely of auto-oriented, strip commercial corridor with pockets of undeveloped land. There are several existing billboards along Broadway Street and overhead utilities are prevalent, including a PG&E tower line near American Canyon Road. Vegetation along SR-29 consists of ornamental landscaping and ruderal (weedy) seasonal grasses within the median, roadside ditches, and vacant lots. There are no rock outcroppings or national or state-listed historic buildings along Broadway Street in American Canyon.

Although the Specific Plan does not contemplate reclassification of SR-29 to an "Officially Designated" State Scenic Highway, it would nonetheless establish a planning framework that would improve the visual appearance of Broadway Street in the following ways:

- The Specific Plan establishes development standards for architectural design, landscaping, and site planning that are intended to promote high quality, cohesive, visually appealing development.
- The Specific Plan prohibits billboards and other types of off-premises outdoor advertising.
- The Specific Plan requires new development to underground utilities.
- The Specific Plan contemplates a Class I bicycle/pedestrian trail on both sides of SR-29, with landscaped strips between the roadway and trail.

The project would not remove any existing trees, historic buildings or rock outcroppings that would be considered scenic resources. It would reduce the height of the existing historic railroad berm on the site, but would accentuate the shape of that berm in the building layout. As discussed

in Item A, above, the project would be prominent in views from SR 29, but not adverse. Because there are no city-designated scenic vistas or scenic resources on this site or nearby that the project could adversely affect, development of this site would result in ***no impact*** on these resources.

d) **Summary of BDSP Analysis**

According to the BDSP EIR, buildout of the BDSP would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area because lighting would be required to employ full cut-off fixtures or be directed downward to avoid spillage onto adjoining properties or streets. This would serve to minimize the increase in light and glare that would occur from a net increase in residential and non-residential development within the Broadway District.

Project-Specific Analysis

The proposed project includes exterior lighting. Project lighting would include building lights and lights in the parking lot areas which would increase artificial light in the project area and potentially generate glare. On-site lighting would be shielded and designed to cast light downward, thereby reducing spillover light and glare on adjacent properties. The applicant has prepared a photometric plan showing that project lighting spillover beyond the project site would be minimal (CBMC Lighting Solutions, July 20, 2022, contained in the project plan-set, sheets 42-47). The lighting would be required to adhere to the City of American Canyon's performance standards for street lighting and glare. In reviewing the Conditional Use Permit application for the proposed project, the City would consider the proposed use of outdoor lighting prior to approval. The building design would not introduce a source of glare associated with large expanses of glass. Therefore, impacts from light or glare would be ***less than significant***.

The project would include entry signage on bridge structures over the entry roadways. The applicant would be required to submit a sign program (indicating location of any lighted signs) to the City for review and approval. The project applicant would be required to implement the sign program, as approved by the City. Visual impact from signage would be ***less than significant***.

Conclusions

As described above, the project would not have the potential to introduce new impacts of create more severe impacts that those described in the BDSP EIR.

II. Agricultural and Forestry Resources

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				**X**
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				**X**
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				**X**
d) Result in the loss of forest land or conversion of forest land to non-forest use?				**X**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				**X**

Discussion

a-e) **Summary of BDSP EIR Analysis**

According to the BDSP EIR, the BDSP boundaries contain mostly urbanized land, with areas of undeveloped or underutilized land, and the BDSP district does not currently support agricultural land use activities. Therefore, buildout of the BDSP would not convert Important Farmland to nonagricultural use. While there is "Farmland of Local Importance" in BSDP boundaries, this does not fall within the Important Farmland umbrella. It was determined that no impacts would occur.

According to the BDSP EIR, none of the sites within the BDSP boundaries would be eligible for a Williamson Act contract. Therefore, it was determined that no impacts would occur.

According to the BDSP EIR, the BDSP boundaries do not contain forest land and that the American Canyon Zoning Ordinance does not have a forest-land zoning district. Therefore, it was determined that no impacts would occur with respect to forest land designations or conversion of forested lands.

Project-Specific Analysis

The project site is undeveloped and located adjacent to a developed area of the City of American Canyon. The site has been used for railroad purposes in the past, and has no existing or known past agricultural uses. The project site contains no Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or active agricultural operations. The most recent California Department of Conservation Important Farmland Maps for Napa County designates the site as Urban and Built Up Land[5]. In addition, this site is located within the municipal boundaries of the City of American Canyon. There are no Williamson Act lands on the site. The proposed project would not involve any changes that could result in conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use or loss of forest land.

There are no forest lands on the site, nor is the site designated or zoned for timberland resources. Therefore, implementation of the project would not involve the loss of any forest land.

Therefore, there would be ***no impact*** to agricultural or forestry resources, and no mitigation would be required.

Conclusions

As described above, the project would not have the potential to introduce new impacts of create more severe impacts that those described in the BDSP EIR.

[5] California Department of Conservation, California Important Farmland Finder, accessed September 29, 2022 https://maps.conservation.ca.gov/DLRP/CIFF/

III. Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

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

Introduction

The air quality analysis was performed using methodologies and assumptions recommended within the Bay Area Air Quality Management District (BAAQMD) *CEQA Air Quality Guidelines* (May 2017). This section describes existing air quality and analyzes potential air pollutant impacts from construction and operation of the proposed project. Appendix A includes criteria pollutant emissions modeling results and the health risk assessment (HRA) prepared for the proposed project.

Background

The BDSP EIR contains environmental and regulatory setting information relevant to air quality for the proposed project. Setting information and updated ambient air quality data for the most recent available three-year monitoring period are presented below. Air pollutants evaluated include carbon monoxide (CO), reactive organic compounds (ROG), nitrogen oxides (NO_x), coarse particulate matter less than 10 micrometers in diameter (PM_{10}), and fine particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$).

The project site is located within the San Francisco Bay Area Air Basin (Air Basin) under the jurisdiction of the BAAQMD. The BAAQMD is the local agency responsible for the administration and enforcement of air

quality regulations for the area. The Air Basin is currently designated "nonattainment" for state and national (1-hour and 8-hour) ozone standards, for the state PM_{10} standards, and for state and national (annual average and 24-hour) $PM_{2.5}$ standards. The Air Basin is designated "attainment" or "unclassifiable" with respect to the other ambient air quality standards.

Table AQ-1 presents ambient air monitoring data from the Napa Valley College monitoring station approximately six miles north of the project site. Air monitoring at the Napa Valley College monitoring station began on April 1, 2018, thus the air monitoring data from this station was not included in the BDSP EIR. No recent air monitoring data was available for CO or sulfur dioxide (SO_2) within the Air basin. Generally, monitoring is not conducted for pollutants that are no longer likely to exceed ambient air quality standards. The PM_{10} and $PM_{2.5}$ exceedances in 2020 shown in Table AQ-1 were likely due to wildfire smoke.

Table AQ-1. Local Ambient Air Monitoring Data (2019 – 2021)

Pollutant		Monitoring Data by Year		
	Standard[a]	2019	2020	2021
Ozone				
Highest 1 Hour Average (ppm)[b]	0.09	**0.095**	0.091	0.070
Days over State Standard		**1**	0	0
Highest 8 Hour Average (ppm)[b]	0.070	**0.076**	**0.077**	0.063
Days over National Standard		**2**	**1**	0
Nitrogen Dioxide (NO_2)				
Highest 1 Hour Average (ppm)[b]	0.180	0.037	0.030	0.029
Days over State Standard		0	0	0
Annual Average ($\lceil g/m^3$)[b]	0.030/0.053	0.005	0.005	**
Coarse Particulate Matter (PM_{10})				
Highest 24 Hour Average ($\lceil g/m^3$)[b]	50	39.0	**125.0**	24.0
Days over State Standard		0	**12**	**
State Annual Average ($\lceil g/m^3$)[b]	20	13.5	**18.6**	9.9
Fine Particulate Matter ($PM_{2.5}$)				
Highest 24 Hour Average ($\lceil g/m^3$)[b]	35	21.5	**148.5**	17.6
Days over National Standard		0	**15**	**
State Annual Average ($\lceil g/m^3$)[b]	12	6.0	**10.4**	**

Notes: Values in **bold** are in excess of at least one applicable standard.
Generally, state standards and national standards are not to be exceeded more than once per year.
ppm = parts per million; $\lceil g/m^3$ = micrograms per cubic meter. A "**" denotes no information available.
PM_{10} is not measured every day. The number of estimated days over the standard is based on 365 days per year.
Source: California Air Resources Board (CARB). IADAM: Air Quality Data Statistics, Top Four Summary. https://www.arb.ca.gov/adam/topfour/topfourdisplay.php

Discussion

a) **Summary of BDSP EIR Analysis**

According to the BDSP EIR, buildout of the BDSP would not conflict with the applicable provisions of the 2017 Clean Air Plan, and the BDSP would reduce annual vehicle miles traveled (VMT) and VMT per capita by 23 percent from the existing baseline scenario. However, the BDSP would not further all the primary goals of the 2017 Clean Air Plan as a result of significant and unavoidable impacts related to construction equipment and vehicle exhaust emissions. Because construction-generated impacts would remain significant after incorporation of mitigation, this impact would be significant and unavoidable. The City made appropriate findings and adopted a statement of overriding considerations for this impact.

Project-Specific Analysis

Determination of whether an individual project supports the goals in the 2017 Clean Air Plan is achieved by a comparison of project-estimated emissions with BAAQMD thresholds of significance. If project emissions would not exceed the thresholds of significance after the application of all feasible mitigation measures, a project is consistent with the goals of the 2017 Clean Air Plan. As described in Impacts b) and c) below, the project would be required to implement the applicable mitigation measures from the BDSP EIR and, with these measures, criteria pollutant and toxic air contaminant (TAC) emissions associated with project construction and operations would not exceed the BAAQMD's significance thresholds. Therefore, the project would not conflict with or obstruct reduction measures presented in the 2017 Clean Air Plan and would have a ***less than significant impact.***

b) **Summary of BDSP EIR Analysis**

Construction Fugitive Dust

BDSP EIR evaluated construction activities associated with buildout of the BDSP, including demolition, site preparation, grading, building construction, paving, and architectural coating. Generally, one of the most substantial air pollutant emissions would be fugitive dust during construction activities. If uncontrolled, these emissions could lead to both health and nuisance impacts. Construction activities would also temporarily create emissions of equipment exhaust and other air contaminants. BDSP EIR Mitigation Measure AIR-2 would reduce impacts from fugitive dust emissions to less than significant levels.

Construction Equipment Exhaust

The timing and components of individual construction projects were not known at the time of the BDSP EIR analysis. The BDSP EIR determined that construction of the BDSP could exceed BAAQMD

preliminary screening levels. Therefore, construction-related air quality impacts were determined to be potentially significant. Incorporation of BDSP EIR Mitigation Measure AIR-3, which would require the use equipment meeting Tier 3 or higher off-road engine standards, would reduce construction impacts; however, it would not guarantee that reductions in impacts from large construction projects involving extensive equipment and/or material transport necessary would be less than significant. Therefore, tis impact was determined to be significant and unavoidable.

Operational Emissions

The BDSP EIR determined that the BAAQMD 2017 Clean Air Plan accounted for regional operational emissions, including those generated in the City of American Canyon, and that operational criteria pollutant emissions impacts would be less than significant.

Operational Carbon Monoxide Hotspot

Based on the Traffic Impact Study prepared for the BDSP by Fehr & Peers, and incorporated into the BDSP EIR, the intersection of Highway 29 and American Canyon Road would experience the highest cumulative peak-hour traffic volumes among the BDSP study intersections, with 6,940 vehicles per hour during the PM peak-hour. The BDSP EIR determined that the future projects would generate peak-hour vehicle trips below the BAAQMD screening threshold for CO hotspots, and would therefore result in a less than significant impact.

Project-Specific Analysis

Construction Fugitive Dust

The proposed project construction activities would be consistent with those anticipated and analyzed in the BDSP EIR. With implementation of Mitigation Measure AIR-2 from the BDSP EIR, impacts from fugitive dust emissions would be ***less than significant.***

Construction Equipment Exhaust

The BAAQMD CEQA Air Quality Guidelines recommend quantification of construction-related exhaust emissions and comparison of those emissions to significance thresholds. The CalEEMod (California Emissions Estimator Model, Version 2020.4.0) was used to quantify construction-related pollutant emissions. Air quality calculation details and CalEEMod output worksheets are included in Appendix A.

Table AQ-2 provides the estimated short-term construction emissions that would be associated with the project and compares those emissions to the BAAQMD's thresholds for construction exhaust emissions. As the construction phases (i.e., grading, paving, building construction, etc.)

are sequential, the average daily construction period emissions (i.e., total construction period emissions divided by the number of construction days) were compared to the BAAQMD significance thresholds. All construction-related emissions would be below the BAAQMD significance thresholds. The air quality emissions assume use of paint compliant with BAAQMD Regulation 8, Rule 3 for architectural coatings, which limits the VOC content of the paint.

Table AQ-2. Estimated Average Daily Construction Emissions (pounds/day)

Source	ROG	NO_x	PM_{10}	$PM_{2.5}$
Average Daily Construction	**19.86**	**19.75**	**0.61**	**0.57**
Significance Threshold	*54*	*54*	*82*	*54*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Notes: The BAAQMD construction significance thresholds for PM_{10} and PM2.5 apply to exhaust emissions only. Source: CalEEMod Version 2020.4.0

Average daily construction emissions would be below the significance thresholds (See Table AQ-2). Compliance with Mitigation Measure AIR-3 from the BDSP EIR would prohibit the use of older, dirtier equipment (e.g., Tier 1 or Tier 2). Regardless, based on the estimated construction start date of 2025 for the project, most construction equipment would be expected to be Tier 3 or higher. Therefore, impacts from equipment exhaust emissions during project construction activities would be ***less than significant.***

Operational Emissions

Estimated maximum daily and annual operational emissions that would be associated with the project are presented in Tables AQ-3 and AQ-4 and are compared to BAAQMD's thresholds of significance. As indicated, the estimated operational emissions that would be associated with the project are below the BAAQMD's significance thresholds and would be ***less than significant***.

Table AQ-3. Estimated Daily Operational Emissions (pounds/day)

Condition	ROG	NO_x	PM_{10}	$PM_{2.5}$
Summer	18.21	6.55	10.39	2.98
Winter	17.59	7.39	10.39	2.98
Maximum Proposed Project	**18.21**	**7.39**	**10.39**	**2.98**
Significance Threshold	*54*	*54*	*82*	*54*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: CalEEMod Version 2020.4.0

Table AQ-4. Estimated Annual Operational Emissions (tons/year)

	ROG	NO_x	PM_{10}	$PM_{2.5}$
Total Proposed Project	**3.06**	**1.17**	**1.70**	**0.48**
Significance Threshold	*10*	*10*	*15*	*10*
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: CalEEMod Version 2020.4.0

Operational Carbon Monoxide Hotspot

As previously discussed, the BDSP EIR determined that the future projects would generate peak-hour vehicle trips below the BAAQMD screening threshold for CO hotspots and would result in a less than significant impact. The BAAQMD concludes that a given project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal air does not mix (i.e. tunnels, parking garages) in order to generate a significant CO impact. The project would not increase traffic at intersections above these screening levels. Therefore, impacts that would be associated with long-term operational CO exhaust emissions would be ***less than significant***.

c) **Summary of BDSP EIR Analysis**

According to the BDSP EIR, the environment (roadway trip volumes, rail use, locations of stationary sources) is likely to change by the time that residential land uses are proposed and future projects may locate new sources of toxic air contaminants (TAC) and $PM_{2.5}$ in proximity to existing or proposed sensitive receptors. Therefore, the level of risk associated with future projects in the BDSP planning area cannot be evaluated with certainty. The BDSP EIR determined that Mitigation Measures AIR-4a and AIR-4b would reduce potential impacts to a less than significant level.

Project-Specific Analysis

The project would constitute a new emission source of TACs (including diesel particulate matter [DPM]) and $PM_{2.5}$ due to its construction activities. Studies have demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. The project would also locate sensitive receptors within 1,000 feet of an existing permitted stationary source, Highway 29, rail, and major roadways.

Construction Impacts for Existing Sensitive Receptors

The construction Health Risk Assessment results associated with existing receptors due to project construction activities are summarized below. As shown in Table AQ-5, the maximum cancer risk from project construction emissions would be 3.54 in one million, below BAAQMD's threshold of

10 in one million. Hazard and $PM_{2.5}$ concentrations would also be below BAAQMD's thresholds of significance. Therefore, health impacts on existing sensitive receptors associated with project construction would be ***less than significant***.

Table AQ-5. Estimated Project Construction Health Impacts for Existing Sensitive Receptors

Source	Cancer Risk	Hazard Impact	$PM_{2.5}$ Concentration
Unmitigated Construction	**3.54**	**0.04**	**0.28**
Significance Threshold	*10*	*1.0*	*0.3*
Threshold Exceeded?	**No**	**No**	**No**

Notes: Hazard impact relates to chronic hazard. No acute health risk is associated with DPM under current OEHHA Guidelines. PM2.5 risk is in units of microgram per cubic meter (ug/m^3).
Source: ECORP, 2022.

Health Impacts for Proposed Sensitive Receptors

The following describes the health impacts associated with proposed residences as a result of existing cumulative sources including an existing permitted stationary source, Highway 29, rail, and major roadways.

The BAAQMD's CEQA Air Quality Guidelines include standards and methods for determining the significance of cumulative health risk impacts. The method for determining cumulative health risk requires the tallying of health impacts from permitted stationary sources, major roadways, and any other identified substantial air toxic sources in the vicinity of a project site (i.e., within a 1,000-foot radius) and then adding the individual sources to determine whether the BAAQMD's cumulative health risk thresholds are exceeded.

Table AQ-6 provides the cumulative cancer risks, hazard indexes, and $PM_{2.5}$ concentrations (in $\mu g/m^3$) impacting the proposed residences from existing emission sources within 1,000 feet of the project site.

Table AQ-6. Estimated Project Health Impacts for Proposed Sensitive Receptors

Source	Cancer Risk	Hazard Impact	$PM_{2.5}$ Concentration
Stationary Source	0.7	0.00	0.0
Highway 29	8.7	0.00	0.2
Rail	3.4	0.00	0.0
Major Roadways	0.1	0.00	0.0
Total	**12.9**	**0.01**	**0.2**
Significance Threshold	*100*	*10*	*0.8*
Threshold Exceeded?	**No**	**No**	**No**

Note: Displays risk values for the nearest proposed receptor to Highway 29 – other locations were determined to have lower risk values – See Appendix A. Hazard impact relates to chronic hazard. No acute health risk is associated with DPM under current OEHHA Guidelines.
Source: RCH Group, 2022.

As shown in Table AQ-6, health risk values for proposed sensitive receptors are below BAAQMD's cumulative significance thresholds[6]. Therefore, health impacts associated with the proposed sensitive receptors would be ***less than significant***.

d) **Summary of BDSP EIR Analysis**

According to the BDSP EIR, the residential, general office, and shopping center land uses are not expected to produce any offensive odors that would result in odor complaints. During construction activities, diesel powered vehicles and equipment used on-site could create localized odors, but these would be temporary in nature and would dissipate. As such, construction-period and operation-period odor impacts were determined in the BDSP EIR to be less than significant.

Project-Specific Analysis

The project is a residential development that would not produce any offensive odors that would result in odor complaints. During construction, diesel powered vehicles and equipment used on-site would create localized odors, but these would be temporary and would dissipate quickly. Therefore, odor impacts associated with the project would be ***less than significant***.

Mitigation Measures

BDSP EIR MM AIR-2: Prior to issuance of the first construction permit for projects that occur pursuant to the Specific Plan, the applicant shall submit construction plans to the City of American Canyon with the following notes on them. The dust abatement measures described in the notes shall be implemented during construction.

During construction activities, the following air pollution control measures shall be implemented:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day, or more as needed.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads and surfaces shall be limited to 15 miles per hour.
- All roadways, driveways, and sidewalks shall be paved as soon as possible.

[6] The health-related impacts of grading and removing contaminated soils near existing sensitive receptors in the adjacent apartment complex

- Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 2 minutes (beyond the 5-minute limit required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- A publicly visible sign shall be posted with a name and telephone number of the person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations.

BDSP EIR MM AIR-3: Prior to issuance of the first construction permit for development projects that occur pursuant to the Specific Plan, the applicant shall provide documentation to the City of American Canyon demonstrating that all off-road by diesel equipment proposed for use is powered with Tier 3 or cleaner engines.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

IV. Biological Resources

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		**X**		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				**X**
c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		**X**		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			**X**	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				**X**
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				**X**

Background

A Biological Resource Analysis (BRA) prepared by LSA, Inc. (LSA 2018) provides a description of existing biological resources on the project site and identifies potentially significant impacts that could occur to sensitive biological resources from the construction of the proposed project. Biologist Sean Avent of

Sunset Ecological Solutions (Sunset) conducted a peer review field verification of biological resource conditions described in the BRA (Sunset, 2021). In addition, three rounds of protocol-level rare plant surveys were conducted on the project site by Sol Ecology in 2022 (Sol Ecology 2022). Additional studies reviewed and incorporated into this section include informal consultation emails with Joseph Terry at USFWS (2022) and species occurrence databases such as California Natural Diversity Database (CNDDB), USFWS IPaC database, and the California Native Plant Society's (CNPS) Rare Plant Inventory. Several species were added to the evaluation beyond those initially addressed in the ESA report on the basis of consultation with USFWS.

The 13.44-acre project site is part of a larger 15.05-acre parcel (property) that is bordered to the north and east by the active Southern Pacific Railroad. The property is bordered to the south by dense residential and commercial development, and to the west by an undeveloped parcel adjacent to Highway 29. A mix of industrial, commercial and recreational facilities lies beyond Highway 29 to the west of the property. Beyond the operational rail line to the east of the property is the Watson Ranch Specific Plan (WRSP) which is under construction with a mix of residential and non-residential development. A mix of commercial, semi-industrial, and low-density residential development lies to the north of the property. The site is accessed off Napa Junction Road at the south end of the property (LSA 2018; Gillenwater Consulting 2022).

The property consists primarily of developed and ruderal lands and native/non-native grasslands. Additional habitat types on the site include cottonwood stands, mixed tree stands, seasonal wetlands and seasonal ditches. Abandoned railroad berms, a small vacant wood structure, and several debris stockpiles also occupy the site.

The ruderal/developed areas of the site are covered with hard-packed gravel or areas of previously disturbed soils with weedy, non-native plant species forming the predominant plant cover. Species include wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), perennial rye grass (*Festuca perennis*), and Himalayan blackberry (*Rubus armeniacus*). A patch of introduced giant reed (*Arundo donax*) grows in the southern area of the project site, and is associated with a deposit of broken concrete. Stands of introduced Himalayan blackberry occur in several locations and are most often associated with the old railroad berm where it grows adjacent to seasonal wetlands. Pampas grass (*Cortaderia selloana*), also a non-native weedy species, forms single-species stands and small clusters scattered throughout the project site (LSA 2018).

Grasslands on the project site consist of a mix of non-native and native grassland plant species. Non-native grassland is the most prevalent vegetation type on the project site, and includes wild oats, perennial rye grass, medusa head (*Festuca caput-medusae*), ripgut brome, and Italian thistle (*Carduus pycnocephalus*). Other non-native plant species observed include yellow star-thistle (*Centaurea solstitialis*), tall wheat grass (*Elymus pontica*), Harding grass (*Phalaris aquatica*), English plantain (*Plantago lanceolata*), and milk

thistle (*Silybum marianum*). Two native plant species, hayfield tarweed (*Hemizonia congesta* subsp. *luzulifolia*) and blue-eyed grass (*Sisyrinchium bellum*), were observed throughout the grassland areas, and four native plant species, California oatgrass (*Danthonia californica*), bearded ryegrass (*Elymus triticoides*), meadow barley (*Hordeum brachyantherum*), and slender rush (*Juncus tenuis*), were concentrated within a portion of the southern part of the grassland area (LSA 2018).

Two stands of cottonwood trees occur on the project site, one in the south and one in the west. The cottonwood stands are dominated by Fremont's cottonwood (*Populus fremontii*) and have an understory consisting of ruderal/developed and non-native grassland. Cottonwood stands in the southern portion of the project site consist of a grove of small diameter trees (less than 12 inches in diameter) and isolated large diameter trees (between 24 and 52 inches in diameter) that have been topped. The other stand occurs in the western portion of the project site, west of the old railroad berm. This grove consists of approximately 15 trees that range in size form 6 inches to 48 inches in diameter (LSA 2018).

The mixed tree stands include northern California black walnut (*Juglans hindsii*), coast live oak (*Quercus agrifolia*), red willow (*Salix laevigata*), and yucca (*Yucca* sp.). The trees are located west of the old railroad berm, on the north arm of the seasonal wetland, and in the southern part of the project site. A patch of poison oak (*Toxicodendron diversilobum*) is also present along the old railroad berm east of the mixed tree stand's edge (LSA 2018).

A wetland delineation performed in 2017 (LSA 2017) and verified by the ACOE, identified 1.438 acres of ruderal seasonal wetlands and 0.084 acre of Other Waters (seasonal borrow ditches) on and adjacent to the site. Seasonal wetlands consist of a large wish-bone shaped, south-east to north-west seasonal wetland and several other smaller seasonal wetlands located along the northern boundary of the site that were created by railroad excavation activities, or are in isolated depressions (LSA 2017). Species within the seasonal wetlands include nut sedge (*Cyperus eragrostis*), spike rush (*Eleocharis macrostachya*), coyote thistle (*Eryngium* sp.), toad rush (*Juncus bufonius*), brown-headed rush (*J. phaeocephalus*), iris-leaf rush (*J. xiphioides*), pennyroyal (*Mentha pulegium*), narrowleaf cattail (*Typha angustifolia*), and cocklebur (*Xanthium strumarium*). The seasonal borrow ditches convey stormwater from the adjacent areas and the site, and empty into a rocked retention basin then terminate into sheet flow across a neighboring property. There are no perennial wetland features on the site (LSA 2017, 2018).

Discussion

a) **Special-status Species**

Summary of BDSP EIR Analysis

According to the BDSP EIR, the BDSP boundaries contain developed land, agricultural use (orchard-vineyard), open space (annual grasslands), wetland and riparian habitat along American Canyon Creek and North Slough. Most of the vacant land in plan area is made up of scattered, isolated parcels classified as orchard-vineyard, which are subject to routine disturbance and provide no permeant value to wildlife. Of the aquatic habitats within the BDSP boundaries, American Canyon Creek is classified by the National Wetland Inventory (NWI) as riverine, freshwater emergent wetland and freshwater pond wetland types. North Slough is classified by the NWI as riverine wetland type (FirstCarbon Solutions 2019).

The BDSP identifies 17 special-status plant species and 32 special-status animal species that could occur within its boundaries. These species are listed in Appendix B. Without on-site reconnaissance, no definitive conclusions regarding suitable habitat for special-status, and this potential for special-status species within the BDSP area can be made (FirstCarbon Solutions 2019).

Project-Specific Analysis

Special-Status Plant Species

Special-status plant species documented by the CNDDB (CDFW, 2022) within approximately five miles of the project site are shown in Figure 15. One special-status plant species, the two-forked clover (*Trifolium amoenum*), has been mapped on or adjacent to the project site (CDFW 2022), this species is discussed in greater detail below.

Furthermore, according to the CDFW's CNDDB and the California Native Plant Society Rare Plant Inventory (CNPS, 2022), a total of 15 special-status plant species are known to occur within five miles of the project site. However, many of these plants occur in specialized habitats such as marshes, and vernal pools, which do not occur onsite. Additional detail is provided on why these species are not expected to occur, in the Special Status Species tables in Appendix B.

Due to the disturbed nature of the project site, there is a low likelihood of special-status plant species occurring onsite. The BRA determined that no special-status plant species had potential to occur (LSA 2018). The 2022 rare plant survey found no special-status species on site, however,

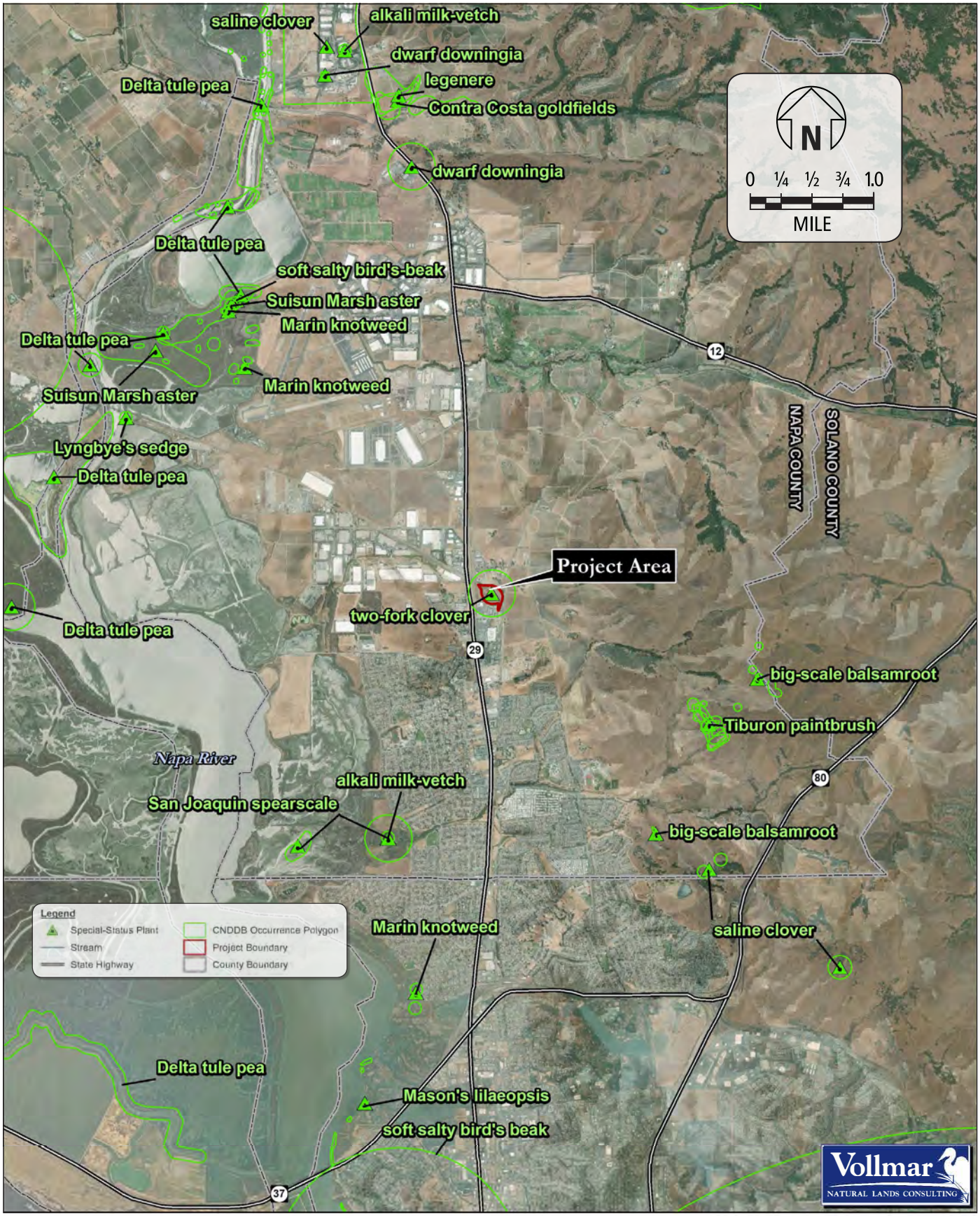


Figure 15
Regional Special Status Plant Species

Source: Vollmar Natural Land Consulting

the report listed six species with some potential to occur on site (Sol Ecology 2022). These included:

- Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*) (CNPS 1B.2);
- congested-headed hayfield tarplant (*Hemizonia congesta* ssp. *congesta*) (CNPS 1B.2);
- Contra Costa goldfields *(Lasthenia conjugens*) (CNPS 1B.2, Federally endangered);
- legenere (*Legenere limosa*) (CNPS 1B.1);
- Napa bluecurls (*Trichostema ruygtii*) (CNPS 1B.2); and
- two-fork clover (*Trifolium amoenum*) (CNPS 1B.1, Federally endangered).

Congdon's tarplant is associated with floodplains, swales, grasslands, and disturbed sites. The closest observation is 8.7 miles southeast of the project site and dates from the 1930's; it has since been presumed extirpated from that location. Congested-headed hayfield tarplant is associated with grasslands and marsh edges; the closest observation is 11.8 miles northwest of the project site.

Napa bluecurls requires open areas with thin clay soils; the closest occurrence is approximately seven miles northeast of the site. Due to the poor quality of the potential habitat for Congdon's tarplant, congested-headed hayfield tarplant and Napa bluecurls on site, and the distance of the nearest known occurrences, these species are not expected to occur. Both Contra Costa goldfields and legenere are limited to wet meadows and vernal pools, and are documented in a remnant vernal pool complex 3.9 miles north of the site. As there is no suitable vernal pool or wet meadow habitat on site, neither species is expected to occur. Furthermore, none of the above special-status plant species were detected in the rare plant survey report (Sol Ecology 2022). Therefore, no impact is expected to the above special-status plant species.

Two-fork clover (*Trifolium amoenum*) is federally listed as endangered and assigned the rank of 1B.1 by CNPS. This plant was documented on or adjacent to the project site in 1950, and the occurrence is classified as "Presumed Extant" in the most recent edition of CNDDB (CDFW 2022a). However, the 2012 5-year review for the two-fork clover describes the plant as being completely extirpated except for a single natural population on privately held land in Marin County. A reintroduction effort is also underway on Ring Mountain Open Space Preserve, Marin County (Terry & Jeffrey, pers. comm.). Additionally, protocol-level surveys in 2006 and 2022 have failed to detect any occurrences of this species (LSA, 2018, Sol Ecology, 2022). However, seeds of the plant may persist in the seedbank for years or even decades (Terry & Jeffrey, pers. comm.). The documented historical occurrence, combined with the occurrence of suitable grassland habitat on the project site, suggests that this species has a possibility, though unlikely, to occur on the site.

Therefore, impacts to two-forked clover could be ***potentially significant*.** Implementation of BDSP EIR MM BIO-1a and Mitigation Measure BIO-1 would reduce this impact to a ***less-than-significant*** level.

Special-Status Wildlife Species

Special-status wildlife species documented by the California Natural Diversity Database (CDFW 2022a) within approximately five miles of the project site are shown in Figure 16. No special-status wildlife records have been mapped on or directly adjacent to the project site. However, a total of 24 special-status wildlife species are known to occur within a 5-mile vicinity of the project site (CDFW 2022). Nine special-status wildlife species are included in this analysis because of their potential to occur or because of a pending change in their listing status that warrants additional review, including:

- California red-legged frog (*Rana draytonii*) (Federal Threatened);
- Western spadefoot toad (*Spea hammondii*) (Federal Candidate, State Species of Special Concern);
- Western pond turtle (Emys marmorata) (State Species of Special Concern);
- Monarch butterfly (*Danaus plexippus*) (Federal Candidate Threatened);
- Callippe silverspot butterfly (*Speryeria callippe callippe*) (Federal Endangered);
- Swainson's hawk (*Buteo swainsoni*) (State Threatened);
- Northern harrier (*Circus cyaneus*) (State Species of Special Concern);
- White-tailed kite (*Elanus leucururus*) (CDFW Fully Protected); and
- Golden eagle (*Aquila chrysaetos*) (CDFW Fully Protected).

Special-status raptors including Swainson's hawk, northern harrier, white-tailed kite and golden eagle are also protected under California Fish and Game Code (FGC) §3503.5 and under the Migratory Bird Treaty Act (MBTA) (50 CFR 10.13). These species are further discussed below. The Special Status Animals table in Appendix B presents additional details for the species known from the region of the project site that are not expected to occur onsite.

California red-legged frog is federally listed as threatened and is a state species of special concern. The project site is located outside USFWS designated critical habitat for the species, but designated critical habitat occurs approximately 0.76 miles to the southeast. Eleven California red-legged frog occurrences have been recorded within five miles of the site, and two occurrences are within one mile. One occurrence is from North Slough Creek, approximately 0.59 mile north-north-east of the project site. The second occurrence is recorded from a cement tank close to an abandoned quarry pond, approximately 0.3 mile from the project site. It is possible that dispersing individual California red-legged frogs could find their way to the project site and use the area as non-breeding dispersal habitat. The seasonal wetlands on site do not pond long enough and are

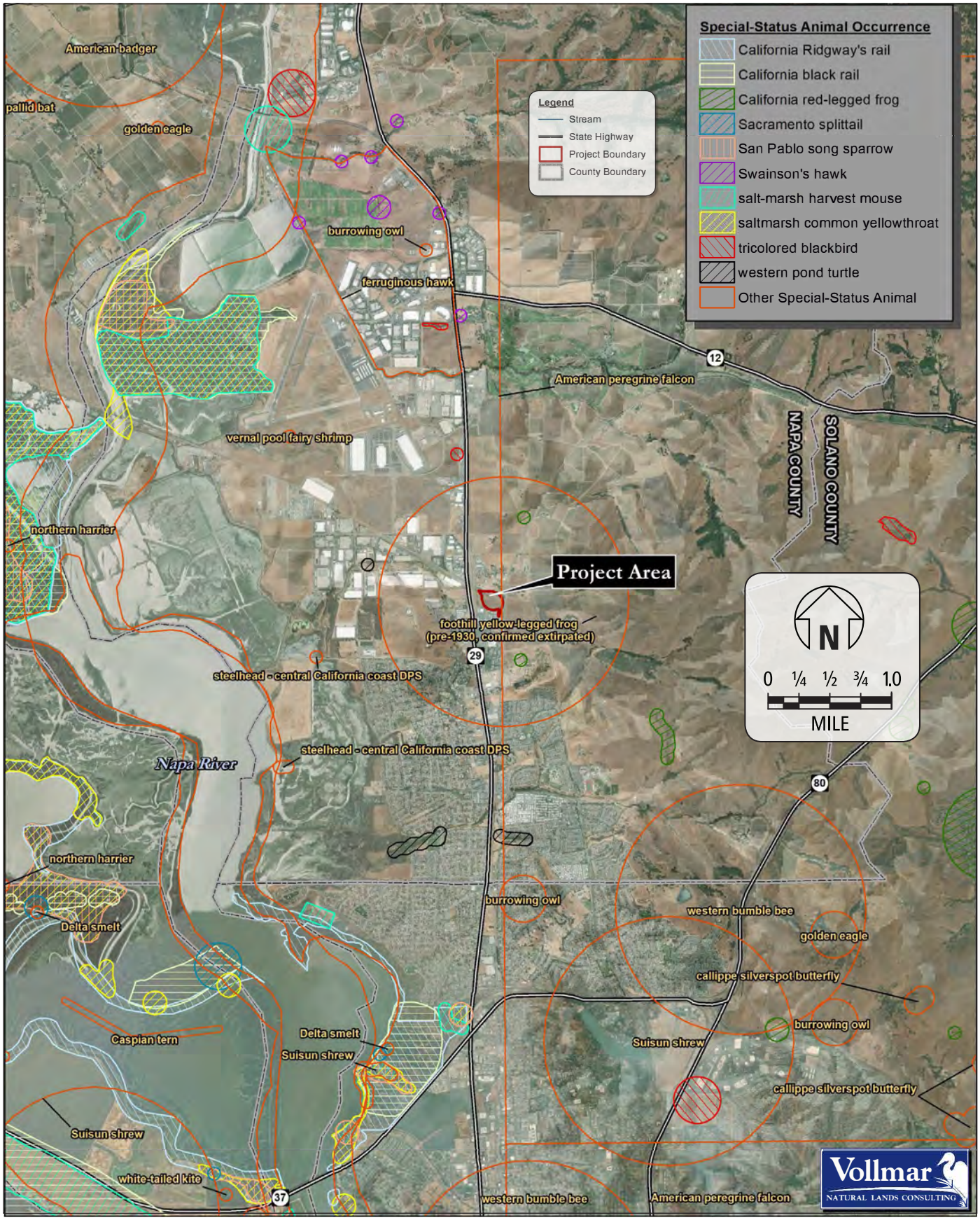


Figure 16
Regional Special Status Animals

Source: Vollmar Natural Land Consulting

not deep enough for successful California red-legged frog breeding. Breeding adults are most often associated with water deeper than two feet (USFWS 2002), and tadpoles require 11 to 20weeks to develop into terrestrial frogs (Bobzien and DiDonato 2007). As these conditions are not present on the site, California red-legged frogs are therefore not expected to breed here. Project activities of vegetation clearing and grading will result in the loss of approximately 1.16 acres of potential dispersal habitat. Given the potential for California red-legged frogs to use the project site as non-breeding dispersal habitat, impacts to this species could be ***potentially significant.*** Implementation of BDSP EIR MM BIO-1a and Mitigation Measure BIO-2 would reduce this impact to a ***less-than-significant*** level.

Western spadefoot toad is a State Species of Special Concern and a Federal candidate species with a listing decision expected in 2023. Western spadefoot is strongly associated with grassland and vernal pool habitats, but may occur in valley-foothill hardwood forests. In northern California, this species ranges through the Central Valley and adjacent foothills. The closest CNDDB occurrence is located approximately 33 miles northeast of the project site (CDFW 2022). There are no CNDDB occurrences in Napa County, and due to the poor quality or lack of potential habitat, as well as the distance of the nearest known occurrence, the species is not likely to occur at the project site. Therefore, ***no impact*** is expected for this species.

Northwestern pond turtle is a State Species of Special Concern and a Federal candidate species with a listing decision expected in 2024. The closest known record for Northwestern pond turtle is 0.9 miles west of the project site (CDFW 2022). While Northwestern pond turtle primarily occupy open freshwater habitat, this species is known to travel up to 0.31 miles (500m) upland for nesting, egg-laying and aestivation (Davidson and Alvarez 2020). The site does not provide any open water habitat within 0.31 miles, and is therefore is not expected to provide aquatic nor upland habitat for this species. Therefore, ***no impact*** is expected for this species.

Callippe silverspot butterfly is federally listed as endangered. The closest known record for callippe silverspot butterfly is 4.4 miles southeast of the project site (CDFW 2022). The larval host plant for the callippe silverspot butterfly is the California golden violet (*Viola pedunculata*), hereafter referred to as the "host plant". The closest documented occurrence of the host plant is approximately 1.9 miles southeast of the project site. Targeted special-status species surveys in 2022 did not identify any host plant on the project site (Sol Ecology 2022). However, the project site does provide marginal grassland habitat for the host plant (Calflora 2022; LSA 2018). If host plants are identified on-site, and if direct mortality were to occur from construction activities, the project could harm callippe silverspot butterfly. Additionally, if host plants are identified on site, the species could be harmed through the introduction of invasive landscaping plants, or through the use of pesticides on the project site. Therefore, impacts to this species could be ***potentially***

significant. Implementation of BDSP EIR MM BIO-1a and Mitigation BIO-3 would reduce this impact to a ***less-than-significant*** level.

Monarch butterfly is a federal candidate threatened species with a listing decision expected in 2024. The project site is within the range of monarch butterfly, and the closest known occurrence is 6.3 miles south of the site (CDFW 2022). The larval host plant for this species is milkweed (*Asclepias sp.*). The 2022 rare plant surveys (Sol Ecology 2022) noted the presence of potential nectar source plants and suitable habitat for larval host plans, but did not detect any larval host plants. If host plants are identified on-site, and if direct mortality were to occur from construction activities, the project could harm monarch butterfly. Additionally, if host plants are identified on site, the species could be harmed through the introduction of invasive landscaping plants, or through the use of pesticides on the project site. Therefore, impacts to this species could be ***potentially significant***. Implementation of BDSP EIR MM BIO-1a and Mitigation BIO-3 would reduce this impact to a ***less-than-significant*** level.

Swainson's hawk is a State threatened species and protected from direct take by MTBA and FGC. The closest known record for nesting Swainson's hawk is 2.2 miles north of the project site (CDFW 2022). No Swainson's hawk nests have been observed on the site or in the immediate vicinity of the project site during LSA's project site surveys. However, the nesting population appears to be increasing throughout its nesting range in northern California (recent CNDDB records) and the Fremont cottonwoods growing in the project site provide suitable nesting habitat. Therefore, there is the possibility that Swainson's hawks could nest near the project site and that nesting could be disturbed by construction activities.

If Swainson's hawks are found to be nesting on or adjacent to the project site, implementation of the proposed project could impact nesting Swainson's hawks. Nest site disturbance could result in: (1) nest abandonment; (2) loss of young; (3) reduced health and vigor of eggs and/or nestlings (resulting in reduced survival rates), and could ultimately result in the take (killing) of nestling or fledgling Swainson's hawks. In addition, Swainson's hawks could use the upland or dry areas (including seasonal wetlands during the dry season) of the project site for foraging. Therefore, project activities including vegetation clearing and grading could result in the loss of up to 13 acres of foraging habitat for Swainson's hawk.

Therefore, the impacts to Swainson's hawk from the proposed project could be ***potentially significant***. Implementation of Implementation of BDSP EIR MM BIO-1a and Mitigation Measure BIO-4 would ensure that any potentially significant impacts are reduced to a ***less-than-significant*** level.

Northern harrier is a State Species of Special Concern and protected under MTBA and FGC. The closest CNDDB record of this raptor was documented 3.7 miles west of the project site (CNDDB 2022). The project site could provide nesting and foraging habitat for the northern harrier, although marginal quality due to the degraded state of the site, throughout the grasslands. The loss of foraging habitat associated with the project is not considered substantial as there are extensive foraging opportunities in adjacent open space to the project site. Should northern harrier nest on or near the project site, nesting activities could be disrupted by construction activities. Northern harrier nests within grasslands and project activities of vegetation clearing and grading could impact nesting habitat for northern harrier. Therefore, impacts to northern harrier could be ***potentially significant***. The implementation of BDSP EIR MM BIO-1b would reduce potential impacts to northern harrier to a ***less-than-significant*** level.

White-tailed kite (*Elanus leucurus*) is a state fully protected species. It inhabits grasslands, agriculture fields, oak woodlands, savanna and riparian habitats in rural and urban areas. The species typically nests in trees surrounded by open foraging habitat. The trees on the project site provide potential nesting habitat. LSA biologists observed this species on or in the vicinity of the project site in 2018 (LSA 2018). The loss of foraging habitat associated with the project is not considered substantial as there are extensive foraging opportunities in adjacent open space to the project site. Should white-tailed kite nest on or near the project site, nesting activities could be disrupted by construction activities. Therefore, impacts to white-tailed kite could be ***potentially significant***. The implementation of BDSP EIR MM BIO-1b would reduce potential impacts to nesting and foraging white-tailed kites to a ***less-than-significant*** level.

Golden eagle (*Aquila chrysaetos*) is a state fully protected species. It inhabits grasslands, sagebrush, oak woodland, agricultural fields, savanna and barren areas, especially in hilly or mountainous regions. The species typically nests in rock ledges but may also select large trees. The nearest known occurrence of this species is 3.5 miles to the southeast. Mature cottonwood trees on the project site could provide potential nesting habitat. The loss of foraging habitat associated with the project is not considered substantial as there are extensive foraging opportunities in adjacent open space to the project site. Should golden eagle nest on or near the project site, nesting activities could be disrupted by construction activities. Therefore, impacts to golden eagle could be ***potentially significant***. The implementation of BDSP EIR MM BIO-1b would reduce potential impacts to nesting and foraging golden eagles to a ***less-than-significant*** level.

Other raptors and passerine birds. In addition to the above special-status bird species, construction of the proposed project has the potential to affect species protected by the MTBA and FGC, such as tree or ground nesting raptors or nesting passerine birds. Specific surveys for nesting raptors have not been conducted. In the absence of survey results indicating otherwise,

it is conservatively assumed that implementation of the proposed project could cause nest abandonment and death of eggs or young.

Passerine birds frequently change nesting locations from year to year and thus, past nesting histories are not necessarily indicative of future nesting activities. Similar to the raptors, construction activities could disturb or directly affect passerine birds, their eggs, and/or young. Therefore, impacts to nesting raptors and passerines are ***potentially significant***. Implementation of BDSP EIR MM BIO-1b would reduce the impact to a ***less-than-significant*** level.

b) **Riparian Habitat and Sensitive Natural Communities**

Summary of BDSP EIR Analysis

According to the BDSP EIR, the BDSP area contains approximately 25.5 acres of riverine habitat and 0.11 acre of freshwater pond. Riverine habitat is concentrated along American Canyon Creek and North Slough, two intermittent drainage features tributary to the Napa River. Freshwater pond habitat is concentrated along American Canyon Creek. Roadside ditches in the Southern Gateway sub-area of the BDSP area support additional riverine habitat and freshwater pond habitats. Development activities near American Canyon Creek, North slough and other drainage features may affect sensitive natural communities and riparian habitat. Impacts may be direct (e.g., installing a bridge or culvert), or indirect (e.g., disturbance within 10 feet of these features). Therefore, buildout of the BDSP could lead to ***potentially significant*** impacts to sensitive natural communities, riparian habitat or federally protected wetlands.

Project-Specific Analysis

There is no riparian habitat at the project site, therefore no loss of riparian habitat is expected. None of the riparian features identified in the BDSP intersect with the project boundaries (First Carbon 2019, LSA 2018). Additionally, there are no sensitive plant communities on the project site. Though the site does support some native grassland and wetland species, the size and composition does not constitute a sensitive plant community (LSA 2018). Therefore, ***no impact*** is anticipated for riparian areas, or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

c) **Wetlands**

Summary of BDSP EIR Analysis

According to the BDSP EIR, the BDSP area contains approximately 0.35 acres of freshwater emergent wetland concentrated along North Slough, American Canyon Creek, roadside ditches and erosional features. Buildout of the BDSP could result in ***potentially significant*** impacts to these features.

Project-Specific Analysis

A formal wetland delineation for the larger 15.05-acre parcel (of which the project site is 13.44 acres) was performed by LSA in 2017, and was verified by the Army Corps of Engineers (Corps) on April 19, 2018. Based on the verified wetland delineation, there are 1.522 acres of Jurisdictional Waters (federal and State), including 1.438 acres of seasonal wetland features, and 0.084 of acres of Other Waters (seasonal ditches), on the 15.05-acre project parcel (LSA 2017). The proposed grading of the project site would result in the loss of 0.983 acres of seasonal wetlands, and 0.016 acres/130 linear feet of Other Waters for a net loss of approximately one acre of Jurisdictional Waters. This constitutes a ***potentially significant*** impact. Implementation of BDSP EIR MM BIO-2 and project-specific Mitigation Measure BIO-5 would reduce the impact to a ***less-than-significant*** level.

d) **Wildlife Corridors**

Summary of BDSP EIR Analysis

According to the BDSP EIR, the BDSP boundaries contain mostly urbanized area characterized by dense residential and commercial development. Undeveloped properties within the BDSP are fragmented and disconnected amongst urban development and infrastructure. Furthermore, Highway 29 obstructs terrestrial wildlife movement within the BDSP. Waterways within the BDSP are intermittent and do not support anadromous fish passage. Urban-adapted wildlife may utilize drainage features for movement. However, impacts to these species are not expected due to high degree of adaptability to the urban environment. Therefore, buildout of the BDSP is expected to have *a* ***less-than-significant*** impact on wildlife corridors.

Project-Specific Analysis

The project site is bordered by urban and residential development to the north and south, and by an undeveloped parcel adjacent to Highway 29 to the west. Highway 29 and the Southern Pacific

Railroad act as barriers to wildlife with limited crossing opportunities. Despite the existence of urban development to the north and south, the undeveloped land to the east and west of the project are connected to large tracts of open space. As such, common wildlife species likely use the site to some degree for local movements, but the site does not provide connectivity to any significant habitat areas and is not a designated wildlife corridor. Because the site does not provide connectivity between significant habitat areas, the loss of the project site as open space would not constitute a loss of a migration corridor on a regional scale.

Migratory birds may also use the habitat within the project site opportunistically; however, higher quality habitat exists along the San Francisco Bay and Napa River corridor. The habitat within the project site offers only marginal habitat for species along the Pacific Flyway.

Based on the above, the project would not interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites, and no additional analysis is required and the project is expected to have ***less-than-significant*** impact on wildlife corridors, consistent with the BDSP EIR findings.

e) **Local Policies and Ordinances**

Summary of BDSP EIR Analysis

According to the BDSP EIR, BDSP activities are subject to American Canyon Municipal Code Chapter 19.24.040, which restricts development and land use activities affecting riparian corridors. Generally, permitted uses must further the biological and hydrologic functions of riparian corridors and be in the public interest. In addition, any development activities that occur within riparian corridors must implement protective measures for fish, wildlife, vegetation and water within the drainage feature. The only riparian corridors within the BDSP that could be affected by development and land use activities are American Canyon Creek and North Slough. To the extent that BDSP activities would impact these features, they would be subject to the requirements of Chapter 19.24.040, and impacts would be ***less than significant***.

The City of American Canyon's Tree Ordinance (Ord. 18.40.110) specifies that:

> A. Existing trees shall be preserved on the site unless otherwise approved by the city council as a part of the site development plans.
>
> B. Unless specifically approved by the city council, any tree removed shall be replaced on the site. Replacement trees shall be a minimum size of a twenty-four-inch box of the same species unless specifically approved by the city council. (Ord. 98-10 § 1 (part), 1998).

Project-Specific Analysis

The project would not impact American Canyon Creek or North Slough.

The project would remove 32 Fremont cottonwood trees, one California black walnut, one wild plum, one coastal live oak, and five giant yucca trees. The proposed landscape plan for the project includes over 250 new trees, including 22 western sycamores, six valley oaks, and 144 coastal live oaks. This would comply with the City's tree ordinance.

Therefore, the additional tree replacement requirements in Chapter 19.24.040 would not apply, and the project would have ***no impact*** to local biological ordinances and policies.

f) **HCP or NCCP**

Summary of BDSP EIR Analysis

According to the BDSP EIR, the BDSP area is not within the boundaries of an adopted habitat conservation plan or natural community conservation plan. This condition precludes the possibility of the BDSP conflicting with the provisions of such a plan. ***No impacts*** would occur.

Project-Specific Analysis

The project sites do not lie within the boundaries of any adopted Habitat Conservation Plan (HCP) Natural Community Conservation Plan (NCCP), or other approved local, regional or State habitat conservation plan. The proposed project would not result in any new or more severe impacts beyond what was analyzed in the BDSP EIR. No additional analysis is required as ***no impact*** is anticipated (CDFW 2022b).

Applicable BDSP EIR Mitigation Measures

BDSP EIR MM BIO-1a: Prior to development activities within undeveloped properties within the Specific Plan area, the applicant shall retain a qualified biologist to conduct a reconnaissance-level biological assessment. The assessment shall evaluate the potential presence of special-status plant and wildlife species, sensitive natural communities, jurisdictional features, and wildlife and fish movement. If the reconnaissance-level biological assessment determines that protocol-level surveys or pre-construction surveys are warranted, these studies shall be completed prior to construction. Additionally, any required mitigation (protective buffers, passive relocation, restoration, etc.) shall be completed at the appropriate time. This mitigation measure shall not apply to sites that are entirely or mostly hardscaped or disturbed.

BDSP EIR MM BIO-1b: Prior to tree removal activities that occur during the nesting season (February 1 and August 31), the applicant shall retain a qualified biologist to conduct a pre-construction nesting bird survey no more than 14 days prior to vegetation removal. If the biologist observes nesting birds to be present, a minimum 250-foot protective buffer shall be established around the nest until the young have fledged. This mitigation measure shall not apply to tree removal activities that occur outside the nesting season (September 1 to January 31).

BDSP EIR MM BIO-2: Prior to development activities within undeveloped properties that contain blue line drainages or wetland features within the Specific Plan area, the applicant shall retain a qualified biologist to conduct a jurisdictional assessment (or other applicable evaluation). The assessment shall determine if the resource falls under the jurisdiction of a federal or state resource agency (e.g., United States Army Corps of Engineers, California Department of Fish and Wildlife, San Francisco Bay Regional Water Quality Control Board). If the assessment is affirmative, the applicant shall obtain the requisite permits from the appropriate resource agencies and implement applicable mitigation measures for impacts to such features (avoidance, restoration, payment of fees to an off-site mitigation bank, etc.). If the assessment is negative, no further action is required (FirstCarbon Solutions 2019).

Additional Project Specific Mitigation Measures

Mitigation Measure BIO-1: As indicated in the aforementioned **BDSP EIR MM BIO-1a,** the following mitigation measures shall be implemented to ensure that impacts to two-fork clover are avoided:

1) A qualified botanist shall conduct surveys for special-status plant species in all suitable habitat areas present on the project site, following the 2018 Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Sensitive Communities (CDFW 2018). Surveys shall coincide with the species' blooming period, usually April through June.

    a) If two-fork clover is not detected during focused surveys, the botanist shall document the findings in a letter to the lead agency, and other appropriate agencies as needed, and no further mitigation will be required.

    b) If two-fork clover is detected, the following measures shall be implemented:

        i) Information regarding the special-status plant population shall be reported to the CNDDB

ii) If the populations can be avoided during project implementation, they shall be clearly marked in the field by a qualified botanist and avoided during construction activities. Before ground clearing or ground disturbance, all on-site construction personnel shall be instructed as to the species' presence and the importance of avoiding impacts to this species and its habitat.

iii) If two-fork clover cannot be avoided, any disturbance to those individuals may result in a jeopardy opinion, and therefore permits may not be issued. Compensatory mitigation would not be sufficient to protect the species existence.

Mitigation Measure BIO-2: As indicated in the aforementioned **BDSP EIR MM BIO-1a**, the following mitigation measures shall be implemented to ensure that impacts to dispersing adult California red-legged frogs are avoided.

1) Pre-construction surveys for dispersing adult California red-legged frogs shall be completed for at least two survey rounds prior to the commencement of construction activities, per USFWS's "Revised Guidance on Site Assessments and Field Surveys for the California Red Legged Frog (USFWS 2005)". Surveys shall consist of one daytime and one nighttime survey, and shall be conducted by a qualified amphibian biologist. If two-fork clover is not detected during focused surveys, the botanist shall document the findings in a letter to the lead agency, and other appropriate agencies as needed, and no further mitigation will be required.

    a) If CRLF is detected, the following additional steps shall be implemented:

        i) Work and major construction activities shall be limited to the dry season (June through September) and the daytime when California red-legged frogs are less likely to disperse through the work area.

        ii) If work and major construction activities cannot be limited to the dry season, a qualified biologist will clear the site prior to construction activities. In the event a California red-legged frog enters the work area, the qualified biologist will have the authority to stop activities if necessary; and the qualified biologist shall relocate any California red-legged frogs from the disturbance footprint that are in danger of being injured or killed.

    b) All proposed project construction staff shall be trained in the identification of the California red-legged frog and its habitats and the implementation of the avoidance and minimization measures.

Mitigation Measure BIO-3: As indicated in the aforementioned **BDSP EIR MM BIO-1a**, the following mitigation measures shall be implemented to ensure that impacts to callippe silverspot butterfly and monarch butterfly are avoided.

1) Surveys for the primary host plants, California golden violet *(Viola pedunculata*) for callippe silverspot butterfly and milkweed (*Asclepias sp*) for monarch butterfly, shall be conducted within 100-feet of the project site, during a season when the host plants can be identified. This can be conducted in conjunction with Mitigation Measure BIO-1, described above.

    a) If the above-mentioned primary host plants are identified within the project boundary, the location will be identified, fenced, and an environmentally sensitive area will be established around the location of the host plants for the duration of construction and the following measures will be discussed with USFWS and CDFW to determine their suitability.

        i) If avoidance is not feasible, the project proponent will consult with CDFW and USFWS to determine if the extent of loss of host plant is significant. If it is, measures to address the loss could include implementing a salvage plan that will salvage seeds from host plants for restoration and replanting after construction. If this is determined to be Details on the seed salvage would be included in the mitigation and monitoring plan developed by the project proponent and provided to USFWS and CDFW for review and approval. If an appropriate relocation area exists, the project proponent will coordinate with USFWS and CDFW to carry out the relocation by a qualified botanist.

        ii) Pesticide and insecticide use on the project site shall be carried out in compliance with an Integrated Pest-Management (IPM) plan prepared by a licensed Pest Control Advisor, with the goal of minimizing pesticide exposure to pollinating insects. The project site shall be landscaped according to a Planting Plan that excludes any species with a high potential to invade host plant habitat.

Mitigation Measure BIO-4: As indicated in the aforementioned **BDSP EIR MM BIO-1a**, the following mitigation measures shall be implemented to ensure that impacts to Swainson's hawk are avoided.

1) Pre-construction surveys for nesting Swainson's hawk shall be conducted across potential habitat for a quarter-mile radius around all project activities, and shall be completed for two survey periods immediately prior to a project's initiation. The surveys shall be conducted in

accordance with CDFW's "Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley" (CDFG 2000), which identifies different survey windows throughout the pre-nesting and nesting season (ranging from January 1 through July 30/post-fledging) that have different survey methodologies and requirements.

a) If Swainson's hawks are found to be nesting on the project site or within a quarter-mile of the project site, consultation with CDFW shall be conducted. The size of the nest protection buffer shall be determined during consultation with CDFW.

Mitigation Measure BIO-5: Prior to issuance of a grading permit, the applicant shall submit proof to the Community Development Department that resource agencies have approved permits to mitigate unavoidable impacts to Jurisdictional Waters through a combination of permittee-responsible on-site wetland creation and turn-key off-site wetland and stream restoration through a conservation partner or mitigation bank, if available. A mitigation and monitoring plan shall be developed in consultation with relevant agencies, and the appropriate notifications and permit applications should be submitted (ex. RWQCB Section 401, ACOE Section 404, and CDFW LSAA Section 1602).

V. Cultural Resources

Would the project:

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

Background

Regulatory Setting

Federal Regulations

National Register of Historic Places

Although the project does not have a federal nexus, properties which are listed in or have been formally determined eligible for listing in the National Register of Historic Places (NRHP) are automatically listed in the California Register of Historical Resources (CRHR). The following is therefore presented to provide applicable regulatory context. The NRHP was authorized by Section 101 of the National Historic Preservation Act and is the nation's official list of cultural resources worthy of preservation. The NRHP recognizes the quality of significance in American, state, and local history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects. Pursuant to 36 Code of Federal Regulations (CFR) Part 60.4, a property is eligible for listing in the NRHP if it meets one or more of the following criteria:

Criterion A: Are associated with events that have made a significant contribution to the broad patterns of our history.

Criterion B: Are associated with the lives of persons significant in our past.

Criterion C: Embody the distinctive characteristics of a type, period, or method of installation, 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.

Criterion D: Have yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting at least one of the above designation criteria, resources must also retain integrity. The National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, defined as follows:

Location: The place where the historic property was constructed or the place where the historic event occurred.

Design: The combination of elements that create the form, plan, space, structure, and style of a property.

Setting: The physical environment of a historic property.

Materials: Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.

Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.

Feeling: A property's expression of the aesthetic or historic sense of a particular period of time.

Association: The direct link between an important historic event or person and a historic property.

Certain properties are generally considered ineligible for listing in the NRHP, including cemeteries, birthplaces, graves of historical figures, properties owned by religious institutions, relocated structures, or commemorative properties. Additionally, a property must be at least 50 years of age to be eligible for listing in the NRHP. The National Park Service states that 50 years is the general estimate of the time needed to develop the necessary historical perspective to evaluated significance (National Park Service 1983). Properties which are less than 50 years must be determined to have "exceptional importance" to be considered eligible for NRHP listing.

State Regulations

California Environmental Quality Act

California Public Resources Code (PRC) Section 21804.1 requires lead agencies determine if a project could have a significant impact on historical or unique archaeological resources. As defined in PRC Section 21084.1, a historical resource is a resource listed in, or determined eligible for listing in, the CRHR; a resource included in a local register of historical resources or identified in a historical resources survey pursuant to PRC Section 5024.1(g); or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant. PRC Section 21084.1 also states resources meeting the above criteria are presumed to be historically or cultural significant unless the preponderance of evidence demonstrates otherwise. Resources listed in the NRHP are automatically listed in the CRHR and are, therefore, historical resources under CEQA. Historical resources may include eligible built environment resources and archaeological resources of the pre-contact or historic periods.

CEQA Guidelines Section 15064.5(c) provides further guidance on the consideration of archaeological resources. If an archaeological resource does not qualify as a historical resource, it may meet the definition of a "unique archaeological resource" as identified in PRC Section 21083.2. PRC Section 21083.2(g) defines a unique archaeological resource as an artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- It contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological resource does not qualify as a historical or unique archaeological resource, the impacts of a project on those resources will be less than significant and need not be considered further (CEQA Guidelines Section 15064.5[c][4]). CEQA Guidelines Section 15064.5 also provides guidance for addressing the potential presence of human remains, including those discovered during the implementation of a project.

According to CEQA, an impact that results in a substantial adverse change in the significance of a historical resource is considered a significant impact on the environment. A substantial adverse change could result from physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired (CEQA Guidelines Section 15064.5 [b][1]). Material impairment is defined as demolition or alteration in an adverse manner [of] those characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the CRHR or a local register (CEQA Guidelines Section 15064.5[b][2][A]).

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC Section 21083.2[a], [b]).

CEQA Guidelines Section 15126.4 stipulates an EIR shall describe feasible measures to minimize significant adverse impacts. In addition to being fully enforceable, mitigation measures must be completed within a defined time period and be roughly proportional to the impacts of the project. Generally, a project which is found to comply with the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* (the Standards) is considered to be mitigated below a level of significance (CEQA Guidelines Section 15126.4 [b][1]). For historical resources of an archaeological nature, lead agencies should also seek to avoid damaging effects where feasible. Preservation in place is the preferred manner to mitigate impacts to

archaeological sites; however, data recovery through excavation may be the only option in certain instances (CEQA Guidelines Section 15126.4[b][3]).

California Register of Historical Resources

The CRHR was established in 1992 and codified by PRC Sections 5024.1 and 4852. The CRHR is an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected from substantial adverse change to the extent prudent and feasible (Public Resources Code, 5024.1(a)). The criteria for eligibility for the CRHR are consistent with the NRHP criteria but have been modified for state use to include a range of historical resources that better reflect the history of California (Public Resources Code, 5024.1(b)). Unlike the NRHP, the CRHR does not have a defined age threshold for eligibility; rather, a resource may be eligible for the CRHR if it can be demonstrated sufficient time has passed to understand its historical or architectural significance (California Office of Historic Preservation 2006). Further, resources may still be eligible for listing in the CRHR even if they do not retain sufficient integrity for NRHP eligibility (California Office of Historic Preservation 2006). Generally, the California Office of Historic Preservation recommends resources over 45 years of age be recorded and evaluated for historical resources eligibility (California Office of Historic Preservation 1995:2).

Properties are eligible for listing in the CRHR if they meet one of more of the following criteria:

Criterion 1: Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

Criterion 2: Is associated with the lives of persons important to our past.

Criterion 3: Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

Criterion 4: Has yielded, or may be likely to yield, information important in prehistory or history.

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains, until the coroner of the county in which the remains are discovered has determined if the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of this identification.

California Public Resources Code Section 5097.98

California Public Resources Code Section 5097.98 states that the NAHC, upon notification of the discovery of Native American human remains pursuant to Health and Safety Code Section 7050.5, shall immediately

notify those persons it believes to be descended from the deceased (i.e., the Most Likely Descendant or "MLD"). With permission of the landowner or a designated representative, the MLD may inspect the remains and any associated cultural materials and make recommendations for treatment or disposition of the remains and associated grave goods. The MLD shall provide recommendations or preferences for treatment of the remains and associated cultural materials within 48 hours of being granted access to the site.

Local Regulations

City of American Canyon General Plan

The City of American Canyon General Plan contains goals and policies to avoid potential impacts to cultural resources. These goals and policies were created to ensure that the City's culturally significant resources are protected through the following:

- Conducting a comprehensive archaeological and cultural resources and historic vegetation survey in the City and Sphere of Influence;
- Adopting an Ordinance authorizing the City to designate appropriate vegetation or archaeological sites as American Canyon City Historic Points, Sites, or Districts as approved by the State Historic Office of Preservation;
- Exploring methods for the future preservation of historic vegetation and archaeological and cultural resources;
- Requiring all City-owned properties designated as historic resources are maintained in a manner that is aesthetically and/ or functionally compatible with the resources;
- Establishing a program of historic preservation incentives;
- Considering waiving building permit fees for small property owners with historic resources for the purpose of renovation/ preservation of that resource;
- Considering allowing flexibility in the building code requirements for rehabilitation of historic structures;
- Encouraging appropriate adaptive reuse of historic resources;
- Promoting the formation of neighborhood conservation organizations; and
- Encouraging the Chamber of Commerce to promote the City' s historic resources in visitor and tourist-oriented materials (City of American Canyon General 2019).

The goals and policies from the General Plan relevant to cultural resources are identified below:

Goal 8E: To Promote the preservation and restoration of the sites, structures and districts that have architectural, historical, archaeological and/or cultural significance to the City of American Canyon.

Objective 8.19: Ensure that the City's historically and archaeologically significant resources are protected in a manner that preserves and/or enhances the resources' inherent historic value.

Policy 8.19.1: Conduct a comprehensive survey of archaeological and cultural resources and historic vegetation that is based on established criteria and encompasses the entire City and its Sphere of Influence.

Policy 8.19.2: Adopt a Preservation Ordinance that will authorize the City to designate appropriate vegetation or archaeological sites deemed to be of historic, archaeological, or cultural significance an American Canyon City Historic Point, Site or District. Such an ordinance shall conform to state and federal criteria for establishing a preservation ordinance.

Policy 8.19.3: Explore various methods for the future preservation of historic vegetation and archaeological and cultural resources. For example, consider establishing "receiver site" and "adopt a building" programs to preserve historic structures that must be removed from their sites. Additionally, consider utilizing the Secretary of the Interior Standards for Historic Rehabilitation and standards and guidelines prescribed by the State Office of Historic Preservation as the architectural and landscape design standards for rehabilitation, alteration, or additions to sites containing historic resources in order to preserve these structures in a manner consistent with the sites' architectural and historic integrity.

Policy 8.19.4: Though the design review process, encourage compatibility between new development and existing adjacent historic structures in terms of scale, massing, building materials and general architectural treatment.

Policy 8.19.5: Require that all City- owned properties designated as historic resources are maintained in a manner that is aesthetically and/or functionally compatible with such resources.

Objective 8.20: Provide incentives to private owners of historic resources to maintain and/ or enhance their properties in a manner that will conserve the integrity of such resources in the best possible condition.

Policy 8.20.1: Establish a program of historic preservation incentives that incorporates elements such as tax benefits provided by the 1981 Tax Revenue Act or any amended version of said act; the waiver of building permit fees for small property owners of historic resources; and flexible building code requirements.

Policy 8.20.2: Consider the waiver of building permit fees for small property owners with historic resources who are unable to benefit from other government programs for the rehabilitation, alteration, or reuse of their structure(s), provided that they rehabilitate their historic resources in accordance with established historic preservation guidelines.

Policy 8.20.3: Consider allowing flexibility in building code requirements for the rehabilitation of historic structures as specified in State Historical Building Code Part 8, Title 24 if these structures are rehabilitated in accordance with established historic preservation guidelines.

Policy 8.20.4: Prohibit demolitions if other alternatives exist that enable a property owner to sensitively add to the existing structure, or develop an accompanying building on the site that allows property development rights to be realized. Variances of setbacks, heights and parking requirements should be given to make the preservation of an existing historic building feasible when no other reasonable alternative exists.

Policy 8.20.5: Encourage appropriate adaptive reuse of historic resources such as the Basalt Plant in order to prevent misuse, disrepair and demolition, taking care to protect surrounding neighborhoods and/or agricultural land from incompatible uses.

Objective 8.21: Promote community appreciation of American Canyon's unique history and community involvement in its retention and preservation.

Policy 8.21.1: Promote the formation and maintenance of neighborhood organizations and foster the creation of neighborhood conservation programs, giving special attention to transitional areas.

Policy 8.21.2: Encourage the creation of a Chamber of Commerce to promote the City's historic resources in visitor and tourist-oriented brochures as the City grows and develops.

Methodology

If a project may cause a substantial adverse change in the characteristics of a resource that convey its significance or justify its eligibility for inclusion in the CRHR, either through demolition, destruction, relocation, alteration, or other means, then the project would have a significant effect on the environment (CEQA Guidelines Section 15064.5[b]).

Direct impacts can be assessed by identifying the types and locations of proposed development, determining the exact locations of cultural resources within the project site, assessing the significance of the resources that may be affected, and determining the appropriate mitigation. Removal, demolition, or alteration of historical resources can permanently impact the historic fabric of an archaeological site, building or structure, or historic district.

The State Legislature, in enacting the CRHR, amended CEQA to clarify which properties are significant, as well as which project impacts are considered significantly adverse. A project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have significant effect on the environment (CEQA Guidelines Section 150645[b]). A substantial adverse change in the significance of a historical resource means demolition, destruction, relocation, or alteration of the

resource or its immediate surroundings such that the significance of a historical resource would be materially impaired (CEQA Guidelines Section 150645[b][1]).

The CEQA Guidelines further state that "[t]he significance of an historical resource is materially impaired when a project… [d]emolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in the California Register … local register of historic resources… or its identification in an historic resources survey." As such, the consideration for determining whether the project will have a significant impact on identified historic resources is whether it will materially impair the physical integrity of the historic resource, such that it could no longer be listed in the CRHR or a local landmark program.

Historic Properties Survey

Evans and DeShazo (EDS) prepared an Historical Properties Survey (HPS) of the project area. The survey consisted of a Northwest Information Center (NWIC) record search of the California Historical Resources Information System, a field survey, detailed historical analysis, outreach to the Native American community, and study documentation (EDS, Historic Property Survey for The Residences at Napa Junction Project, East Napa Junction Road, American Canyon, Napa County, California, September 20, 2022). The study was peer reviewed by Montrose Environmental archaeologist Charlane Gross, under contract to the City of American Canyon (Cultural Resources Letter Report, November 11, 2022).

The HPS identified a railroad bed associated with the Santa Rosa & Carquinez Railroad that was utilized between 1888 and 1928; the Southern Pacific Railroad balloon loop that was utilized between ca. 1925 and ca. 1984, which consists of a defunct railroad grade (southern portion of the loop) within the Project Area and active tracks utilized by the California Northern Railroad (northern portion of the loop) adjacent and north of the Project Area; a ca. 1970 refuse scatter; a ca. 1900 concrete foundation; a ca. 1970 concrete pad; over 600 railroad-associated materials (i.e., railroad ties, railroad rails, rail switches, knuckle coupler, tie plates, fishplates, fish bolts, rail anchors, and spikes) located in various portion so the Project Area; two isolated historic-period artifacts (one glass insulator fragment and a bottle fragment); and several chunks and slabs of aggregated concrete.

Of the cultural resources identified within the Project Area, the ca. 1925 Southern Pacific Railroad balloon loop is recommended eligible for listing the National Register of Historic Places (NRHP) and California Register of Historic Resources (CRHR) under Criterion C/3, as a particular and rare example of a railroad engineering design.

No pre-contact period archaeological resources were identified within the Project Area.

Discussion

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

Summary of BDSP EIR Analysis

According to the BDSP EIR, 12 historic structures (i.e., more than 45 years old) located within the BDSP and nine historic structures located within a 0.5-mile radius of the BDSP area. The 12 resources located within the BDSP area include three historic sites (foundations and privies), one farm/ranch, six residential homes, and two commercial buildings that were recorded between 1977 and 2015. These structures were evaluated for listing in the California Register of Historical Resources and National Register of Historic Places and were determined not to be eligible for listing. Therefore, these resources do not meet the definition of a "historical resource" for the purposes of CEQA.

The Technical Background Report prepared in 1993 for the City of American Canyon's General Plan reported that there are no state or federally listed historic properties within the Plan Area or within the city limits. The report does suggest that the Old Route of the Napa-Vallejo Road, the Southern Pacific and Electric Railroad Lines from the Napa River Bridge crossing to Napa Junction, and unnamed historic farmsteads should be evaluated to determine their eligibility for listing on the state and federal registers. However, the City has not performed a formal inventory or completed a comprehensive survey within the Plan Area, and it has not adopted a Historic Preservation Ordinance.

Although there are no listed historic resources within the BDSP area, it is possible that subsurface excavations may encounter previously undiscovered historic resources during development activities. The implementation of standard cultural resource construction mitigation (MM CUL-1) would ensure that this impact is less than significant.

Project-Specific Analysis

As described in the Background section above, one of the cultural resources identified within the Project Area, the ca. 1925 Southern Pacific Railroad balloon loop, is recommended eligible for listing the NRHP/CRHR under Criterion C/3 as a particular and rare example of a railroad engineering design.

Due to the Project's potential adverse effects/impacts on the ca. 1925 South Pacific Railroad balloon loop, EDS Principal Architectural Historian Stacey De Shazo, M.A. completed a Secretary of Interior Standards for the Treatment of Historic Properties (Standards) Review to determine if the proposed Project would adversely affect/impact the historic property/historical resource. EDS

found that the proposed Project meets the Standards for Rehabilitation and therefore, would not significantly diminish the integrity of the ca. 1925 Southern Pacific Railroad balloon loop by altering the character-defining features that qualify it for the NRHP and CRHR, including the teardrop shape and turning radius of the loop, and the raised railroad bed (aka berm). As such, EDS recommended a finding of no adverse effect/significant impact to historic properties/historical resources as a result of the Project in accordance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800, and CEQA.

The Montrose Environmental peer review of the EDS report disagrees with the EDS finding of no adverse effect/significant impacts to site P-28-966 (CA-NAP-1113H). Instead, Montrose suggests that the demolition of a significant portion of the large, physically imposing berm would represent a significant disruption of the historic resource, destroying the physical integrity of the site. Montrose suggested mitigation for this impact, which has been incorporated into this IS in Mitigation Measures CUL-1 and CUL-2, below. However, even with these mitigation measures, the project would result in the elimination of a significant historical resource and therefore result in a potentially **significant unavoidable impact** that will be addressed further in the EIR**.**

b) **Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?**

Summary of BDSP EIR Analysis

According to the BDSP EIR, no known prehistoric archaeological resources have been recorded within the BDSP area. However, it is possible that subsurface excavations may encounter previously undiscovered archaeological resources within the BDSP and the off-site development areas. The implementation of standard cultural resource construction mitigation (MM CUL-1) would ensure that this impact is less than significant.

Project-Specific Analysis

An NWIC record search, archival research, NAHC and Native American community input, and a field survey conducted as part of the EDS HPS described above did not identify any prehistoric or historic-era cultural sites, features, artifacts, or culturally significant properties within the project area. However, there remains a possibility that project ground-disturbing activities could uncover evidence of Native American or early historic period use and/or occupation of the project area.

BDSP Mitigation Measure CUL-1, below, would reduce any impacts to such resources to a ***less-than-significant*** level.

c) **Disturb any human remains, including those interred outside of formal cemeteries?**

Summary of BDSP EIR Analysis

The BDSP area includes areas previously inhabited by Native American tribes and, thus, there is always the possibility that subsurface construction activities associated with buildout of the BDSP, such as trenching and grading, could potentially damage or destroy previously undiscovered human remains. However, if human remains are discovered, implementation of BDSP MM CUL-4 would reduce this potential impact to a less than significant level.

Project Specific Analysis

As discussed above, archival research, Native American community outreach, an NWIC record search, and a field survey did result in the documentation of any known human remains within the project area However, the possibility exists that subsurface construction activities may encounter previously undiscovered human remains. Implementation of BDSP Mitigation Measure CUL-4 would reduce this impact to a ***less-than-significant*** **level.**

Mitigation Measures

BDSP EIR MM CUL-1: If prehistoric or historic-period archaeological resources are encountered during ground-disturbing activities associated with new development that occurs pursuant to the Specific Plan, all construction activities within 100 feet of the find shall halt and the City of American Canyon shall be notified. Prehistoric archaeological materials might include obsidian and chert flakedstone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil ("midden") containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. A Secretary of the Interior-qualified archaeologist shall inspect the findings within 24 hours of discovery. If it is determined that the project could damage a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with PRC Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section 15126.4(b)(3), this may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If avoidance is not feasible, a qualified archaeologist shall prepare and implement a detailed treatment plan in consultation with the City of American Canyon. Treatment of unique archaeological resources shall follow the applicable requirements of PRC Section 21083.2. Treatment for most resources would consist of (but would not be not

limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the Project. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals.

BDSP EIR MM CUL-4: In the event of discovery or recognition of any human remains during construction activities, such activities within 100 feet of the find shall cease until the Napa County Coroner has been contacted to determine that no investigation of the cause of death is required. The Native American Heritage Commission (NAHC) shall be contacted within 24 hours if it is determined that the remains are Native American. The NAHC will then identify the person or persons it believes to be the most likely descendant from the deceased Native American (PRC Section 5097.98), who in turn would make recommendations to the City of American Canyon for the appropriate means of treating the human remains and any associated funerary objects (CEQA Guidelines Section 15064.5(d)).

Additional Project Specific Mitigation Measures

Mitigation Measure CUL-1: The developer shall retain a qualified professional to prepare and submit a National Register of Historic Places nomination form to the California State Historic Preservation Office. In this way, the Southern Pacific Railroad balloon loop will be listed on the NRHP and CRHR as a resource of recognized importance, and the information will be available to professionals and members of the public alike.

Mitigation Measure CUL-2: The applicant shall retain a qualified professional to prepare Historic American Engineering Record (HAER) documentation. HAER was established in 1969 by the National Park Service, the American Society of Civil Engineers and the Library of Congress to document historic sites and structures related to engineering and industry.

Conclusions

As described above, the project would have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR, including potential significant unavoidable impacts to historic resources.

VI. Energy

Would the project:

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

Background

California Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the state's Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Code was established by California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer greenhouse gas (GHG) emissions.

The 2022 California Energy Code was adopted by the CEC on August 11, 2021 and will apply to buildings whose permit applications are applied for on or after January 1, 2023. The Building Energy Efficiency Standards are enforced through the local plan check and building permit process. Local government agencies may adopt and enforce additional energy standards for new buildings as reasonably necessary in response to local climatologic, geologic, or topographic conditions, provided that these standards exceed those in the California Energy Code.

California Green Building Standards Code (Title 24, Part 11)

The California Green Building Standards Code (CALGreen) is part 11 of Title 24, California Code of Regulations. CALGreen is the first-in-the-nation mandatory green building standards code, developed in an effort to meet the goals of California's landmark initiative AB 32, which established a comprehensive program of cost-effective reductions of GHG emissions to 1990 levels by 2020. CALGreen includes a waste

diversion mandate, which requires that at least 65 percent of construction materials generated during new construction or demolition projects are diverted from landfills. CALGreen went into effect on January 1, 2023.

Discussion

a, b) **Summary of BDSP EIR Analysis**

The BDSP EIR did not separately analyze the energy consumption resulting from the buildout of the BDSP; however, energy was addressed in several relevant topical areas of the EIR. As discussed in BDSP EIR Section 3.2, Air Quality and Greenhouse Gases, Section 3.13, Utilities and Service Systems, and Section 6, Other CEQA Considerations, buildout of the BDSP planning area would result in the consumption of electricity, natural gas, and transportation fuels during construction and operation. The BDSP EIR ultimately determined that buildout of the BDSP would be consistent with the City's Sustainability Best Practice Activities[7], which largely encompasses energy efficiency measures through the reduction of fossil fuel consumption such as promoting infill development, alternative modes of transportation, and higher density development.

According to the energy efficiency and conservation activities goals identified within the City's Sustainability Best Practices Activities, the City of American Canyon joined Marin Clean Energy (MCE) in November of 2015. MCE provides renewable energy without replacing PG&E's infrastructure, maintenance, or billing systems. On September 1, 2016, the City of American Canyon was automatically enrolled in the Light Green Program; at which time, users began utilizing a minimum of 52 percent renewable energy. In addition, the MCE Deep Green Program was also provided as an option to customers, allowing for 100 percent renewable energy consumption.

Project-Specific Analysis

Construction Activities

The air quality modeling (CalEEMod) described in detail in the air quality section utilized standard fuel consumption estimates to determine that project construction activities would require approximately 94,500 gallons of diesel fuel and 44,250 gallons of gasoline.[8] For the finishing phase of construction, some electricity may be used (e.g., for power tools and work lighting). While this electricity usage cannot be quantified at this time, it is anticipated to be relatively minor

[7] City of American Canyon. 2019. *City of American Canyon Sustainability Best Practices*.

[8] Fuel usage is estimated using the CalEEMod output for CO_2, and a $kgCO_2$/gallon conversion factor from the U.S. Energy Information Administration Voluntary Reporting of Greenhouse Gases Program, https://www.eia.gov/environment/pdfpages/0608s(2009)index.php.

compared to normal building operations. When not in use, equipment would be powered off to avoid unnecessary energy consumption. Natural gas would not be used during construction.

During construction of the proposed project, the building contractor would be required by BDSP EIR Mitigation Measure AIR-2 (see air quality section) to limit idling time of equipment and vehicles to a maximum of 2 minutes (more restrictive than the 5-minute limit required by the state) and maintain and properly tune construction equipment in accordance with manufacturer's specifications. These requirements would benefit air quality and would also prevent wasteful or inefficient consumption of fuel during proposed project construction. The building contractor would also be required to comply with the 2022 California Green Building Standards Code (codified in Title 24 of the California Code of Regulations (CCR)) Section 4.408 Construction Waste Reduction, Disposal and Recycling, which requires the recycling or salvaging for reuse of a minimum of 65 percent of the nonhazardous construction and demolition waste. Compliance with the 2022 California Green Building Standards Code would reduce consumption of energy associated with transport, processing, and disposal of solid waste at landfills. Therefore, construction impacts would be ***less than significant***.

Operational Activities

The air quality modeling (CalEEMod) described in detail in the air quality section utilized standard fuel consumption estimates to determine that proposed project operation would require approximately 163,000 gallons of gasoline. CalEEMod also estimated electricity usage and determined the project would require approximately 2,027,077 kilowatt-hours (kWh) of electricity per year.

The project would be required to meet the current Title 24 Building Energy Efficiency and CALGreen standards. Furthermore, BDSP Policy 2.1 requires all development to exceed Title 24 energy standards by 15 percent. This would be achieved through passive solar orientation of the residences to minimize east/west facing glazing, utilization of exterior solar shading throughout south facing glazing, high efficiency all-electric heat pump equipment, and other architectural strategies. The community center pools would be heated by a combination of solar thermal collectors on the roof and utilize an air-to-water heat pump to heat pool make up water. Some of the surface parking would also be covered with carport photovoltaics. The project would meet the California Green Building Standards Code Tier 2 Voluntary Measures requirements for electric vehicle charging infrastructure. Therefore, the project would not result in wasteful, inefficient, or unnecessary consumption of energy and this impact would be ***less than significant*.**

Renewable Energy and Energy Efficiency Plans

The City of American Canyon adopted an Energy Efficiency Climate Action Plan (EECAP) in 2013.[9] The EECAP provides feasible strategies to cost-effectively reduce energy use and energy-related

[9] City of American Canyon. Energy Efficiency Climate Action Plan. December 2012.

GHG emissions both in municipal operations and in the community. Successful implementation of the plan would reduce utility bills, reduce water usage, increase home and building values and support local jobs. The proposed project would not conflict with or obstruct the City's EECAP. Therefore, the proposed project would not conflict with a local plan for energy efficiency.

The project is a consumer and end user of electricity and fuel. It is assumed that electricity consumed by the proposed project would be provided by MCE/PG&E in accordance with state renewable energy plans and that equipment and vehicles used by the proposed project would conform with state regulations and plans regarding fuel efficiency. As discussed above, the proposed project would be required to exceed Title 24 energy efficiency standards. Therefore, the proposed project would not conflict with a state plan for energy efficiency and this impact would be ***less than significant.***

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

VII. Geology and Soils

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)				X
ii) Strong seismic ground shaking?		X		
iii) Seismic-related ground failure, including liquefaction?		X		
iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located in a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		X		
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?		X		
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site, or unique geologic feature?		X		

Background

American Canyon is located within the California Coast Range geomorphic province, which is characterized as a geologically complex and seismically active region consisting of northwest-trending faults, mountain ranges, and valleys. The oldest bedrock units are the Jurassic-Crustaceous-age Franciscan Complex and Great Valley sequence, which are overlain by younger rocks that include the Sonoma and Clear Lake Volcanics and various sedimentary formations. Extensive folding and thrust faulting between 11 and 130 million years ago created complex geologic conditions that underlie the highly varied topography present today.

The project site is located within the southern portion of the Napa Valley, which consists of a large northwest-trending alluvial plain flanked by the Mayacama Mountains to the west and Howell Mountain to the east. The site is situated on mostly level terrain and is underlain by Pleistocene to Holocene age alluvial fan deposits consisting of gravel, sand, silt, and clay.

American Canyon is within the seismically active San Francisco Bay Area and will therefore experience the effects of future earthquakes. Numerous earthquakes have occurred in the region within historic times; at least 14 earthquakes with a Richter Magnitude of 5.0 or larger have occurred within 62 miles of the project site between 1900 and 2016. The active Rodgers Creek Fault is located approximately 10.5 miles to the east and the nearest active fault, the West Napa Fault, is located approximately 0.7 miles southwest (MPEG, 2017).

Geologic data and information pertaining to the project site was obtained for this analysis from two geotechnical investigations. The first was completed in August 2017 by Friar Associates Incorporated (Friar) for a proposed development consisting of approximately 13 multi-family residential buildings with ancillary facilities. The second was a preliminary geotechnical investigation completed in August 2021 by Miller Pacific Engineering Group (MPEG) for a project consisting of approximately 400 residential units, similar to the project proposed in this initial study. Both geotechnical studies included subsurface investigations.

Discussion

a.i) **Summary of BDSP Analysis**

The active West Napa Fault is located within the Specific Plan Area with its Alquist-Priolo Earthquake Fault Hazard Zone overlapping with the areas around Oat Hill on the west side of State Route 29. Future development activities that occur as part of the Specific Plan within an Alquist-Priolo Earthquake Fault Hazard Zone would require the preparation of a fault investigation to determine the precise location of the trace of the West Napa Fault and establish appropriate setbacks for new structures. This requirement is reflected in Mitigation Measure GEO-1a.

Project-Specific Analysis

The project site is located outside the Alquist-Priolo Fault Hazard Zone for the West Napa Fault and the potential for onsite surface fault rupture is very low. Mitigation Measure GEO-1a, as outlined in the BDSP EIR, would not be applicable. The proposed project would not introduce new impacts or create more severe impacts associated with surface fault rupture than those previously analyzed in the BDSP EIR. No additional analysis or mitigation is required, and this impact is less than significant.

a.ii) **Summary of BDSP Analysis**

The BDSP FEIR identified the probability of one or more earthquakes of magnitude 6.7 (Richter scale) or higher occurring in the project area has been evaluated by the U.S. Geological Survey (USGS). Based on the results of the USGS evaluation, there is a 63-percent likelihood that such an earthquake event will occur in the Bay Area between 2007 and 2036. The faults with the greater probability of movement with a magnitude of 6.7 or higher earthquake are the Hayward Fault at 27 percent, the San Andreas Fault at 21 percent, and the Calaveras Fault at 11 percent. In addition, the West Napa fault is located within the Specific Plan area but does not cross the project site. During the 2014 South Napa Earthquake, which occurred on the West Napa fault, USGS instrument readings at monitoring sites in Napa and Vallejo reported peak ground acceleration values ranging from 19.8 to 40.7 percent of gravity, which corresponds to “strong” and “very strong” ground shaking.

BDSP Mitigation Measure GEO-1b requires that future development activities under the Specific Plan would be required to prepare a design-level geotechnical report, which would provide recommendations on the appropriate level of soil engineering and building design necessary to minimize ground-shaking hazards. The implementation of this mitigation measure would ensure that the proposed project is not exposed to strong ground shaking hazards and impacts associated with ground shaking would be less than significant.

Project Specific Analysis

According to the project site geotechnical studies, the Specific Plan Area could experience ground shaking from a major earthquake (i.e., magnitude 6.7) on one of the region’s fault systems sometime before 2043 (MPEG, 2017).

The potential for strong seismic shaking at the project site is high due to its proximity to local and regional faults including the West Napa fault and Green Valley fault. The adverse impact associated with strong seismic shaking is potential damage to structures and improvements (MPEG, 2021). The MPEG study also identified possible foundation design options and general

seismic design parameters for the structures. Consistent with BDSP EIR Mitigation Measure GEO-1b, the proposed project would be required to prepare a design-level geotechnical report, which would provide recommendations on the appropriate level of soil engineering and building design necessary to minimize ground-shaking hazards. The proposed project would not introduce new impacts or create more severe impacts associated with seismic ground shaking than those previously analyzed in the BDSP EIR. No additional analysis is required, and this impact is less than significant with the mitigation prescribed in the BDSP EIR.

a.iii) **Summary of BDSP Analysis**

The analysis in the BDSP EIR determined that the Specific Plan Area is underlain by sandstone bedrock, relatively strong and incompressible alluvial subsoils, and a topsoil layer of clayey soils. The alluvial and topsoil materials are fine-grained and are not susceptible to liquefaction, settlement, or collapse during an earthquake. The BDSP EIR concluded that impacts associated liquefaction is less than significant.

Project Specific Analysis

The geotechnical investigation conducted by Friar in August 2017 encountered stiff, silty sandy, gravelly clay in 5 exploratory borings. The near-surface clay was described as moist and firm, and it was observed to become stiffer with depth, containing sand, some rock fragments, and small gravel. Friar did not report soil conditions that would be indicative of liquefaction susceptibility. MPEG concluded in its 2021 geotechnical investigation that the interpreted subsurface conditions encountered in its borings and cone penetration tests (CPTs) were generally consistent with the mapped geologic conditions at the site, namely, alluvial deposits of varying composition. From the ground surface to the full depth explored (50 feet below ground surface), the CPTs encountered predominantly medium stiff to stiff clays and silts and medium dense silty and clayey sands (Miller Pacific, 2021). The subsurface soils encountered in all CPT's included layers of sandy soils of variable thickness and composition. MPEG analyzed the potential for liquefaction and identified several thin sand layers at various depths that could liquefy under a strong seismic event. MPEG concluded that if liquefaction does occur in these thin sand layers, post liquefaction settlements are estimated to be up to approximately 0.5 to 2 inches. While the BDSP EIR concluded that the proposed project would not be susceptible to ground failure, liquefaction, or liquefaction-related phenomena and the impacts would be less than significant, preliminary geotechnical investigation study on the project site has verified that liquefaction could occur in subsurface sand lenses. This constitutes a new potentially significant impact not previously identified as such in the BDSP EIR. However, the liquefaction potential described by MPEG can be remedied by standard, industry-accepted ground improvement techniques and foundation

design, which would be identified during the design-level geotechnical investigation required under BDSP EIR Mitigation Measure GEO 1b. Additional investigation and final design recommendations to address liquefaction required under BDSP EIR Mitigation Measure GEO-1b would reduce this impact to less than significant.

a.iv **Summary of BDSP Analysis**

The BDSP EIR concluded that, because the topography of the Specific Plan Area is generally low relief and because most, if not all, of the properties with the Specific Plan Area boundaries either currently support urban development or have been rough graded, the likelihood of landsliding is very low. Impacts associated with landsliding in the Specific Plan Area would be less than significant.

Project Specific Analysis

Similar to the Specific Plan Area topography, the project site is flat-lying with no or little relief and the potential for landsliding is nil. The proposed project would not introduce new impacts or create more severe impacts associated with landsliding than those previously analyzed in the BDSP EIR. No additional analysis is required, and the impact is less than significant.

b) Summary of BDSP Analysis

The BDSP EIR concluded that grading, building construction, paving, and utility installation activities associated with the Specific Plan could result in erosion and sedimentation, which if not appropriately managed, would cause sediment accumulation and downstream hydromodification leading to ponding or flooding. BDSP EIR Mitigation Measure HYD-1a, in Section 3.7 (Hydrology and Water Quality), would require the implementation of stormwater quality control measures during construction activities to prevent pollutants from entering downstream waterways. The BDSP EIR analysis determined that implementation of Mitigation Measure HYD-1a would reduce this impact to less than significant.

Project Specific Analysis

Grading and construction activities associated with the proposed project would disturb surface soils and, depending on the season and site conditions, stormwater could mobilize loose sediments causing surface soil erosion and sediment accumulation in onsite and adjacent wetland areas and drainage features (see Section X, Hydrology and Water Quality in this IS for additional discussion). Erosion and sedimentation in the post-construction project phases would be substantially reduced if not eliminated because the project site would have drainage improvements and would be covered with buildings, vegetated landscape areas, and pavement.

Soil erosion and loss of topsoil would be reduced during the construction phase of the proposed project through the implementation of BDSP EIR Mitigation Measure HYD-1a, which would require the project to apply stormwater quality control measures to prevent sediments and pollutants from entering downstream wetlands and drainages. Mitigation Measure HYD-1a would require implementation of a Stormwater Pollution Prevention Plan (SWPPP) prior to issuance of a grading permit, which is consistent with California's Construction General Permit (CGP) requirements. Adherence to Mitigation Measure HYD-1a and the requirements of the CGP would reduce the potential for erosion and topsoil loss during construction. The proposed project would not introduce new impacts or create more severe impacts associated erosion and loss of topsoil than those previously analyzed in the BDSP EIR. No additional analysis is required, and this impact would be less than significant with the mitigation prescribed in the BDSP EIR.

c) Summary of BDSP Analysis

The BDSP EIR concluded that soils that are composed of well-compacted alluvium would generally be considered suitable to support urban development. The project site is underlain by silty clay soils, which were determined through geotechnical testing to be suitable to support urban development provided that standard grading and soil engineering practices are implemented. As such, the proposed project would not be susceptible to or cause landslides, lateral spreading, subsidence, collapse, ground failure, liquefaction, or liquefaction related phenomena. These impacts were determined to be less than significant, and no mitigation would be required.

Project Specific Analysis

The geotechnical investigation and soils analysis conducted at the project site (Friar, 2017; MPEG, 2021) encountered subsurface soil materials that were consistent with those identified elsewhere in the Specific Plan Area. In general, the project site is underlain by stiff to very stiff sandy silty clay. MPEG evaluated the potential for three ground failure types in its 2021 investigation report, which are discussed below.

Significant settlement can occur when new loads are placed over soft, compressible clays or loose granular soils (MPEG, 2021). MPEG concluded that the project site is predominantly underlain by medium stiff silt and clay with interbedded sand layers. Based on its analysis, MPEG determined that the underlying clay appears to be over-consolidated and would settle less than normally consolidated soils. The amount of predicted settlement would depend on the consolidation properties of the clay and the proposed building loads, and thus MPEG estimates the risk of damage due to consolidation settlement to be moderate.

Seismic ground shaking can induce settlement in unsaturated, loose, granular soils in a phenomenon referred to as seismic densification. Settlement occurs as the loose soil particles rearrange into a denser configuration when subjected to ground motion. Varying degrees of settlement can occur throughout a deposit, resulting in differential settlement of structures founded on such deposits (MPEG, 2021). MPEG concluded that the soils above the groundwater level are silts and clays and thus the risk of seismic densification impacting the new structures is generally low. This is considered a less-than-significant impact.

The findings that the project site could be susceptible to moderate settlement and liquefaction (see Topic a-iii, above) are potentially significant impacts. However, soil conditions that could lead to settlement and liquefaction can be remedied by standard, industry-accepted ground improvement techniques and foundation design, which are summarized in MPEG 2021 and would be further developed during the design-level geotechnical investigation required under Mitigation Measure GEO-1b. Additional investigation and final design recommendations to address settlement and liquefaction required under Mitigation Measure GEO-1b would reduce this impact to less than significant.

d) Summary of BDSP Analysis

The Specific Plan Area boundaries contain native soils consisting of clays, loams, and clay loam mixtures, including the Clear Lake clay. These soils can have the tendency to shrink when desiccated and swell when wet, and are referred to as expansive soils. The volume changes caused by expansive soils can damage building foundations and utilities if not properly addressed through soil engineering and foundation design. The BDSP identified Mitigation Measure GEO-1b, which requires the preparation of a design-level geotechnical study that complies with the applicable requirements of the latest adopted edition of the California Building Standards Code. This study would identify grading and soil engineering practices to ensure that expansive soil conditions are adequately abated. As such, after implementation of mitigation, impacts would be reduced to less than significant.

Project Specific Analysis

The geotechnical investigation conducted by Friar in 2017 determined, based on laboratory testing of subsurface soil samples, that the underlying soils did not exhibit shrink-swell characteristics and were not considered expansive. MPEG in 2021 retrieved samples from four additional hand auger borings and laboratory analysis indicated that the near-surface soils have

medium to high plasticity[10] and moderate expansive potential. Consequently, based on the MPEG analysis, there is a moderate risk of expansive soil affecting the proposed improvements. BDSP EIR Mitigation Measure GEO-1b requires the preparation of a design-level geotechnical study that complies with the applicable requirements of the latest adopted edition of the California Building Standards Code. The proposed project would therefore be required to conduct a design-level geotechnical investigation as required under Mitigation Measure GEO-1b, which would include the soil testing for soil expansivity. Results of soil testing required under Mitigation Measure GEO-1b would supplement previous soil data gathered by the investigations by Friar (2017) and MPEG (2021). The proposed project would not introduce new impacts or create more severe impacts associated potentially expansive soils than those previously analyzed in the BDSP EIR. No additional analysis is required, and this impact is less than significant with the mitigation prescribed in the BDSP EIR.

e) Summary of BDSP Analysis

The BDSP EIR (Section 3.5, Geology, Soils and Seismicity) did not provide an analysis of soils suitability for septic systems because none were proposed as part of the BDSP.

Project Specific Analysis

The proposed project would be served by sanitary sewer service provided by the City of American Canyon. Septic systems or wastewater disposal systems would not be necessary, and no impacts would occur.

f) Summary of BDSP Analysis

Impacts to paleontological resources was addressed in the BDSP EIR under the cultural resources chapter (Section 3.4, Cultural Resources). As part of the BDSP EIR, a paleontological records search was commissioned through the University of California Berkeley Museum of Paleontology. The results of the search identified no vertebrate fossils within the Specific Plan Area boundaries. However, one fossil locality (D8020) was found within a 0.5-mile radius of the BDSP area. Fossil locality (D8020) was located east of Oat Hill and has been identified as a Paleocene invertebrate from the Purisima Formation. The BDSP EIR requires implementation of mitigation through Mitigation Measure CUL-3 to ensure that construction activity that could damage or destroy paleontological resources during construction ceases upon discovery of fossilized remains, thereby reducing this potential impact to a less than significant.

[10] Plasticity is the ability of a material to undergo permanent deformation under stress without cracking. Fine-grained soils become plastic as their moisture content is increased, leading to loss in shear strength and stability.

Project Specific Analysis

The Project site is a relatively flat parcel, which has been previously developed with industrial uses and is not considered nor does it contain a unique geological feature. The Project site is underlain by relatively young alluvial soils and is not mapped within the Purisima Formation; therefore, the potential for discovery of fossilized remains during the construction is low. Fossil remains have not been identified on the project site and the fossil locality (D8020), discussed above, is approximately 0.62 miles to the west. The anticipated level of development under the proposed project does not anticipate deep excavations or foundations, which would limit the depth of disturbance and further reduce the potential to encounter fossil remains, if present. Additionally, although it is unlikely that paleontological resources would be identified during construction, implementation of Mitigation Measure CUL-3, as required by the BDSP EIR, would identify any significant paleontological resources exposed during project construction. BDSP EIR Mitigation Measure CUL-3 would reduce the potential for disturbance of fossil remains. The proposed project would not introduce new impacts or create more severe impacts associated with the disturbance or destruction of paleontological resources than those previously analyzed in the BDSP EIR. No additional analysis is required, and this impact is less than significant with the mitigation prescribed in the BDSP EIR.

Mitigation Measures

BDSP EIR MM GEO-1b: Prior to issuance of building permits for development projects that occur pursuant to the Specific Plan, the City of American Canyon shall verify that the applicant has commissioned a design-level geotechnical report. The report shall be prepared by a licensed geologist or geotechnical engineer and determine whether the geologic conditions of the site in question are suitable for development. All recommendations for grading, soil engineering, and construction shall be incorporated into the project plans.

BDSP EIR MM CUL-3: If potential fossils are discovered during project implementation, all earthwork or other types of ground disturbance within 100 feet of the find shall stop immediately until a qualified professional paleontologist can assess the nature and importance of the find. The paleontologist shall report his/her findings to the City of American Canyon. Based on the scientific value or uniqueness of the find, the paleontologist shall either record the find and recommend that the City of American Canyon allow work to continue or recommend salvage and recovery of the fossil. The paleontologist shall, if required, propose modifications to the stop-work radius based on the nature of the find, site geology, and the activities occurring on the site. If treatment and salvage is required, recommendations will be consistent with Society of Vertebrate Paleontology guidelines and currently accepted scientific practice. If required, treatment for fossil

remains shall include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection, and, if required, shall also include preparation of a report for publication describing the finds.

Conclusion

As described above, the project would not have the potential to introduce new impacts of create more severe impacts that those described in the BDSP EIR.

VIII. Greenhouse Gas Emissions

Would the project:

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

Background

The GHG emissions analysis was performed using methodologies and assumptions recommended within the BAAQMD *CEQA Air Quality Guidelines* (May 2017).[11] Appendix A includes GHG emissions modeling results prepared for the project.

The BDSP EIR contains the relevant environmental and regulatory setting information related to GHG emissions for the project. On April 20, 2022 the BAAQMD Board of Directors adopted the proposed CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans.[12] The BAAQMD concluded that a new land use development project being built today needs to incorporate the design elements in Table GHG-1 to do its "fair share" of implementing the goal of carbon neutrality by 2045.

Discussion

a) **Summary of BDSP EIR Analysis**

The BDSP EIR concluded that development and land use activities contemplated by the BDSP would generate direct and indirect GHG emissions; however, these emissions would not result in a significant impact on the environment.

[11] The May 2017 BAAQMD CEQA Guidelines includes revisions made to the BAAQMD's 2010 Guidelines to address the California Supreme Court's 2015 opinion in Cal. Bldg. Indus. Ass'n vs. Bay Area Air Quality Mgmt. Dist., 62 Cal.4th 369. The May 2017 CEQA Guidelines update does not address outdated references, links, analytical methodologies or other technical information that may be in the Guidelines or Thresholds Justification Report. The BAAQMD is currently working to update any outdated information in the Guidelines.

[12] BAAQMD. Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans. April 2022.

Table GHG-1. BAAQMD CEQA Thresholds of Significance for Evaluating Climate Change Impacts

Thresholds for Land Use Projects (Must include A or B)
A. Projects must include, at a minimum, the following project design elements: 1. Buildings a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development). b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. 2. Transportation a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA: i. Residential projects: 15 percent below the existing VMT per capita ii. Office projects: 15 percent below the existing VMT per employee iii. Retail projects: no net increase in existing VMT b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.
B. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

Source: BAAQMD, 2022.

Construction

The BAAQMD does not provide a construction-related GHG significance threshold but recommends that construction-generated GHGs be quantified and disclosed. The BAAQMD also recommends that lead agencies (in this case, the City of American Canyon) determine the level of significance of construction GHG emissions in relation to meeting AB 32 GHG reduction goals. As discussed in the BDSP EIR, buildout of the BDSP EIR would emit GHGs from upstream emission sources and direct sources. However, the BAAQMD does not have a recommended assessment methodology or threshold for plan-level, construction-generated GHGs. Upstream emissions

were not estimated because they were not within the control of the project and to do so would have been speculative.

Operation

The BDSP EIR calculated operational GHG emissions with CalEEMod, Version 2016.3.2 using the trip generation estimates provided in the Traffic Impact Analysis and compared them to the BAAQMD's 4.6 metric tons of carbon dioxide equivalent (CO_2e) [13] per service population per year for project-level GHG emissions. The full buildout of the BDSP was expected in 2036. Because 2036 was not offered as an operational year in CalEEMod Version 2016.3.2, emissions were estimated for 2035. Operation after full buildout in 2035 was estimated to generate approximately 23,153 metric tons of CO_2e per year or 4.59 metric tons of CO_2e per service population per year. The operational emissions were less than the BAAQMD's applicable GHG emissions threshold at the time. Thus, the BDSP's GHG emissions impact was determined to be less than significant.

Project-Specific Analysis

Construction

Development of the project would generate GHG emissions during short-term construction activities, such as site preparation, operation of construction equipment, operation of on-site heavy-duty construction vehicles, hauling of materials to and from site, and construction-worker vehicle trips similar to the construction activities analyzed in the BDSP EIR. The CalEEMod (Version 2020.4.0) model was used to quantify construction-related pollutant emissions. Construction of the project was estimated to generate approximately 1,353 metric tons of CO_2e. BAAQMD has not adopted a GHG emissions significance threshold because GHG emissions from construction represent a very small portion of a project's lifetime GHG emissions.[14] Therefore, construction of the project would have a ***less-than-significant impact.***

Operation

Long-term operational GHG emissions that would result from the project would include generated vehicular traffic, operation of any landscaping equipment, off-site generation of electrical power over the life of the project, the energy required to convey water to and wastewater from site, and emissions associated with the hauling and disposal of solid waste. The project's operational GHG emissions were considered and analyzed in the BDSP EIR. The BAAQMD CEQA Air Quality Guidelines recommend quantification of GHG emissions. The CalEEMod (Version 2020.4.0) was

[13] Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

[14] BAAQMD. CEQA Thresholds and Guidelines Update. Frequently Asked Questions, 4. Will There be a Threshold for Construction-Related Emissions? https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines

used to quantify estimated operational GHG emissions that would be associated with the project, which are displayed in Table GHG-2. The estimated annual emissions assume the year 2027, the first full year the proposed project could conceivably be completely built-out and operational.

Table GHG-2. Estimated Annual Greenhouse Gas Emissions

Emission Source	GHG CO_2e Metric Tons Per Year
Project Operations	
Area	6
Energy	268
Mobile	1,448
Solid Waste	108
Water/Wastewater	74
Total Emissions	**1,904**

Note: Estimated GHG emissions are rounded to the nearest metric ton.
Source: CalEEMod Version 2020.4.0

The BAAQMD no longer recommends comparing a project's emissions to their previously adopted numerical thresholds. Instead, a proposed residential or commercial land use project needs to incorporate the design elements in Table GHG-1 to do its "fair share" of implementing the goal of carbon neutrality by 2045. If a project complies with A or B in Table GHG-1, GHG emissions impacts are less than significant.

The project would not include natural gas appliances or natural gas plumbing. As discussed in the Energy section of this document, the project would not result in wasteful, inefficient, or unnecessary energy usage. As noted in the Transportation section of this document, the project's VMT would be reduced by more than 15 percent compared to the regional average. The project also would achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2 (see Project Description). Therefore, the project would do its "fair share" of implementing the goal of carbon neutrality by 2045 and operation of the project would have a ***less-than-significant impact***.

b) **Summary of BDSP EIR Analysis**

The BDSP EIR concluded that development and land use activities contemplated by the BDSP would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of GHGs. The BDSP EIR states that the program and policy recommendations contained in the City of American Canyon Energy Efficiency Climate Action Plan (EECAP) were reviewed to determine if development of the project would conflict with any of the recommendations. The EECAP outlines a course of action to reduce community-wide GHG emissions generated within the City of American Canyon.

The American Canyon General Plan Circulation Element proposes mobility improvements that would promote the development of mobility enhancements are intended to improve both motorized and non- motorized circulation within the Broadway District. Consistent with these objectives, the BDSP's design encourages development that results in reduced GHG emissions.

The BDSP was found to be consistent with all applicable plans, policies, and regulations adopted for the purpose of reducing emissions of greenhouse gases, including the City's EECAP. As a result, it was determined that impacts would be ***less than significant***.

Project-Specific Analysis

The City adopted an EECAP in 2013, which the project would not conflict with. However, the EECAP does not require the reduction of GHG emissions consistent with the criteria established in CEQA Guidelines Section 15183.5(b). The applicable state plan, policy or regulation adopted for the purpose of reducing the GHG emissions is SB 32, which extends AB 32 and requires that GHG emissions are reduced 40% below the 1990 levels by 2030 (as written into Executive Order B-30-15), and other State regulations with post-2020 goals such as Executive Order S-3-05. The project would result in a significant impact if it would be in conflict with the goals of these State regulations. The assumption is that SB 32 and associated regulations will be successful in reducing GHG emissions and reducing the cumulative GHG emissions Statewide to meet 2030 goals and post-2030 goals. The State has taken these measures, because no project individually could have a major impact (either positively or negatively) on the global concentration of GHG emissions. The project has been reviewed relative to SB 32 and the State's *Climate Change Scoping Plan* and it has been determined that the project would not conflict with the goals of SB 32 and other State regulations. Furthermore, as stated in Impact a), the project would do its "fair share" of implementing the goal of carbon neutrality by 2045. Therefore, the project would result in a ***less-than-significant*** impact.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

IX. Hazards and Hazardous Materials

Would the project:

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

Background

Information pertaining to hazards and hazardous materials issues was derived from several studies that characterize the site's soil and groundwater contamination conditions These studies include an Environmental Site Assessment completed in July 2021 (AllWest, 2021), and a Phase II Subsurface Investigation report completed in 2022 (AllWest, 2022), and a Human Health Risk Assessment completed in July 2022 (Intrinsik, 2022).

The project site is undeveloped land ringed by railroad tracks dating back to about 1902. From 1947 to 1958, the site consisted of predominantly vacant land with several structures located on its southernmost portion. From 1968 until present, parts of the project site were occupied by several abandoned structures, which were no longer present by the early 1980s. No structures currently exist on the site (AllWest, 2021). Historical activities on the site were associated with railroad operations. The project site was a rail junction connecting the railroads of the California Coast Ranges north of San Francisco Bay to the national rail network following completion of the Santa Rosa and Carquinez Railroad in 1882. Rails at the site connected to the Lombard Railyard that served as the headquarters for the California Northern Railroad. Routine maintenance and small repairs were also performed at the Lombard Railyard (Ecological Risk, Inc, 2022).

An initial soil investigation was conducted in November 2016 to determine whether the past industrial and railroad-related uses had adversely impacted the underlying soil. Arsenic, lead, cobalt, and/or mercury were detected in one or more soil samples at concentrations above the conservative residential screening values, as indicated in the Department of Toxic Substances Control (DTSC) Human and Ecological Risk Office (HERO) Human Health Risk Assessment (HHRA). Based on these initial findings, the project site was enrolled in the Voluntary Cleanup Program (case Number 60002585, site code 202168), with the DTSC as the lead agency. The DTSC and the project applicant signed a California Land Reuse and Revitalization Agreement (CLRRA) in November 2021 (AllWest, 2022).

AllWest Environmental (AllWest) completed a Phase II soil and groundwater investigation in November 2021. Sixty-two soil samples from 21 soil borings, 15 soils vapor samples, and one groundwater sample were collected and select samples were analyzed for petroleum; volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs) including polynuclear aromatics (PNAs) and polyaromatic hydrocarbons (PAHs); organochlorine pesticides (OCPs); polychlorinated biphenyls (PCBs); organochlorine acidic herbicides (OCHs); asbestos; lead, arsenic, barium and chromium; and hexavalent chromium (Cr VI). Results of the soil, vapor and groundwater sampling showed that the project site soils have slightly elevated concentrations of the metals arsenic, barium, cobalt, mercury and lead in soil; and the VOCs benzene, 1,3-butadiene, tetrachloroethene and vinyl chloride in soil vapor (AllWest, 2022).

Following the Phase II investigation, a Human Health Risk Assessment was conducted to evaluate the potential cancer risks and noncancer health hazards[15] to future multi-family dwelling residents and commercial use (outdoor employees and intrusive workers) from chemicals detected in soil and soil gas at the project site. Estimated future cancer risks for the multi-family dwelling resident range from $3x10^{-8}$ to $4x10^{-7}$, which is below the low end of the United States Environmental Protection Agency (USEPA) risk management range of $1x10^{-6}$. Future multi-family dwelling resident total noncancer hazards equal 0.8, which is below the California EPA (Cal/EPA) and USEPA target level of 1.0. Estimated future outdoor employee and intrusive worker cancer risk are $8x10^{-9}$ and $3x10^{-8}$, respectively, well below the low end of the risk management range ($1x10^{-6}$). Noncancer hazards for these receptors are also below the target level, ranging from 0.05 (outdoor employee) to 0.3 (intrusive worker) (Ecological Risk, Inc, 2022).

As part of the CLRRA, DTSC staff has requested a Response Plan that describes proposed actions to mitigate the hazardous chemicals present in the soil on the project site (AllWest, 2023). The Response Plan identifies activities that will be implemented to control risks to human health and safety or the environment at the site, describes any land use control that is part of the response action, and outlines a standard public engagement and participation process. The Response Plan would contain, as necessary, remediation goals, proposals for removal, management and disposal of soil containing elevated concentrations of COCs (primarily metals) during site development, and implementation of vapor intrusion mitigation measures including installation of vapor barriers and sub-slab venting systems (as warranted) under proposed building foundations (AllWest, 2022). Information regarding the preparation of the Response Plan was presented in a Fact Sheet prepared by AllWest in March 2023 and released to the owners and occupants of the properties located near the project site. The Fact Sheet is intended to provide information about environmental investigations and to explain steps in the investigative process.

Discussion

a) **Summary of BDSP EIR Analysis**

The BDSP EIR identified potential hazardous materials transported, used, or disposed of during project construction to include common substances such as gasoline, diesel, oil, grease, mechanical fluids, paints, and cleaning solvents. Post-construction residential uses would not be expected to handle large quantities of hazardous materials. The non-residential uses would be expected to manage commonly used substances such as cleaning solvents, diesel, gasoline, grease/degreasers, mechanical fluids and oil as part of daily operations. The routine use of these materials would not be considered a potential risk to human health or the environment. The use of acutely hazardous materials that have the potential to expose substantial numbers of people

[15] Non cancer hazards refer to adverse health effects other than cancer. Chronic noncancer effects can include mutagenicity, developmental toxicity, neurotoxicity, and reproductive toxicity.

or the environment to harm are not anticipated by any of the project uses. The BDSP EIR determined this impact to be less than significant.

Project Specific Analysis

Potential hazardous materials used and transported to and from the project site during construction would be similar to those identified in the BDSP EIR. During the limited period of construction (15 to 30 months), gasoline, diesel, oil, grease, mechanical fluids, paints, and cleaning solvents would be transported onto the project site and spent quantities would be removed after use. Soils impacted with residual concentrations of metals, namely arsenic and lead, could be removed from the project site during project development. These materials would be managed in accordance with requirements of the Response Plan (described in the "Background" above), which has been requested by the DTSC to address potential risks to human health and safety or the environment at the project site. Adherence to the DTSC-approved controls, as outlined in the Response Plan, would substantially reduce the potential for impacted soils, including fugitive dust, to be released to the environment during development at the project site. Post-construction, residential and commercial properties would generate non-hazardous and hazardous chemicals ranging from household cleaners in consumer container quantities to cleaning solvents, diesel, gasoline, grease/degreasers, mechanical fluids and oil in commercial quantities. These hazardous and non-hazardous materials, whether from residential or non-residential uses, would be used, disposed of, and transported offsite in a manner consistent with local and state regulations. Spent hazardous materials would not be disposed of onsite. The proposed project would not introduce any hazardous materials that were not analyzed previously nor would the proposed project result in a new or substantially greater significant impacts with regard to hazards and hazardous materials. The proposed project would not introduce environmental impacts or create more severe impacts than those analyzed in the BDSP EIR. No additional analysis or mitigation is required, and this impact would be ***less than significant***.

b) Summary of BDSP EIR Analysis

The BDSP EIR identified potential hazardous materials transported, used, or disposed of during project construction to include common substances such as gasoline, diesel, oil, grease, mechanical fluids, paints, and cleaning solvents. The residential uses would be expected to only handle consumer quantities of household chemicals. The non-residential uses would be expected to manage substances such as cleaning solvents, diesel, gasoline, grease/degreasers, mechanical fluids, and oil as part of daily operations, which would not be considered a potential risk to human health or the environment. Land uses that handle large quantities of hazardous materials are generally agricultural, industrial, or resource extraction but these types of land uses are not contemplated by the Specific Plan. Additionally, the BDSP EIR identified no existing structures

within the project site, thus precluding the possibility of presence of asbestos, lead, PCBs, or mercury being present within the Specific Plan Area. The Specific Plan requires new development to underground utilities, which would significantly reduce (to negligible) the levels of electric and magnetic field (EMF) radiation emitted into the environment. The proposed project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accidents involving the inadvertent release of hazardous materials into the environment. The BDSP EIR determined these impacts to be less than significant.

Project Specific Analysis

Consistent with the project specific analysis presented for Item (a), above, the proposed residential/commercial development would use hazardous and non-hazardous materials (i.e., household cleaners, cleaning solvents, diesel, gasoline, grease/degreasers, mechanical fluids and oil). These materials would be used and stored in consumer and commercial containers as per manufacturer recommendations. No bulk chemical or fuels that could have the potential for upset and release to the environment would be stored on site in stand-alone containers or above- or below-ground tanks. The transportation and disposal of hazardous and non-hazardous materials would be conducted in compliance with state and local regulations and spent materials would be disposed of or recycled at facilities permitted to manage hazardous waste. The proposed project would not introduce any hazardous materials that were not previously analyzed nor would the proposed project result in a new or substantially greater significant impacts with regard to hazards and hazardous materials. The proposed project would not release of hazardous materials into the environment or create more severe impacts than those analyzed in the BDSP EIR. No additional analysis or mitigation is required, and this impact would be ***less than significant***.

c) Summary of BDSP EIR Analysis

Napa Junction Elementary School is located within the Specific Plan Area boundaries and is within the "Business Park" Subarea. Additionally, Canyon Oaks Elementary School, Donaldson Way Elementary School, and American Canyon High School are within 0.35-mile, 0.40 mile, and 0.65 mile, of the Specific Plan Area boundaries, respectively. Land uses that emit hazardous emissions or handle hazardous materials are generally agricultural, industrial, or resource extraction in nature. These types of land uses are not contemplated by the Specific Plan. Thus, buildout of the Specific Plan would not emit hazardous emissions or handle hazardous materials within 0.25 mile of a school. The BDSP EIR determined that this impact would be less than significant.

Project Specific Analysis

The proposed project would be a residential/commercial development that would not store use or dispose of large quantities of bulk hazardous materials. As stated in items (a) and (b), above, household cleaners, cleaning solvents, diesel, gasoline, grease/degreasers, mechanical fluids and oil would be used during the temporary construction period and by residential and commercial occupants of the project site. These materials would not be stored in large volume bulk containers, nor would they be used in large scale industrial applications. There is a very low potential that these materials would be inadvertently released to the environment to expose offsite receptors. The schools closest to the project site are the Napa Valley Montessori School, located 0.4 miles to the west and the Napa Junction Magnet Elementary School, located 1 mile to the west-southwest. Based on land uses of the proposed project, its limited use of hazardous materials, and the distance from local schools, the proposed project would not emit hazardous emissions or handle hazardous or acutely hazardous materials within one-quarter mile of an existing or proposed school. The proposed project would not introduce environmental impacts or create more severe impacts than those analyzed in the BDSP EIR. No additional analysis or mitigation is required and this impact is ***less than significant***.

d) Summary of BDSP EIR Analysis

The BDSP EIR identified eight sites within the Specific Plan boundaries that are listed on hazardous materials databases compiled pursuant to Government Code Section 65962.5. The eight listed sites are associated with leaking USTs. Seven of the sites are listed as "Closed," signifying that they have been satisfactorily remediated. The one remaining site, which is listed as an open case, is a Caltrans property containing four gasoline underground storage tanks (USTs), which were removed from the SR-29 right-of-way in 2015. Groundwater and soil testing indicated contamination by gasoline, diesel, and volatile organics exceeding state threshold levels for residential and commercial development. Caltrans is responsible for remediating groundwater and soil to the satisfaction of the RWQCB. This process is occurring independently of the BDSP and is not contingent on the adoption or implementation of the plan; the BDSP would not inhibit remediation of this site. The BDSP EIR determined this impact to be less than significant.

Project Specific Analysis

As discussed in the "Background" section above, the project site is associated with Voluntary Cleanup case #60002585 (site code 202168) on the EnviroStor database, with the DTSC as the lead agency. The DTSC and the applicant signed a California Land Reuse and Revitalization Agreement (CLRRA) in November 2021. The Voluntary Cleanup case addresses residual soil contamination that resulted from historical site uses that included railroad operations. Site investigation

determined that the project site is impacted by slightly elevated concentrations of arsenic, barium, cobalt, mercury and lead in soil and the VOCs benzene, 1,3-butadiene, tetrachloroethene and vinyl chloride in soil vapor (AllWest, 2022). A Human Health Risk Assessment determined that cancer risks and noncancer health risks were below federal and state thresholds for future multi-family dwelling residents and commercial use outdoor employees and intrusive workers. Only arsenic and lead remain above background levels however, the majority of the soil included in the health risk assessment would either be removed during construction or remain on the site covered by buildings, pavement, other associated infrastructure, thereby making it generally inaccessible to future site users (Intrinsik, 2022). As discussed in Topic (a), above, soils impacted with arsenic and lead could be disturbed and removed during project site development. These soils would be managed in accordance with requirements of the DTSC-approved Response Plan, which is developed to address potential risks to human health and safety or the environment at the site. Adherence to the controls outlined in the Response Plan would substantially reduce the potential for impacted soils to be released to the environment. Based on the site investigation and human health risk assessment, and considering the measures to reduce exposure to impacted soils as outlined in the DTSC-approved Response Plan, the residual soil contamination in the subsurface soils would not create a significant hazard to the public or the environment. The proposed project would not introduce new environmental impacts or create more severe impacts than those analyzed in the BDSP EIR. No additional analysis or mitigation is required, and this impact is ***less than significant***.

e) Summary of BDSP EIR Analysis

The northern portion of the Specific Plan Area is within 2 miles of Napa County Airport. The Airport Land Use Compatibility Plan (ALUCP) indicates that hazards to aviation consist of sources of smoke, glare, distracting lights, or electrical interference typically caused by land uses including agricultural, industrial, refineries, and resource extraction. These types of land uses are not contemplated by the Specific Plan; rather, the BDSP proposes development of 1,200 residential units and about 840,000 square feet of non-residential commercial uses. Thus, buildout of the Specific Plan would not result in aviation safety hazards for persons residing or working in the project vicinity. The BDSP EIR concluded that impact would be less than significant.

Project Specific Analysis

The project site is 12,000 feet (2.27 miles south southeast) of Napa County Airport. The ALUCP designates five “Airport Compatibility Zones” that correspond to certain geographic areas near the Napa County Airport. A portion of the project site is located within Airport Compatibility Zone D where residential uses are considered incompatible. Nonresidential uses are considered acceptable if they do not attract more than 100 persons per acre within structures or 150 persons

total on the site per acre. Project-related uses within Zone D would be limited to residential parking and project amenities, including the commercial daycare center, resident community center, and wetland areas, all of which are non-prohibited used in Zone D areas. The remaining portion of the property is located within Airport Compatibility Zone E, which does not contain any restriction on residential use. All the residential units would be located within Airport Compatibility Zone E. Compatibility Zone E is defined as:

> *Other Airport Environs: An airport's influence area often extends beyond the typically defined compatibility zones during busy traffic hours and when larger aircraft are in the pattern. Aircraft overflights can occur anywhere in these areas when aircraft are departing or approaching an airport. Overflight annoyance is the primary impact element in these areas. The risk of accident is very low.*

While any permitted use is allowed in Zone E, noise-sensitive outdoor land uses (i.e., amphitheaters, landfills and ponds) are prohibited (Shutt Moen & Associates, 1999). The proposed project consists of residential and commercial development and would be an acceptable land use in accordance with the ALUCP. Additionally, residential/commercial development would not present hazards to aviation (i.e., smoke, glare, distracting lights, or electrical interference aviation hazards) and thus would not result in safety hazards for people residing or working in the vicinity of the proposed project. The proposed project would not introduce environmental impacts or create more severe impacts than those analyzed in the BDSP EIR. No additional analysis or mitigation is required, and this impact is ***less than significant***.

f) Summary of BDSP EIR Analysis

The BDSP EIR determined that the Specific Plan would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. The BDSP includes several mobility enhancements and new connections that increase mobility within the subareas, which, in turn, enhance emergency response and evacuation. The BDSP EIR determined that other improvements, such as trail connections, would have no impact on emergency access or evacuation and concluded that development consistent with the Specific Plan would not impair emergency response or evacuation in the Specific Plan Area, and this impact would be less than significant.

Project Specific Analysis

The proposed project would improve access to and within the Business Park Subarea by the proposed grid of interior streets, improvements to Napa Junction Road and Reliant Way, and the easement agreement with UP to allow access through the project site. Access improvements to

the project site would not interfere with an emergency response plan or an emergency evacuation plan. The proposed development would comply with the California Fire Code requirements for emergency access. The proposed project would not result in potential impacts that would be more severe than those previously considered in the BDSP EIR and would not introduce new environmental impacts or create more severe impacts than those analyzed in the BDSP EIR. No additional analysis or mitigation is required, and this impact is less than significant.

g) **Summary of BDSP EIR Analysis**

The BDSP boundaries are surrounded by urban and infrastructure uses on three sides, and undeveloped land on the fourth. These characteristics preclude the possibility of the BDSP boundaries being exposed to wildland fires. The BDSP EIR determined that there is no impact.

Project Specific Analysis

The project site is not located in a Fire Hazard Severity Zone (FHSZ) within the Local Responsibility Area (LRA), as mapped by California Department of Forestry and Fire Protection (CAL FIRE, 2022). The Specific Plan Area, including the project site is urbanized and is not adjacent to wildland areas so the risk of exposure to wildland fires is very low. This impact is a less than significant impact.

Conclusion

As described above, the proposed project would be consistent with the BDSP EIR and the project would not introduce new impacts or create more severe impacts than those previously described in the BDSP EIR. No mitigation measures are necessary.

X. Hydrology and Water Quality

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project would impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: i) result in substantial erosion or siltation on- or off-site; ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site; iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or iv) impede or redirect flood flows?		X		
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Background

The project site is located in the 426-square-mile Napa River Watershed and receives 24.6 inches of rain annually with the majority occurring from November to March. The nearest major water feature is North Slough, located approximately 400 feet to the northwest. North Slough is a blue line drainage feature that originates in the agricultural areas northeast of American Canyon and enters a drainage channel at Paoli Loop Road, which conveys it under SR-29 and into the Green Island Road Business Park. In the business park, the waterway reemerges in a natural channel and ultimately empties into the Napa River. The Napa River is listed by the San Francisco Bay Area Regional Water Quality Control Board as impaired on the Clean Water Act 303(d) list for pathogens and sediment/siltation. The project site is not within any 100-year or 500-year flood hazard area. Groundwater at the project site has been encountered at depths greater than 10 feet below the ground surface (Friar Associates, 2017).

The project site is mostly undeveloped and is entirely pervious, consisting of sparsely vegetated lands with some small wetland areas and a relic railroad alignment feature (railroad bed and berm) (BKF, 2022a). Soils at the project site consist of brown sandy clay with very slow infiltration rates (AllWest Environmental, 2021). The topography of the site is generally flat with some dips and mounds evident as a result of some previous grading activities (Friar Associates, 2017). A raised railroad berm runs along the west side of the property and depressions (former borrow pits from railroad berm construction) run through the interior, where the onsite wetland features are located. A small portion of the site, referred to as the panhandle, is bound between the Union Pacific Railroad property to the northeast and an apartment complex to the south.

There is no developed storm drainage system on the site. The main depressed portion of the site collects the majority of runoff from the site and directs flows to the northwest where it drains via surface flow through an existing culvert system to the existing drainage ditch on the west side of the berm. Once it crosses the berm, this runoff also flows to the existing culvert under Highway 29 to the northwest of the site (BKF, 2022a). The panhandle portion of the site drains to a ditch that flows to the southwest into the existing storm system for the neighboring apartment complex. This neighboring storm system discharges to the south of the existing site and the surface flows through an existing drainage channel to an existing culvert under Highway 29 to the northwest of the site. The culvert under Highway 29 ultimately discharges into North Slough.

Discussion

a) Summary of BDSP Analysis

The BDSP EIR determined that construction and operational activities associated with the BDSP have the potential to degrade water quality in downstream water bodies, such as North Slough and the Napa River. According to the BDSP EIR, buildout of the Specific Plan has the potential to

degrade water quality in the short-term as a result of land disturbance from construction activities and the presence of contaminants associated with construction machinery, and in the long-term due to changes to land use and drainage patterns that may increase the delivery of sediments, nutrients, organic compounds, trash/debris, and other contaminants to waterways, such as North Slough, that are tributary to the Napa River. The BDSP EIR concluded that impacts would be less than significant with the implementation of Mitigation Measure HYD-1a and HYD-1b, which require implementation of a construction Stormwater Pollution Prevention Plan (SWPPP) and a long-term Stormwater Control Plan, respectively.

Project-Specific Analysis

The BDSP EIR anticipated development of the project area to include high-density residential development, along with other development such as retail. Under the proposed project a residential housing development would be constructed on 13.44 acres of the 15.05-acre project site. The remaining 1.61 acres of the property would be retained as open space to preserve existing seasonal wetlands.

Construction of the project would include earthwork activities (i.e., grading, excavation, and other soil-disturbing activities) and placement of engineered fill soils. Stormwater runoff from construction activities is a common source of pollutants (mainly sediment) to receiving waters. Earthwork activities can loosen soils making them more susceptible to erosion from stormwater runoff and causing them to migrate to storm drains and downstream or downgradient water bodies, such as North Slough. Because the Project exceeds one acre of disturbance by construction activities, it would be required to comply with NPDES regulations and obtain coverage under the State Construction General Permit (CGP), including implementation of stormwater construction BMPs[16] as set forth in a detailed SWPPP. Compliance with the CGP is required by law and has proven effective in protecting water quality at construction sites. Additionally, implementation of a SWPPP would be required under BDSP EIR Mitigation Measure HYD-1a, as detailed above.

The proposed project design incorporates Low Impact Design (LID) features (see Section 2, Project Description) consistent with Phase II Small MS4 Permit post-construction stormwater control requirements and a Stormwater Control Plan has been prepared for the project consistent with BDSP EIR Mitigation Measure HYD-1b (BKF, 2022a) that includes stormwater pollutant source control measures. Such LID features proposed as part of the project include limiting impermeable paving and maximizing permeable paving and creating bioretention areas for stormwater

[16] Typical BMPs implemented at construction sites include placement of sediment barriers around storm drains, the use of fiber rolls or gravel barriers to detain small amounts of sediment from disturbed areas, and temporary or permanent stockpile covers to prevent rainfall from contacting the stockpiled material.

treatment and retention onsite. Additionally, all stormwater from the developed areas of the site would be pre-treated via bioretention cells and flow-through planters before being discharged to existing receiving wetlands and waters to ensure stormwater discharges from the site meet or exceed RWQCB design guidelines that have been formulated to prevent adverse impacts to receiving waters, consistent with water quality standards and objectives identified in the San Francisco Bay Basin Water Quality Control Plan (Basin Plan) (RWQCB, 2017). As described in the Project Description (Section 2), stormwater from the majority of the site (12.59 acres) would be directed into a large bioretention cell at the north end of the development, where it would be pre-treated before being discharged to the existing wetlands to the north. Stormwater from a 0.79-acre area of the southern panhandle area of the site would be directed into flow-through planters before being discharged to the existing storm drain system along Napa Junction Road. Implementation of the post-construction stormwater requirements under BDSP EIR Mitigation Measure HYD-1b and the project Stormwater Control Plan, including application of LID design features and pollutant source controls, consistent with Phase II Small MS4 Permit requirements, would prevent the discharge of pollutants to surface waters or groundwater and minimize or eliminate the potential for degradation of surface water or groundwater quality.

Water quality impacts related to violation of water quality standards or degradation of water quality during construction and following the completion of construction (operation) would be less than significant. Implementation of the proposed project and associated issuance of a Design Permit from the City would not result in more intense or extensive construction or operational activity that has the potential to degrade water quality in downstream water bodies. Accordingly, it does not result in any change to the analysis or conclusions in the BDSP EIR. Therefore, the proposed project would not introduce new impacts or create more severe impacts associated with water quality than those previously analyzed in the BDSP EIR. No additional analysis is required.

b) Summary of BDSP Analysis

The BDSP EIR determined that impacts on groundwater would be less than significant. According to the BDSP EIR, buildout of the BDSP would not contribute to groundwater overdraft because the BDSP area would be served by potable water service provided by the City of American Canyon, and no groundwater wells would be drilled on-site. Additionally, the BDSP EIR determined that buildout of the BDSP would not impair groundwater recharge because soils that underlie the BDSP area are mostly clay, which have a very low infiltration rate—particularly when thoroughly wetted—and thus offer marginal groundwater recharge qualities. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

Consistent with the discussion and analysis in the BDSP EIR, the proposed project would be served by the existing potable water service provided by the City of American Canyon. Project construction of utilities and foundations would involve subsurface excavation. If shallow groundwater were encountered during excavation activities, it would have to be pumped out of the construction trench to create a dry work area. If excavations intersect shallow groundwater and dewatering activities are required, dewatering would be temporary, highly localized, and would typically involve the extraction of low volumes of shallow groundwater from excavation trenches. Because of its short-term nature, construction dewatering would not affect local groundwater levels or volumes. Clay soils with very slow infiltration rates underlay the site (AllWest Environmental, 2021) and do not contribute to significant groundwater recharge. Therefore, the proposed project would not introduce new impacts or create more severe impacts associated with groundwater supplies or groundwater recharge than those previously analyzed in the BDSP EIR. No additional analysis is required.

c) Summary of BDSP Analysis

The BDSP EIR determined that development consistent with the BDSP would not contribute runoff to downstream storm drainage facilities that would result in the potential for flooding, erosion or siltation, or create runoff water which would exceed the capacity of existing or planned stormwater drainage systems. According to the BDSP EIR, buildout of the BDSP would increase the impervious surface of the BDSP area, but compliance with the City's post-development stormwater requirements would ensure that that new development captures, detains, and regulates the release of the additional runoff generated by new impervious surfaces in a manner that avoids inundating downstream stormwater facilities such that flooding occurs.

Pursuant to the requirements of the applicable stormwater permits, the City of American Canyon requires new development to address post-development stormwater quality using LID design measures and pollutant source control measures. LID serves two purposes: treating runoff (i.e. removing pollutants) and reducing the release of runoff during peak events. Common examples of LID design measures include bioretention basins, landscaping, use of pervious surfaces, and designing impervious areas to drain into landscaped areas for infiltration into underlying soils.

When applications for new development are filed with the City of American Canyon, City staff review project plans for compliance with the City's post-development stormwater requirements to ensure that new development captures, detains, treats, and regulates the release of the additional runoff generated by new impervious surfaces in a manner that avoids inundating downstream stormwater facilities and that is consistent with Phase II Small MS4 Permit post-

construction stormwater control requirements. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

Implementation of the proposed project would not involve the direct alteration of a stream or river and would not substantially alter the existing drainage pattern of the project site; stormwater runoff during construction and following completion of the Project would continue to either be retained onsite in the wetland areas and/or flow downgradient to the drainage ditches and North Slough. The proposed project has been designed consistent with the City's post-development stormwater requirements and with Phase II Small MS4 Permit post-construction stormwater control requirements. Additionally, as previously discussed under a), above, construction activities would adhere to the requirements of the CGP and BDSP EIR Mitigation Measure HYD-1a, which require implementation of a SWPPP to ensure pollutants are not mobilized in stormwater and transported offsite and that erosion and sediment transport offsite is minimized and/or avoided. Also, as discussed under a), above, the proposed project design incorporates bioretention areas and LID design features, as well as a Stormwater Control Plan with stormwater pollutants source control measures and LID stormwater treatment and management strategies, consistent with the requirements of BDSP EIR Mitigation Measure HYD-1b. With implementation of the Stormwater Control Plan and project LID design features, post-construction stormwater peak discharges would not be increased. Additionally, as described in the BDSP EIR, the project site is not within any 100-year or 500-year flood hazard area and project elements would not impede or redirect flood flows.

Based on the previous studies, the project needs to account for 235 cubic feet per second (cfs) of total flow coming from the lands to the east. Currently, the 100-year storm runoff from the east enters the channel at the two locations identified on the attached markup. The primary discharge point is the culvert crossing the railroad tracks which is a 2'x3' culvert and has a capacity of approximately 50 cfs. This discharges directly into the upstream end of the channel. The remaining 185 cfs of flow overtops the railroad tracks and sheet flows into the channel. To prevent flooding on their site, the Canyon Ridge development constructed a 48-inch bypass pipe through their site with a capacity of 48 cfs directly across from the 2x3 culvert. The Canyon Ridge overflow collects any flows that exceed 6 inches from the channel bottom, therefore lending additional capacity to the upstream reach.

Since the proposed project will be building housing over this area, it would need to extend the 2' x 3' culvert under the site and back into the channel. This portion of runoff would continue to flow in the upstream reach of the channel (50 cfs split between the channel and the 48-inch bypass). The portion of flow that currently would sheet flow into the channel would be collected and

redirected through the project site in a 60-inch reinforced concrete pipe. Since the channel capacity increases to 185 cfs at about the halfway mark along the southern perimeter of our site, the project's drainage system would then redirect the diverted flow back into the channel at that point. This would allow the flows to converge, cross Reliant Way through a new culvert, and discharge into the western wetlands. This drainage system would leave the upstream reach of the channel with minimal flow until the diverted flows re-enter the channel.

Therefore, the proposed project would not introduce new impacts or create more severe impacts associated with drainage, drainage systems, runoff, erosion, siltation, or flood flows than those previously analyzed in the BDSP EIR. No additional analysis is required.

d) Summary of BDSP Analysis

The BDSP EIR determined that there are no inland water bodies that could be potentially susceptible to a seiche in the BDSP vicinity and that the BDSP area is not susceptible to tsunami inundation. Additionally, as described in the BDSP EIR, the project site is not within any 100-year or 500-year flood hazard area and is not subject to flooding.

Project-Specific Analysis

The Project site is not located within the 100-year or 500-year flood hazard zone designated by the Federal Emergency Management Agency (FEMA), is not in a tsunami hazard inundation zone, is not at risk of inundation as a result of a seiche, and is not in an area subject to current or projected future coastal flooding. Impacts related to the release of pollutants due to flooding would be less than significant. Therefore, the proposed project would not introduce new impacts or create more severe impacts associated with seiche, tsunami, or flooding than those previously analyzed in the BDSP EIR. No additional analysis is required.

e) Summary of BDSP Analysis

This question was not included in the BDSP EIR. No conclusion was made regarding the significance level of impacts related to compliance with a water quality control plan or sustainable groundwater management plan.

Project-Specific Analysis

As discussed above under topics a), b), and c), above, the proposed project, consistent with the determination of the BDSP EIR, would not result in significant polluted runoff, water quality degradation, or groundwater impacts. Similarly, and as discussed above, the proposed project would have a less-than-significant impact on onsite and offsite water quality during construction and occupancy of the site. The proposed LID design features and Stormwater Control Plan strategies for retaining and treating stormwater ensure stormwater would be retained onsite

and/or discharged into drainage ditches and other stormwater conveyance features in a manner that avoids erosion and the potential for sediment to be transported offsite. For these reasons, the proposed project would not conflict with or obstruct water quality objectives or beneficial uses identified in the Basin (RWQCB, 2017), representing the RWQCB's master water quality control planning documents for all regional terrestrial surface water bodies (e.g., creeks, rivers, streams, and lakes), groundwaters, coastal drainages, estuaries, coastal lagoons, and enclosed bays. The proposed project would not reduce groundwater recharge or require new groundwater withdrawals. Impacts relating to conflict or obstruction of implementation of a water quality control plan or sustainable groundwater management plan from implementation of the proposed project would be less than significant. No new impacts related to conflict or obstruction of implementation of a water quality control plan or sustainable groundwater management plan would occur, and the proposed project would not increase the severity of previously identified significant impacts. There are no changed circumstances and no new information of substantial importance requiring evaluation, and the proposed Project is within the scope of the project analyzed in the BDSP EIR.

Mitigation Measures

BDSP EIR MM HYD-1a: Prior to issuance of grading permits for development projects that occur pursuant to the Specific Plan, the City of American Canyon shall verify that the applicant has prepared a Stormwater Pollution Prevention Plan (SWPPP) in accordance with the requirements of the statewide Construction General Permit. The SWPPP shall be designed to address the following objectives: (1) all pollutants and their sources, including sources of sediment associated with construction, construction site erosion, and all other activities associated with construction activity are controlled; (2) where not otherwise required to be under a Regional Water Quality Control Board permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated; (3) site best management practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity; and (4) stabilization BMPs are installed to reduce or eliminate pollutants after construction are completed. The SWPPP shall be prepared by a qualified SWPPP developer. The SWPPP shall include the minimum BMPs required for the identified Risk Level. BMP implementation shall be consistent with the BMP requirements in the most recent version of the California Stormwater Quality Association Stormwater Best Management Handbook—Construction or the Caltrans Stormwater Quality Handbook Construction Site BMPs Manual.

BDSP EIR MM HYD-1b: Prior to issuance of building permits for development projects that occur pursuant to the Specific Plan, the project applicant shall prepare a Stormwater Control Plan that includes post-construction stormwater controls in the site design to satisfy requirements of the

Phase II Small MS4 Permit. This shall include a review of the final Stormwater Control Plan by the City of American Canyon to ensure that the required controls are in place.

Provision E.12.h of the MS4 Permit requires that an operation and maintenance program be implemented for post-construction stormwater management features. Responsible parties and funding for long-term maintenance of all BMPs must be specified. This plan shall specify a regular inspection schedule of stormwater treatment facilities in accordance with the requirements of the MS4 Permit. Reports documenting inspections and any remedial action conducted shall be submitted regularly to the City for review and approval.

Conclusion

As described above, the project would not have the potential to introduce new impacts of create more severe impacts that those described in the BDSP EIR.

XI. Land Use and Planning

Would the project:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Physically divide an established community?				**X**
b) 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?			**X**	

Background

The property is located within the Downtown Core subarea of the BDSP, which is intended to encourage mixed-use development focusing on lodging, local and visitor serving retail, and high-density residential development to create a destination for residents and visitors. Each BDSP subarea is further divided into distinct zoning districts, several of which were newly established in the BDSP. The property is within the Business Park zoning district, which is intended to encourage professional uses, a limited range of retail and service commercial uses oriented to the day-to-day needs of local residents, and multifamily residential uses, especially in conjunction with a commercial use. Permitted uses within the Business Park zone include multifamily residential and townhouses.

The property is located within the vicinity of the Napa County Airport and is subject to the Napa County ALUC ALUCP (Shutt Moen Associates 1999). Four areas of land use compatibility typically are assessed for development within the airport planning area: (i) noise; (ii) safety; (iii) airspace protection; and (iv) overflight annoyance. The ALUCP designates five "Airport Compatibility Zones" that correspond to certain geographic areas near the Napa County Airport. A portion of the property is located within Airport Compatibility Zone D. Residential uses typically are considered incompatible uses within Airport Compatibility Zone D. Nonresidential uses are considered acceptable if they do not attract more than 100 persons per acre within structures or 150 persons total on the site per acre. The remaining portion of the property is located within Airport Compatibility Zone E, which does not contain any restriction on residential use. However, an avigation easement may be required for the residential units in Zone E.

Discussion

a) **Summary of BDSP Analysis**

According to the BDSP EIR, development and mobility enhancements contemplated by the BDSP would displace existing uses. This would occur on a voluntary basis. All the mobility enhancements are intended to improve both motorized and non-motorized circulation within the Broadway District. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

Development of the project would not physically divide an established community. Active railroad tracks border the property to the north and east. The property is bordered to the south by dense residential and commercial development and to the west by an undeveloped, City-owned parcel adjacent to Highway 29. The internal roadway network of the project would connect Napa Junction Road and Reliant Way. Sidewalks are provided near the property along Napa Junction Road and Reliant Way. These sidewalks currently terminate at the project site and the project would construct new connections to the proposed internal sidewalk network. The project would promote connectivity in the project area and would not divide the existing apartments to the south. Impacts would be ***less than significant***.

b) **Summary of BDSP Analysis**

According to the BDSP EIR, the BDSP required a General Plan Amendment to ensure consistency between the BDSP and the American Canyon General Plan. When a Specific Plan entails amendments to the General Plan designations or zoning, inconsistency with the existing designations or zoning is an element of the project itself, which then necessitates a legislative policy decision by the agency and does not signify a potential environmental effect. As such, the proposed General Plan Amendment served as a self-mitigating aspect of the BDSP that served to correct the conflict. The BDSP EIR concluded that the BDSP was consistent with all applicable goals, objectives, and policies in the General Plan. Therefore, impacts were determined to be less than significant.

Project-Specific Analysis

As discussed in the Project Description, the project proposes to develop 453 residential units on the property, which exceeds the 180 units stated for the Downtown Core in the BDSP. The residential unit cap in the BDSP is superseded by the Housing Crisis Act of 2019. As described in the Project Description, the project would utilize the State Density Bonus Law to achieve the

proposed project density, including incentives, concessions, and waivers. The project also would require the City's approval of vehicular parking ratios, as further provided in the State Density Bonus Law.

Forty-six of the 453 rental units would be offered at affordable rates to very-low income households, with the other units offered at market rates. The project's 46 very low- income units would comprise just over 15 percent of the project's 301 "base" units (i.e., the maximum number of units that could be developed on the property given the 20 units per acre allowed under the General Plan and BDSP). Through use of the California State Density Bonus Law, the project would request a 50-percent density bonus, which would allow for the 453 total units. The affordable units would be constructed concurrently with the market rate units and would be evenly distributed throughout the project site. The affordable units would be kept affordable for a minimum of 55 years

By making 15 percent of the "base" units available to very-low-income households, the project also would be able to request up to three "incentives or concessions" under the State Density Bonus Law. The project also can request a "waiver" of any City development standard that would have the effect of physically precluding the construction of the proposed development at the density or with the incentives or concessions permitted by the State Density Bonus Law. The project includes the following specific waiver requests:

- Reduce minimum rear yard setback from 10'-0" to 3'-0"
- Reduce minimum side yard setback from 10'-0" to 3'-0"
- Reduce minimum setback between building face (front or rear within project site) from 35'-0" to 30'-0"
- Reduce minimum setback between building face (front or rear at property line) from 35'-0" to 23'-0"
- Increase maximum number of stories from 3 stories to 4 stories
- Increase maximum building height from 42'-0" to 50'-0"

The project also requests reduced vehicular parking ratios as provided for under the State Density Bonus Law, inclusive of parking for guests and persons with a disability, as follows: zero to one bedroom, one parking space; two to three bedrooms, one and one-half parking spaces.

The project would not result in an exceedance of the overall BDSP residential unit count. The BDSP allows for density transfers between sub-areas. Potential environmental impacts of locating the residential density at the project site are assessed and mitigation is identified in this document.

The proposed project also would be consistent with the ALUCP, as no residential units are proposed within Airport Compatibility Zone D. Project-related uses within Zone D would be limited to residential parking and project amenities, including the community center, as well as wetland areas. All the residential units, including many of the parking spaces, are proposed within Airport Compatibility Zone E.

Therefore, the project would not conflict with any land use plan or policy aimed at the protection of the environment and land use impacts would be ***less than significant***.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

XII. Mineral Resources

Would the project:

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

Discussion

a, b) **Summary of BDSP Analysis**

According to the BDSP EIR, the BDSP does not support mineral extraction operations. Neither the state nor the City of American Canyon designates the BDSP as a location of known mineral deposits. This condition precludes the possibility of a loss of mineral resources of statewide or local importance. The BDSP EIR concluded that no impact would occur.

Project-Specific Analysis

The BDSP boundaries do not contain a known mineral deposit and the BDSP does not currently support any mineral extraction operation. No site within the BDSP is designated by the state or the City of American Canyon as a location of known mineral deposits. The project would not result in the loss of known mineral deposit sites that would be of value to the region and residents of the state, nor is there high potential for mineral resources of statewide or local importance to be identified at the project site. Therefore, development of the project would result in ***no impact*** on mineral resources.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

XIII. Noise

Would the project result in:

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	X			
b) Generation of excessive groundborne vibration or groundborne noise levels?		**X**		
c) For a project within the vicinity of a private airstrip, or within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				**X**

Background

Noise Descriptors

Noise can be defined as unwanted sound. It is commonly measured with an instrument called a sound level meter. The sound level meter captures the sound with a microphone and converts it into a number called a sound level. Sound levels are expressed in units of decibels (dB).

To correlate the microphone signal to a level that corresponds to the way humans perceive noise, the A-weighting filter is used. A-weighting of dB levels de-emphasizes low-frequency and very high-frequency sound in a manner similar to human hearing. The use of A-weighting is required by most local General Plans as well as federal and state noise regulations (e.g., Caltrans, EPA, OSHA, and HUD). The abbreviation dBA is sometimes used when the A-weighted sound level is reported. All references to dB in this analysis are A-weighted unless otherwise stated.

Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors are the equivalent A–weighted sound level over a given time

period (Leq)[17]; average day–night 24-hour average sound level (Ldn)[18] with a nighttime increase of 10 dB to account for sensitivity to noise during the nighttime; and community noise equivalent level (CNEL)[19], also a 24-hour average that includes both an evening and a nighttime sensitivity weighting. Regarding increases in A-weighted noise level, the following relationships occur (Caltrans, 1998a):

- Under controlled conditions in an acoustics laboratory, the trained healthy human ear is able to discern changes in sound levels of 1 dB;
- Outside of such controlled conditions, the trained ear can detect changes of 2 dB in normal environmental noise;
- It is widely accepted that the average healthy ear, however, can barely perceive noise levels changes of 3 dB;
- A change in level of 5 dB is a readily perceptible increase in noise level; and
- A 10-dB change is recognized as twice as loud as the original source.

Noise Attenuation

Stationary point sources of noise, including construction equipment, attenuate (lessen) at a rate of 6 to 7.5 dB per doubling of distance from the source, depending on ground absorption. Soft sites attenuate at 7.5 dB per doubling because they have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. Hard sites have reflective surfaces (e.g., parking lots or smooth bodies of water) and therefore have less attenuation (6.0 dB per doubling). A street or roadway with moving vehicles (known as a "line" source), would typically attenuate at a lower rate, approximately 3 to 4.5 dB each time the distance doubles from the source, that also depends on ground absorption (Caltrans, 1998b). Physical barriers located between a noise source and the noise receptor, such as berms or sound walls, would increase the attenuation that occurs by distance alone. Construction activities would have characteristics of both "point" and "line" sources, so attenuation would probably range between 4.5 and 7.5 dB per doubling of distance.

Vibration

Vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural

[17]The Equivalent Sound Level (Leq) is a single value of a constant sound level for the same measurement period duration, which has sound energy equal to the time–varying sound energy in the measurement period.

[18]Ldn is the day–night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to night between 10:00 p.m. and 7:00 a.m.

[19]CNEL is the average A-weighted noise level during a 24-hour day, obtained by addition of 5 decibels in the evening from 7:00 to 10:00 p.m., and an addition of a 10–decibel penalty in the night between 10:00 p.m. and 7:00 a.m.

phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). One method of analyzing vibration amplitude is the Peak Particle Velocity (PPV). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. In this report, a PPV descriptor of in/sec is used to evaluate construction generated vibration for building damage and human complaints. Construction vibrations can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations result from vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment.

Regulatory Context

State

The state of California establishes noise insultation standards for new multi-family residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards (Title 24, California Code of Regulations). The noise insulation standards set forth an interior standard of 45 dB, Ldn in any habitable room. They require an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dB, Ldn.

Local

American Canyon General Plan

The American Canyon General Plan Noise Element aims to ensure that American Canyon's existing and future residents, employees, employers, and visitors are protected from the adverse human and environmental impacts of excessive noise. The City of American Canyon General Plan establishes an exterior noise level criterion of 65 dB, Ldn or less within outdoor activity areas of residential land uses. Additionally, the City requires that cumulative noise exposure from exterior noise sources within noise-sensitive dwellings does not exceed 45 dB, Ldn.

American Canyon Municipal Code

The American Canyon Municipal Code § 8.12.060 limits residential interior noise to 60 dB(A) between 7:00 a.m. and 10:00 p.m. and to 55 dB(A) between 10:00 p.m. and 7:00 a.m. § 8.12.070 establishes the following exterior noise limits, as shown in Table NOISE-1.

Table NOISE-1. City of American Canyon Exterior Noise Limits

Type of Land Use	Time Interval	Allowable Exterior Noise Level (dBA)[1]
Residential: Single and Double	10 p.m. – 7 a.m.	50
	7 a.m. – 10 p.m.	60
Residential Multiple	10 p.m. – 7 a.m.	55
	7 a.m. – 10 p.m.	60

Notes:
1. Levels to not be exceeded more than thirty (30) minutes in any hour.
Source: City of American Canyon Municipal Code, § 8.12.070.

§ 8.12.080(B)(2)(a) restricts the use of any tools or equipment used in construction, drilling, repair, alteration or demolition that would create a noise disturbance across a residential or commercial property line except for emergency work of public service utilities or by variance issued by the appropriate authority between the hours of 7 a.m. to 7 p.m.

§ 8.12.080(B)(2)(b) establishes maximum noise limits for construction activities where technically and economically feasible as shown in Table NOISE-2.

Table NOISE-2. City of American Canyon Noise Limits for Construction

Timeframe	Residential	Commercial	Industrial
Daily: 7 a.m. to 7 p.m.	75 dBA	80 dBA	85 dBA
Daily: 7 p.m. to 7 a.m.	60 dBA	65 dBA	70 dBA

SOURCE: City of American Canyon Municipal Code, § 8.12.080, Table 8.12.080

Existing Noise Levels and Sensitive Receptors

RCH Group (RCH) conducted a site-specific noise assessment and Construction Noise & Vibration Impact Analysis in September 2022 (RCH, 2022). The following analysis details the results of the noise monitoring and potential noise impacts from the project. The results of the long-term noise measurements and Construction Noise & Vibration Impact Analysis are in Appendix C.

To quantify existing ambient noise levels, two long-term (72-hour) and five short-term (10-minute) noise measurements were conducted within and around the project site. Table NOISE-3 summarizes the locations and results of the noise measurements. Appendix C includes noise measurement site locations on a map. Based on observations from the short-term measurements, the main source of noise in the project vicinity is traffic noise from Highway 29, wind and birds. Train noise can also be heard onsite, but

it occurs on a less than daily basis (RCH observed one train arriving at the railyard to the southeast of the project site during the two days of attended noise measurements).

The City of American Canyon General Plan Noise Element identifies noise-sensitive land uses as residential developments, schools, libraries, and healthcare facilities (City of American Canyon, 1994). The nearest sensitive receptors (Canyon Ridge apartment complex) are located approximately 20 feet south of the project's southern boundary.

Table NOISE-3. Existing Noise Levels

Location	Time Period	Noise Levels (dB)	Noise Sources
Site 1. North area of the project site, approximately 150 feet south of the railroad centerline	September 27, 12:00 a.m. through September 29, 11:59 p.m., 2022 Tuesday – Thursday 72-hour measurement	Hourly Leq's ranged from: 46-68 CNEL' s: 61, 59, 61	Unattended noise measurements do not specifically identify noise sources
Site 1. North area of the project site, approximately 150 feet south of the railroad centerline	Monday September 26, 2022 10:39 a.m. to 10:49 a.m.	5-minute Leqs: 53, 57	Horn from large truck on Highway 29 67 dB, birds chirping 50 dB
Site 2. East area of the project site, approximately 80 feet west of railroad centerline	September 27, 12:00 a.m. through September 29, 11:59 p.m., 2022 Tuesday – Thursday 72-hour measurement	Hourly Leq's ranged from: 44-63 CNEL' s: 57, 55, 56	Unattended noise measurements do not specifically identify noise sources
Site 2. East area of the project site, approximately 80 feet west of railroad centerline	Monday September 26, 2022 10:22 a.m. to 10:32 a.m.	5-minute Leqs: 52, 49	Train arriving slowly to the railyard 63 dB, wind up to 45 dB
Site 3. Eastern boundary of the project site, approximately 400 feet west of Highway 29	Monday September 26, 2022 10:51 a.m. to 11:01 a.m.	5-minute Leqs: 59, 57	Traffic on Highway 29 up to 65 dB
Site 4. Southern boundary of the project site, approximately 100 feet north of the Canyon Ridge apartments	Monday September 26, 2022 11:03 a.m. to 11:13 a.m..	5-minute Leqs: 46, 50	Quiet area. Wind up to 50 dB
Site 5. Approximate center of the project site.	Monday September 26, 2022 11:15 a.m. to 11:25 a.m..	5-minute Leqs: 52, 52	Distant train noise 48 dB

Source: RCH Group, 2022

Discussion

a) **Summary of BDSP Analysis**

Construction Impacts

The noise analysis of the BDSP EIR concluded that construction equipment would generate noise ranging from 70 to 105 dB and that noise levels would result in a significant impact where noise-sensitive land uses adjoin construction sites. However, this impact would be short-term and would cease upon completion of construction. The BDSP EIR concluded that through adherence to the construction noise limits provided in the City's Municipal Code and mitigations included in that EIR, temporary construction-related noise impacts would not expose persons to noise levels in excess of standards established in the General Plan or Noise Ordinance and impacts would be less than significant. The American Canyon Municipal Code allows construction noise levels up to the daytime 75 dBA noise limit at residential receptors between the hours of 7:00 a.m. and 7:00 p.m. and up to 60 dBA between the hours of 7:00 p.m. and 7:00 a.m. where technically and economically feasible.

Operational Impacts

The noise analysis of the BDSP EIR concluded that potential exposure of persons to excessive noise could occur with buildout of the BDSP. However, BDSP EIR MM NOI-1 would require a detailed acoustical analysis to be prepared for any noise sensitive land uses within the 65 A-weighted decibel (dBA) day/night average sound level (Ldn) roadway noise contours (i.e., within 350 feet of the centerline of Broadway Street). The detailed acoustical analysis would confirm the roadway noise levels impacting the sensitive receptors and identify any necessary mitigation measures to reduce interior noise levels at the sensitive land uses to within City noise standards.

The noise analysis of the BDSP EIR concluded that through adherence to the stationary noise limits in the American Canyon Municipal Code, stationary noise created from future development within the BDSP would not expose persons to noise levels in excess of standards established in the General Plan or Noise Ordinance.

The noise analysis of the BDSP EIR concluded that freight trains that run along the BDSP occur on a less than daily basis and typically run at very slow speeds that minimize their noise impacts and that train noise would not contribute to an exceedance of the City noise standards.

Project-Specific Analysis

Construction Impacts

Construction would result in a temporary increase in ambient noise levels in the vicinity of the project (RCH, 2022) (see Appendix C). Project construction hours would be from 7:00 am to 7:00 pm Monday through Friday. No construction would occur on weekends or federal holidays. Noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment and the prevailing wind direction. Construction activities would occur as close as 20 feet from the Canyon Ridge apartment complex during construction of the southern perimeter homes. Noise from construction activities occurring within 20 feet of the Canyon Ridge apartment complex could generate noise levels of up to 95 dB, Lmax (RCH, 2022).

These noise levels would exceed the residential daytime 75 dB, Lmax construction noise level limit outlined in the American Canyon Municipal Code, § 8.12.080(B)(2)(a). The Code states that maximum noise levels at affected properties shall not exceed the listed thresholds "where technically and economically feasible." It would not be feasible to install temporary noise barriers along the southern perimeter of the project site due to the limited amount of space along the footprint of the southern berm of the project site. Additionally, it would not be feasible to install temporary noise barriers directly south of the berm due to an existing drainage swale that exists between the southern perimeter of the project site and the Canyon Ridge apartment complex. Construction of a temporary 8-foot-tall noise barrier along the western perimeter of the panhandle feature of the project site that is directly east and adjacent to the Canyon Ridge would be feasible. A temporary 8-foot-tall noise barrier would attenuate ground level construction noise reaching the first story of the apartment complex by approximately 9 dB and construction noise reaching the second and third stories by approximately less than 4 dB. The majority of construction activities would occur at distances much farther than 20 feet. Construction activities greater than 140 feet from the Canyon Ridge apartment complex would attenuate to below the 75 dB, Lmax daytime threshold.

The BDSP EIR anticipated intermittent noise ranging from 70 to 105 dB from construction activity which would result in temporary substantial noise increases where noise-sensitive land uses adjoin construction sites. Consistent with the BDSP EIR findings, heavy construction activities occurring near the Canyon Ridge apartment complex (a noise-sensitive land use) would result in a temporary substantial noise increase during construction.

Project-specific mitigation measure NOI-1 would reduce this impact, but not to a less-than-significant level. Although installation of an 8-foot-tall noise barrier along the western perimeter

of the panhandle feature would provide some construction noise attenuation, there are no feasible mitigation strategies that would effectively reduce daytime construction noise below the 75 dB, Lmax noise level limit for daytime construction occurring within 140 feet of the Canyon Ridge apartment complex. Therefore, construction noise would be a ***potentially significant and unavoidable*** impact***.*** Construction noise impacts will be further analyzed in the EIR.

Operational Impacts

Exhibit 3.9-4 of the BDSP EIR indicates that a small portion of the northwestern boundary of the site is within the 65 dB, Ldn noise contour from traffic on Highway 29. All residential structures would be developed farther east and would not be located within the 65 dB, Ldn noise contour, therefore BDSP EIR MM NOI-1 would not apply to the project. In addition, long-term (72-hour) noise measurements taken by RCH to analyze the existing noise environment confirmed that exterior noise levels at proposed residential development locations are below 65 dB, Ldn. As shown in Table Noise-1, existing 24-hour time-averaged noise levels at Site 1 are 59-61 dB, CNEL and 55-57 dB, CNEL at Site 2. As shown in Appendix C, there was only one hour during the long-term noise measurement period that had an hourly Leq exceeding 65 dB. This noise level was recorded at Site 1 which would not contain any residential development. There were no average noise levels at Site 2 (located near an area that would contain residential development) that exceeded 65 dB, Leq and 24-hour noise levels at Site 2 were less than 60 dB, Ldn. In order to reduce outdoor train noise all buildings would meet code requirements for acoustical performance at the time of permitting for construction (Macy Architecture, 2022). These noise levels are below the exterior noise threshold of 65 dB, Ldn provided in Policy 11.2.4 of the City's General Plan.

Noise reduction afforded by building construction can vary depending on construction materials and techniques. Standard construction practices on newer buildings can typically provide approximately 25-30 dB exterior-to-interior noise level reduction (Caltrans 2002). Since the existing exterior noise levels are below 65 dB, Ldn at the project site, the future project interior noise levels would be below the interior noise threshold of 45 Ldn provided in Policy 11.2.2 of the City's General Plan. Therefore, the project would not result in new or more severe impacts related to operational noise levels beyond what was analyzed in the BDSP EIR.

Train noise is the loudest noise source on-site, but it occurs infrequently. According to the noise analysis of the BDSP EIR, trains that run along the rail lines within the BDSP occur on a less than daily basis. The main source of noise from train operations adjacent to the site is the sound of wheels as the trains maneuver through the curved railroad track directly north and east of the project site. Maximum noise levels of up to 88 dB, Lmax were recorded at Site 1 and were likely the result of the sound of the train wheels. This wheel noise can be described as a "squealing"

noise level that can sometimes reach more than 100 dB when measured directly adjacent to the rail line platform[20]. Train movement adjacent to the project site would be a source of annoyance for future project residents.

Consistent with the BDSP EIR, the City's 65 dB, Ldn noise standard for sensitive land uses is based on a 24-hour period, and future train movements, although a source of temporary annoyance for future project residents, would not contribute to an exceedance of that standard. Furthermore, the perimeter homes would insulate the interior neighborhood from train noise and the maximum noise levels would be expected to be well below 60 dB, Lmax in the interior during the infrequent train pass-bys which occur on a less than daily basis. Noise reduction features would meet or exceed requirements in existing building codes. These features include isolated heating and cooling HVAC systems (heat pumps) and sound-insulating walls, doors, and windows. Therefore, the project would not result in new or more severe impacts related to train noise levels beyond what was analyzed in the BDSP EIR. In addition, train noise would be an impact of the environment on the project, which is not considered a potentially significant impact.

According to the BDSP EIR, a significant traffic noise impact would occur if the project increases traffic noise by more than 3 dB at the exterior of any nearby sensitive receptor. A doubling of traffic volumes results in a 3-dB increase. According to the noise analysis of the BDSP EIR, existing average daily traffic volumes are 7,000 on Napa Junction Road east of Broadway Street and adjacent to the project site. The project would generate approximately 2,160 daily total trips (CHS, 2022a), thus the project would not result in a 3 dB increase in traffic noise on Napa Junction Road. The BDSP EIR did not disclose average daily traffic volumes on Reliant Way north of Napa Junction Road. The project would be accessed from both Napa Junction Road and Reliant Way, thus approximately 1,080 daily total trips would be expected to occur on Reliant Way. Based upon the existing commercial and residential uses along this roadway segment, the project would not double the existing traffic volumes.[21] Furthermore, the only existing sensitive receptor along Reliant Way (Canyon Ridge Apartments) is set back greater than 100 feet from the centerline of the roadway. As a result, the project would result in an increase of less than 3 dB above existing traffic noise levels, which is a less than perceptible increase. Therefore, the project would not result in new or more severe impacts related to traffic noise levels beyond what was analyzed in the BDSP EIR. Operational impacts would be ***less than significant***.

b) **Summary of BDSP Analysis**

[20] https://link.springer.com/article/10.1007/s12541-019-00225-7

[21] According to ITE Trp Generation, 10th Edition, a fast food restaurant with drive-thru window generates 470.95 daily trips. Thus, the existing taco bell at 408 Napa Junction Road west of Reliant Way generates approximately 1,205 trips per day (2,559 square foot building).

Construction Impacts

The noise analysis of the BDSP EIR utilized the guidance provided by Caltrans for continuous/frequent intermittent sources of vibration, which defines the threshold at 0.25 inch per second peak particle velocity (PPV). The noise analysis of the BDSP EIR concluded that potential groundborne vibration impacts could occur with buildout of the BDSP. However, according to BDSP EIR MM NOI-2a, any project that would utilize mobile construction equipment within 20 feet of any existing structure with sensitive receptors would have to provide a site-specific vibration analysis. The noise analysis of the BDSP EIR determined that construction vibration impacts would be ***less than significant*** with implementation of MM NOI-2a.

Operational Impacts

The noise analysis of the BDSP EIR also determined that potential operational vibration impacts could occur for vibration sensitive land use development projects located within 30 feet of a truck route or within 80 feet of a railroad line. However, the noise analysis determined that operational vibration impacts would be ***less than significant*** with implementation of BDSP EIR MM NOI-2b.

Project-Specific Analysis

Construction Impacts

Per BDSP EIR MM NOI-2a, a Construction Noise and Vibration Impact Analysis was prepared for the project (RCH 2022) (see Appendix C). That analysis identified potentially significant vibration impacts associated with compaction equipment at distances closer than 25 feet to the apartments, and recommended Mitigation Measure NOI-2 to these impacts. With the implementation of this measure, the project would not introduce new impacts or create more severe impacts related to construction vibration than those analyzed in the BDSP EIR. Construction vibration impacts would be ***less than significant with mitigation***.

Operational Impacts

Due to the slow movement of trains adjacent to the site, vibration is not anticipated to be significant, however per BDSP EIR MM NOI-2b, the applicant would be required to retain an acoustical engineer to conduct a train-related vibration analysis for the proposed residential units that would be located within 80 feet of a rail line, and, if necessary develop mitigation to reduce the vibration levels to within the Caltrans threshold of 0.04 in/sec ppv. These measures may include insulated concrete forms, geofoam-filled trenches, or other ground improvement measures that weaken vibration transmissions. With this Mitigation, the project would not

introduce new impacts or create more severe impacts related to operational vibration levels than those analyzed in the BDSP EIR. It should be noted that the California Supreme Court ruled that, in most cases, CEQA need not consider the impacts of the environment on the project, and should focus on the impacts of the project on the environment[22]. Therefore, this impact would be considered ***less-than-significant***.

c) **Summary of BDSP Analysis**

The noise analysis of the BDSP EIR concluded that development consistent with the BDSP would not expose persons to excessive noise levels from aircraft.

Project-Specific Analysis

The entire BDSP area is located outside the Napa County Airport 55 dB, CNEL contour. Aviation noise exposure within the BDSP is less than 55 dB, CNEL and all development and land use activities are considered acceptable within areas exposed to aviation noise levels of less than 55 dB, CNEL. Consistent with the ALUCP, no residential units are proposed within Airport Compatibility Zone D and all residential units would be within Zone E, which does not contain any restriction on residential use (see Land Use and Planning Section Discussion). Therefore, the project would not introduce new impacts or create more severe impacts related to airport noise than those analyzed in the BDSP EIR. ***No impact*** would occur.

Conclusions

As described above, the project with implementation of Mitigation Measures NOI-1 and NOI-2, would not have the potential to introduce new impacts of create more severe impacts that those described in the BDSP EIR.

Applicable BDSP EIR Mitigation Measures

BDSP EIR MM NOI-1: Prior to issuance of building permits of noise- sensitive land uses within the 65 dBA Ldn roadway noise contours shown in Exhibit 3.9 4 or within the 65 dBA Ldn roadway noise contours specified in Table 3.9 15 (within 350 feet of the centerline of Broadway Street or 127 feet of the centerline of American Canyon Road), the applicant shall retain an acoustical engineer to conduct a detailed acoustical analysis. The detailed acoustical analysis shall confirm the roadway noise levels impacting the sensitive receptors, and if necessary, shall identify mitigation measures to reduce interior noise levels at the sensitive land uses to within City noise standards.

[22] *California Building Industry Association v. Bay Area Air Quality Management District* (December 17, 2015, Case No. S213478)

BDSP EIR MM NOI-2a: Prior to issuance of grading permits, if construction activities will (1) pile drive within 150 feet of (2) utilize mobile construction equipment within 20 feet of any existing structure with sensitive receptors, the applicant shall retain an acoustical engineer to conduct a vibration analysis for potential impacts from construction-related vibration impacts to the existing structure(s) with sensitive receptors. The vibration analysis shall determine the vibration levels created by construction activities at the existing structure(s) with sensitive receptors and, if necessary, develop mitigation to reduce the vibration levels to within the Caltrans threshold of 0.25 inch per second PPV.

BDSP EIR MM NOI-2b: Prior to issuance of building permits, if new vibration-sensitive land uses are located within 30 feet of a truck route or 80 feet of a rail line, the applicant shall retain an acoustical engineer to conduct a vibration analysis for potential impacts from vibration generated by trucks or trains to the vibration-sensitive land uses. The vibration analysis shall determine the vibration levels impacting the proposed structure(s) with sensitive receptors, and if necessary develop mitigation to reduce the vibration levels to within the Caltrans threshold of 0.04 in per second PPV.

Additional Project-Specific Mitigation Measures

Project-Specific Mitigation Measure NOI-1: The project applicant shall:

- Construct an 8-foot-tall solid plywood noise barrier along the western perimeter of the panhandle feature of the project site and along the southern perimeter of the "balloon" feature adjacent to the Canyon Ridge apartment complex fence line.
- Designate a "Construction Noise and Vibration Coordinator" who would be responsible for responding to any local complaints about construction noise and vibration. The Construction Noise and Vibration Coordinator shall determine the cause of the complaint and shall require implementation of reasonable measures to correct the problem. The name, company, and telephone number for the Construction Noise and Vibration Coordinator shall be conspicuously posted at the construction site.
- At least three weeks prior to the start of construction activities, provide written notification to all nearby facilities within 300 feet of the construction site informing them of the estimated start date and duration of construction activities.
- Limit all on-site construction activities, including the operation of any tools or equipment used in construction, drilling, repair, alteration, grading, or demolition work, to between the daytime hours of 7:00 a.m. to 7:00 p.m. Monday through Friday. No construction shall be permitted on weekends and federal holidays.

- Locate staging areas the greatest feasible distance away from noise-sensitive receptors adjacent to the project site.
- Locate stationary noise-generating equipment (e.g., generators, air compressors) the greatest feasible distance away from noise-sensitive receptors adjacent to the project site.
- Require temporary noise dampening barriers around equipment that is more stationary (e.g., generators, air compressors, etc.) when operating within 150 feet of noise-sensitive receptors.
- Require that all construction equipment powered by gasoline or diesel engines have sound control devices (i.e., mufflers) that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.

Project-Specific Mitigation Measure NOI-2: The project applicant shall maintain at least a 25-foot buffer between the vibratory rollers and the Canyon Ridge apartment complex to assure that vibration impacts remain below the 0.25 PPV construction impact threshold.

XIV. Population and Housing

Would the project:

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

Discussion

a, b) Summary of BDSP Analysis

It was concluded in the BDSP EIR that the BDSP would not include substantial direct or indirect population growth in an area. The potential population growth per year resulting from the BDSP would be within historical numeric population increase that have occurred within American Canyon and therefore, the BDSP would be planned residential growth. Furthermore, the BDSP EIR concluded that the BDSP would not displace substantial numbers of existing, necessitating the construction of replacement housing elsewhere. Under the BDSP, no persons would be involuntary displaced and new dwelling units would be built. The BDSP concluded that impacts would be less than significant.

Project-Specific Analysis

The project would develop a 453-unit rental housing complex. The BDSP was prepared in order to guide the development of up to 1,200 net new dwelling units and up to 840,000 square feet of net new non-residential uses within the overall plan area. Development of the project site was included in the BDSP EIR analysis. The 453 rental units would be within the BDSP total planned housing and population growth for the plan area.

The project would not displace existing housing and/or people because there is no housing or residents on-site. Therefore, the project would result in ***less than significant*** impacts to population and housing.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

XV. Public Services

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered 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 following public services:

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

Discussion

a) **Summary of BDSP Analysis**

The BDSP EIR determined that buildout of the BDSP would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times or other performance objectives for fire protection. According to the BDSP EIR, payment of the development fees to fund capital improvements, as well as the BDSP's location within the American Canyon Fire Protection District Station, and compliance with the California Fire Code requirements for emergency access, fire detection and suppression systems, and minimum fire flow would minimize the demand for fire protection services within the BDSP. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

The American Canyon Fire Protection District's Station is approximately one mile south of the project site, at 911 Donaldson Way. The project would comply with the California Fire Code requirements for emergency access, fire detection and suppression systems, and minimum fire flow. The project applicant would pay all applicable development impact fees. The project would not increase the fire risk within the BDSP and would not affect fire protection response times within the BDSP and would not require new fire department facilities to serve the project. Impacts would be ***less than significant***.

b) **Summary of BDSP Analysis**

The BDSP EIR determined that buildout of the BDSP would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 police protection. According to the BDSP EIR, the payment of development fees to fund capital improvements, as well as the project's proximity to the police department stations, would ensure that the development of an additional police station would not be required. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

American Canyon Police Department is approximately one mile south of the project site at 911 Donaldson Way East. New police facilities would not be required to serve the project. The project applicant would pay the required development fees to fund capital improvements. The project is not expected to result in any changes in crime that would warrant changes to police protection service ratios and/or response times. Impacts would be ***less than significant***.

c) **Summary of BDSP Analysis**

The BDSP EIR determined that buildout of the BDSP would not result in substantial adverse physical impacts associated with new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for schools. According to the BDSP EIR, buildout of the BDSP was anticipated to generate 614 students. The BDSP EIR determined that impacts would be less than significant with payment of development fees at the time that building permits are sought. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

The BDSP EIR estimated the student generation rate for affordable housing and multi-family housing would be approximately 1.105 students/dwelling unit and 0.366 students/dwelling unit, respectively. Using the generation rates assumed in the BDSP EIR, the proposed 453 housing units would generate approximately 200 students within the BDSP boundaries. The 200 new students would be within the anticipated number of new students analyzed in the BDSP EIR and planned for by the local schools in the Napa Valley Unified School District. In addition, the project applicant would pay the applicable developer fees. Impacts would be ***less than significant***.

d) **Summary of BDSP Analysis**

The BDSP EIR determined that buildout of the BDSP would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable performance objectives for parks. According to the BDSP EIR, the BDSP was anticipated to increase the population of the Broadway District by approximately 4,300 residents, but impacts would be less than significant because the BDSP would require new development that occurs within the BDSP either to provide trails, parks, and recreational facilities, or to provide fees to the City of American Canyon to develop such fees elsewhere. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

The project would include the development of private recreational facilities such as the community center including a clubhouse, pool house, childcare center, lap pool, rock (leisure) pool, and a variety of outdoor spaces. In addition, assuming a density transfer within the BDSP area, the total number of residents would be consistent with the BDSP EIR assumptions. The project applicant would be required to pay applicable development fees to the City to increase park acreage. Impacts would be ***less than significant***.

e) **Summary of BDSP Analysis**

The BDSP EIR determined that buildout of the BDSP would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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 other public facilities. According to the BDSP EIR, the BDSP's potential increase in population is a nominal increase compared with the existing population served by local libraries and would not be expected to require new or substantially altered library facilities or other public facilities. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

Potential population growth resulting from the project would be consistent with the potential population growth estimated for the buildout of the BDSP. Thus, the project would not require new or substantially altered libraries or other public facilities. Impacts would be ***less than significant***.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

XVI. Recreation

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

Discussion

a, b) **Summary of BDSP Analysis**

According to the BDSP EIR, buildout of the BDSP would result in a population increase. However, requirements for increased park acreage would be met by fees paid to the City of American Canyon and by proposed features of the BDSP, such as bike/pedestrian paths, parks, and private recreational facilities. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

The project would include the development of private recreational facilities such as the community center including a clubhouse, pool house, childcare center, lap pool, rock (leisure) pool, and a variety of outdoor spaces. The project applicant would be required to pay applicable development fees to the City to increase park acreage. Therefore, the project would result in ***less than significant*** impacts to recreation.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

XVII. Transportation/Traffic

Would the project:

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

Introduction

This section is based upon the Trip Generation Memorandum (CHS, 2022a) and Parking and Transportation Demand Management Memorandum (CHS, 2022b).

Background

The BDSP EIR contains the relevant environmental and regulatory setting information related to transportation for the project.

Transit

Local transit is provided by the Vine Transit system, operated by the Napa Valley Transportation Authority (NVTA). Route 11 provides service connecting the cities of Napa, American Canyon, and Vallejo. The nearest northbound Route 11 stop to the project site is located on Main Street, approximately 1,600 feet south of the project site. The nearest southbound Route 11 stop to the project site is located at the southwest corner of the Napa Junction Road and Highway 29 intersection, approximately 1,300 feet west of the project site. American Canyon Transit is an on-demand, door-to-door transit service that operates

within specific areas of the city with the nearest stop to the project site located at the Walmart on Napa Junction Road, approximately 1,300 feet south of the project site.

Bicycle and Pedestrian Facilities

The only existing bike path near the project site is on Broadway (east of the roadway) between Napa Junction Road and Eucalyptus Drive (Class I). There are also several planned bike paths, lanes, and routes in the project area. Sidewalks are provided near the project site along Napa Junction Road and Reliant Way. These sidewalks currently terminate at the project site and the project would construct new connections to the proposed internal sidewalk network. Outside of the Downtown Core subarea of the BDSP, the sidewalk network becomes discontinuous with some incomplete sidewalk segments resulting from older auto-oriented land uses or the general absence of development.

Trip Generation and Traffic Demand Management Program

The BDSP requires all new residential developments of ten or more units to implement a Traffic Demand Management (TDM) program. Residential developments with 100 or more units are required to achieve a minimum of 10 points from the menu of TDM strategies. The project's TDM program would achieve 11 points from the menu of TDM strategies meeting the required 10-point target established in the BDSP (CHS, 2022b).

CHS used the *ITE Trip Generation Manual*, 10th Edition to estimate the expected vehicular trip generation for the project on a typical weekday and during both the AM and PM peak hours. The project is expected to generate up to 2,652 daily vehicle trips, including 229 AM peak hour (90 inbound and 139 outbound) and 243 PM peak hour (143 inbound and 100 outbound) vehicle trips. However, the trip rates from the *ITE Trip Generation Manual* do not factor in trip reductions from the project's required TDM program. The proposed project's TDM program is expected to reduce residential single occupancy vehicle trips by 20 percent. Therefore, the project with the required TDM program implemented would generate up to 2,160 daily vehicle trips, including 190 AM peak hour (75 inbound and 115 outbound) and 202 PM peak hour (118 inbound and 84 outbound) vehicle trips (CHS, 2022a).

Discussion

a) **Summary of BDSP Analysis**

The BDSP EIR determined that the Existing Plus Background Plus Proposed Specific Plan Traffic condition associated with the proposed Specific Plan would 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. The BDSP EIR concluded that impacts related to the Existing Plus Background Plus Proposed Specific Plan Traffic condition would be less than significant.

The BDSP EIR determined that the Cumulative Traffic condition associated with the proposed Specific Plan 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. The BDSP EIR concluded that no feasible mitigation is available and that impacts related to the Cumulative Traffic condition would be significant and unavoidable.

The BDSP EIR determined that buildout of the BDSP may conflict with an applicable congestion management program. According to the BDSP EIR, buildout of the BDSP would generate new vehicle trips that would contribute to unacceptable operations on Highway 29. The American Canyon Circulation Element contemplates mobility improvements that would promote the development of parallel routes and better vehicular, bicycle, and pedestrian connectivity within and adjacent to the Broadway District. However, widening Highway 29 to eight lanes within American Canyon is not feasible. The BDSP EIR concluded that no feasible mitigation is available and that impacts related to an applicable congestion management program would be significant and unavoidable.

Additionally, the BDSP EIR determined that the BDSP would 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. The BDSP EIR concluded that impacts related to policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities would be less than significant.

Project-Specific Analysis

Implementation of the project would not result in any change to the analysis or conclusions in the BDSP EIR. It is reasonably foreseeable that the project would have similar impact on traffic operations in the area as compared to the development projected in the BDSP EIR. Therefore, the project would not result in any impacts more significant than those already analyzed in the BDSP EIR, the analysis and impact conclusions in the BDSP EIR adequately address the project. The project's TDM program would achieve 11 points from the menu of TDM strategies meeting the required 10-point target established in the BDSP (CHS, 2022b). The project would not

introduce new impacts or create more severe impacts related to an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system than those previously analyzed in the BDSP EIR. Impacts would be ***less than significant***.

b) **Summary of BDSP Analysis**

VMT was not included in the BDSP EIR because CEQA requirements shifted from LOS to VMT after adoption of the BDSP and certification of the BDSP EIR. Thus, no VMT estimates were provided within the BDSP EIR. Additionally, the City of American Canyon had not yet adopted thresholds for VMT to determine impacts at the time the BDSP EIR was prepared.

Project-Specific Analysis

Section 15064.3 of the CEQA Guidelines provides specific considerations for evaluating a project's transportation impacts. Per Section 15064.3, analysis of VMT attributable to a project is the most appropriate measure effects of the project on transit and non-motorized travel of transportation impacts. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in Section 15064.3(b)(2) regarding roadway capacity, a project's effect on automobile delay does not constitute a significant environmental impact under CEQA.

As discussed above, the City did not have adopted VMT thresholds at the time the BDSP EIR was certified, nor does it currently have adopted VMT thresholds. In lieu of an established local methodology, the project-related VMT impacts were quantitatively assessed based on guidance provided by the OPR in the publication Transportation Impacts (SB 743) CEQA Guidelines Update and Technical Advisory (OPR, 2018). OPR states that "Residential development that would generate vehicle travel that is 15 or more percent below the existing residential VMT per capita, measured against the region or city, may indicate a less-than-significant transportation impact" (OPR, 2018). OPR also indicates that adding affordable housing to infill locations shortens commutes and reduces VMT, and that a project which includes any affordable housing units may factor the effect of affordability on VMT into the assessment of VMT generated by those units.

CHS calculated estimated project VMT[23]. The Plan Bay Area regional average is 14.5 and 13.9 VMT per capita for years 2020 and 2030, respectively.[24] Therefore, to achieve a 15 percent reduction, project VMT would need to be less than or equal to 12.3 and 11.8 for years 2020 and 2030, respectively. The project site is within Transit Area Zone (TAZ) 1291, which has an average of 12.9

[23] CHS Residences at Napa Junction American Canyon VMT, excel spreadsheet, July 21, 2022

[24]https://mtc.maps.arcgis.com/apps/webappviewer/index.html?id=5dac76d69b3d41e583882e146491568b

and 12.0 VMT per capita for years 2020 and 2030, respectively.[25] However, the project-required TDM program would reduce residential VMT by up to 20 percent (CHS, 2022b). Therefore, the project's VMT per capita would be 9.8 and 9.4 for years 2020 and 2030, respectively, achieving an approximately 32 percent reduction measured against the Plan Bay Area regional average. Furthermore, the project would provide approximately 15 percent of the proposed 453 residential units as very-low-income affordable units, which provides VMT reducing benefits being with the Downtown Core and nearby employment opportunities. Impacts would be ***less than significant***.

c) **Summary of BDSP Analysis**

The BDSP EIR determined that buildout of the BDSP would not create hazards associated with design features or incompatible uses. Mobility enhancements such as roadway and circulation improvements, new connections, and speed limit reductions were contemplated by the BDSP EIR to improve roadway conditions. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

The project does not include changes that could potentially introduce new hazards associated with design features or incompatible uses. Consistent with the BDSP EIR, development on the project site in the BDSP planning area would comply with all regulations related to site design, and the project would not alter the mobility enhancements proposed in the BDSP EIR. The project would not substantially increase traffic hazards. Furthermore, the City traffic engineer would review the site plan prior to project approval. Impacts would be ***less than significant.***

Summary of BDSP Analysis

The BDSP EIR determined that buildout of the BDSP would not result in inadequate emergency access and would not impair roadway safety or emergency response or evacuation. Mobility enhancements such as roadway and circulation improvements, new connections, and speed limit reductions were contemplated by the BDSP EIR in order to improve emergency response and evacuation. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

The project access is consistent with that envisioned in the BDSP EIR. The project does not include changes that could potentially interfere with emergency response, access, or evacuation. Consistent with the BDSP EIR, any development in the BDSP planning area would comply with all

[25] Ibid.

fire codes, City and BDSP street width requirements, and regulations related to emergency access. Furthermore, the City traffic engineer and Fire Department would review the site plan prior to project approval. Impacts would be ***less than significant***.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

XVIII. Tribal Cultural Resources

Environmental Issue	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
a) 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:		X		
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or				X
ii) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	X			

Discussion

ai, aii) **Summary of BDSP Analysis**

According to the BDSP EIR, the BDSP area is not listed on any national, state, or local registers of historic places, including those for tribal cultural resources. On July 20, 2016, the Yocha Dehe Wintun Nation replied with a letter indicating that the BDSP could impact undiscovered archaeological deposits and requested a site visit. The City of American Canyon responded to the Tribe and scheduled a consultation meeting with Yocha Dehe representatives on August 24, 2017,

at American Canyon City Hall. Yocha Dehe representatives were provided information about the BDSP and provided recommendations to City staff. This concluded the tribal consultation process. No tribal cultural resources have been recorded within the BDSP boundaries. In the event of the inadvertent discovery of tribal cultural resources, MM CUL-1 would serve to reduce the impact to a level of less than significant.

Project-Specific Analysis

As part of the EDS Historic Resources Property Survey for the project site (EDS 2022), EDS's archaeologists contacted the Native American Heritage Commission (HAHC) for a Sacred Lands File inventory search. The NAHP review indicated that the results were positive and suggested that EDS contact the Mishewal-Wappo Tribe of Alexander Valley for additional information and input. EDS contacted Scott Gabaldon, Tribal Chairman, on April 11, 2022. No response was received. Archival research, coordination with the NAHC, an archaeological field survey, and outreach to the Native American community did not result in the identification of any TCRs within or near the project area. AB 52 tribal consultation would be initiated by the City as part of the EIR process.

XIX. Utilities and Service Systems

Would the project:

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

Regulatory Context

State

Senate Bill 610: Water Supply Assessments

As revised by Senate Bill (SB) 610 (Stats. 2002, ch. 643), Section 10910, et seq. of the California Water Code set forth the circumstances in which California Environmental Quality Act (CEQA) lead agencies must seek preparation of, or prepare themselves, "water supply assessments" for defined proposed "projects." At the time a lead agency determines that a proposed project requires an Environmental Impact Report (EIR), the lead agency shall identify any "public water system" that would serve the project site and shall request that any such entity prepare a WSA for the project. In the absence of such a public water system, the city or county lead agency must prepare its own WSA. SB 610 functions together with CEQA, in that a WSA must be included in "any environmental document" for any "project" subject to SB 610 (Water Code Section 10911(b); see also State CEQA Guidelines Section 15155(e); see also Id. Section 15361 [defines "environmental documents" to include "Negative Declarations. . . [and] draft and final EIRs"]).

One of the fundamental tasks of a WSA is to determine whether "total projected water supplies available during normal, single dry, and multiple dry water years during a 20-year projection will meet the projected water demand associated with the proposed project, in addition to the public water system's existing and planned future uses, including agricultural and manufacturing uses" (Water Code Section 10910 (c)(3), (c)(4)). In making such a determination, the authors of the WSA must address several factors. Specifically, the WSA must contain information regarding existing water supplies, projected water demand, and dry year supply and demand. In Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova (2007) 40 Cal.4th 412, 433 ("Vineyard"), the California Supreme Court briefly summarized the key content requirements as follows:

With regard to existing supply entitlements and rights, a water supply assessment must include assurances such as written contracts, capital outlay programs and regulatory approvals for facilities construction . . . but as to additional future supplies needed to serve the project, the assessment need include only the public water system's plans for acquiring the additional supplies, including cost and time estimates and regulatory approvals the system anticipates needing (Water Code §§ 10910, subd. (d)(2), and 10911, subd. (a)). (Original italics.)

"Existing" water supplies can be based on different kinds of legal rights or arrangements, including entitlements, water rights, and water service contracts. In many cases, these supplies are likely already described in detail in the supplier's UWMP (Water Code § 10631(b)). Suppliers are expressly permitted to rely on information contained in the most recently adopted UWMPs, provided that the water needed for proposed development project was accounted for therein (Water Code § 10910(c)(2)).

In preparing a WSA, the public water system must disclose and document the quantity of water received from these various sources. Such supplies must be demonstrated by providing the following:

> (A) Written contracts or other proof of entitlement to an identified water supply.
>
> (B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.
>
> (C) Federal, State, and local permits for construction of necessary infrastructure associated with delivering the water supply.
>
> (D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.
>
> (Id. subd. (d)(2)).

A finding of insufficiency in a WSA does not require a city or county to deny or downsize a proposed development project. Rather, after identifying a shortfall, the public water system must provide its plans for acquiring "additional supplies" (or what the California Supreme Court called "future" supplies) (Water Code § 10911(a)). These plans should include information concerning the following:

> (1) The estimated total costs, and the proposed method of financing the costs, associated with acquiring the additional water supplies.
>
> (2) All federal, State, and local permits, approvals, or entitlements that are anticipated to be required in order to acquire and develop the additional water supplies.
>
> (3) Based on the considerations set forth in paragraphs (1) and (2), the estimated timeframes within which the public water system, or the city and county . . . expects to be able to acquire additional water supplies.

These particular Water Code requirements for assessments are action-forcing, in that they require the public water system to lay out a roadmap for obtaining new water supplies once it becomes aware that existing supplies are insufficient for the proposed project together with other foreseeable planned growth.

Regardless of the information provided to a city or county in a WSA, SB 610 stops short of preventing cities and counties from approving the "projects" at issue absent "sufficient" water supplies. But where "existing water supply entitlements, water rights, or water service contracts" are "insufficient" to serve

proposed projects, SB 610 does require that, in approving projects in the face of insufficient supplies, cities and counties must "include" in their "findings for the project[s]" their "determination[s]" regarding water supply insufficiency. SB 610 functions together with CEQA, in that a water supply assessment must be included in "any environmental document" for any "project" subject to SB 610. (Id. subd. (b); Guidelines, § 15155, subd. (e); see also id. § 15361 [defines "environmental documents" to include "Negative Declarations. . . [and] draft and final EIRs"]).

Local

General Plan

The City of American Canyon General Plan sets forth the following goals and policies relevant to utilities and service systems:

• Goal 5: It shall be the goal of American Canyon to establish and maintain a secure water supply and treatment, distribution and storage system to serve the land uses proposed under the general plan.

• Policy 5.2.5: In the event that sufficient capacity is not available to serve a proposed project, the City shall not approve the project until additional capacity or adequate mitigation is provided.

• Goal 5C: Establish and maintain adequate planning, construction, maintenance, and funding for storm drain and flood control facilities to support permitted land uses and preserve the public safety; upgrading existing deficient systems and expanding, where necessary, to accommodate new permitted development and to protect existing development in the City. Pursue public funding sources (i.e., grants) to reduce fiscal impacts of implementation to the City.

• Policy 5.10.3: Require that adequate storm drain and flood control facilities be constructed coincident with new development.

• Policy 5.10.12: Require that new development be designed to prevent the diversion of floodwaters onto neighboring parcels.

• Policy 5.10.18: Require that development projects maximize the use of pervious surface materials (grass, ground cover, and other) that minimize storm water runoff.

• Goal 5D: Maintain the quality of surface and subsurface water resources within the City of American Canyon.

• Policy 5.12.2: Incorporate features in new drainage detention facilities which enhance the water quality of discharges from the facility.

• Policy 5.13.1: Require that development activities comply with the State General Storm Water Permit for Construction Activities with measures that protect surface water quality to the maximum extent practicable.

Stormwater Regulations

The City of American Canyon is a Small Municipal Separate Storm Sewer System (MS4) General Permit co-permittee with the Napa Countywide Storm Water Management Plan (NCSWMP). The City is covered by State's National Pollutant Discharge Elimination System (NPDES) permits, Order 2009-0009-DWQ and Order 2013-0001-DWQ, with technical guidance provided by the State and by Bay Area Stormwater Management Agencies Association (BASMAA) Post-Construction Manual, Design Guidance for Stormwater Treatment and Control for Projects in Marin, Sonoma, Napa and Solano Counties. In most cases, regulated projects must address post-development stormwater quality using treatment measures, commonly known as LID.

Background

This analysis is based on the American Canyon Napa Junction – Water Demand and Fire Flow Demand Technical Memorandum for the project dated July 13, 2022 (BKF, 2022b).

Discussion

a, b) **Summary of BDSP Analysis**

Electricity and Natural Gas

According to the BDSP EIR, Marin Clean Energy (MCE) and PG&E would provide electricity and gas to the future development that occurs pursuant to the BDSP. The BDSP EIR determined that future development that occurs pursuant to the BDSP is estimated to demand 20.4 million kWh of electricity and 92.1 million cubic feet of natural gas at buildout on an annual basis. All new residential and non-residential development would be subject to the latest adopted edition of the Title 24 energy efficiency standards, which are among the most stringent in the U.S. As such, the proposed project would not result in the unnecessary, wasteful, or inefficient use of energy. The BDSP EIR concluded that impacts would be less than significant.

Wastewater

According to the BDSP EIR, buildout of the BDSP would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. Future development in the BDSP planning area would result in a net increase sewer flow of 66,576 gallons per day (gpd). The BDSP EIR determined that all future projects would be required to demonstrate that sewer service is available to ensure that adequate sanitation can be provided. The BDSP EIR determined that several planned capital improvement projects would address deficiencies in the sewer collection

system. The BDSP EIR determined that new development that occurs pursuant to the BDSP would be required to either contribute fees to the City of American Canyon to fund these improvements or install them in conjunction with project implementation (subject to reimbursement for costs outside of its equitable share). This would ensure that adequate wastewater collection and treatment is provided. The BDSP EIR concluded that impacts would be less than significant.

Water

According to the BDSP EIR, a Water Supply Assessment prepared for the BDSP EIR showed that the City's water supply is sufficient to meet projected demand, including demand within the BDSP area, in all years to 2040 and under all normal-, dry-, and multiple-dry-year scenarios. The analysis showed that demand will exceed supply during some dry years, and additional demand as a result of BDSP implementation will increase those supply deficiencies. However, the City is still anticipated to be able to meet demand through the use of carryover State Water Project (SWP) water, or through some combination of carryover SWP water, Advanced Table A Program water, demand reductions, and/or additional purchases on the open market.

In addition, the BDSP EIR determined that recycled water supply in the City is available to meet existing and projected demand and is available in sufficient volume to support non-potable uses at the project site. Use of recycled water at the site was anticipated to increase the City's utilization of this supply.

Additionally, the BDSP EIR determined that individual developments would comply with the City's Zero Water Footprint policy, which would require new accounts to offset potable water use through off-site water conservation measures, conversion of off-site potable irrigation to recycled water, on-site demand reduction (relative to existing use), or by acquiring additional supply. The BDSP EIR concluded that impacts would be less than significant.

Stormwater Drainage

The BDSP EIR determined that buildout of the BDSP would not create a need for new or expanded downstream storm drainage facilities. According to the BDSP EIR, buildout of the BDSP would increase impervious surfaces, but new development would address post-development stormwater quality using treatment measures—LID concepts that would treat runoff and reduce the release of runoff during peak events. Additionally, City staff will review new development plans for compliance with the City's post-development stormwater requirements, which would ensure that new development captures, detains, and regulates the release of the additional runoff generated by new impervious surfaces in a manner that avoids inundating downstream

stormwater facilities such that flooding occurs. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

Electricity

The project site would be served by, and connected to, existing utilities from MCE and PG&E for electricity. The project would not require natural gas. Consistent with the BDSP EIR, the project would be subject to the latest adopted edition of the Title 24 energy efficiency standards, which are among the most stringent in the U.S. As such, the project would not require or result in the relocation or construction of new or expanded electrical or natural gas facilities. Therefore, the project would not introduce electricity or natural gas impacts or create more severe impacts than those previously analyzed in the BDSP EIR. Impacts would be ***less than significant***.

Wastewater

The BDSP EIR determined that new development that occurs pursuant to the BDSP would be required to either contribute fees to the City of American Canyon to fund wastewater improvements or install them in conjunction with project implementation to ensure that adequate wastewater collection and treatment is provided. The project would connect to the existing sanitary sewer line along Napa Junction Road at the southern end of the property.

The city is currently reviewing the water and sewer analysis prepared by the applicant's engineers and will make the final determination as to whether utility expansions are required. The project engineers' initial findings indicate that no utility expansions would be required directly as a result of this project but the city has stated that the sewer to which the project would connect has deficiencies, and a planned capital improvement project is in place to address those deficiencies.

The project would be required to comply with all the applicable development standards and BDSP guidelines; thus, the project would not result in an increase of wastewater demand beyond what was analyzed in the BDSP EIR and would not exceed the wastewater treatment requirements of the Regional Water Quality Control Board (RWQCB). Therefore, the project would not introduce wastewater impacts or create more severe impacts than those previously analyzed in the BDSP EIR. Impacts would be ***less than significant***.

Water

The project would connect to existing potable and recycled water connections along Napa Junction Road at the southern end of the property. The project would construct a site-wide recycled water main that will connect to the existing recycled water main in Napa Junction Road and would utilize recycled water for irrigation throughout the site. Potable water demand for the project would be an average of approximately 72,899 gallons per day and a maximum of 145,798 gallons per day. Recycled water demand for the project would be an average of approximately 8,675 gallons per day, reducing potable water demand by approximately 12 percent.

The city is currently reviewing the water analysis prepared by the applicant's engineers and will make the final determination as to whether utility expansions are required. The project engineers' initial findings indicate that no water supply infrastructure expansions would be required directly as a result of this project.

Consistent with the discussion and analysis in the BDSP EIR, the proposed project would be served by the existing potable water service provided by the City of American Canyon. American Canyon obtains its water supply from a variety of sources, all of which (except for recycled water) are from outside the American Canyon.

All American Canyon's imported water comes through the North Bay Aqueduct (NBA) system. American Canyon obtains State Water Project (SWP) water through its participation in the Napa Flood Control and Water Conservation District (Napa FCWCD), which is the State Water Contractor for SWP.

Additionally, in 1996, American Canyon entered into an agreement with the City of Vallejo for the purchase and delivery of an additional water supply to American Canyon (1996 Agreement). However, American Canyon's SWP and other water supplies are sufficient to serve the project. Therefore, as proposed, the project will not be supplied water under the 1996 Agreement with Vallejo, nor will it require a new service connection under that agreement. Moreover, because the project will not rely on water supplies provided under the 1996 Agreement, there are no project-related environmental consequences associated with potential limitations of the water supplied by Vallejo under the 1996 Agreement, such as curtailment.

Development of the project would implement the City's requirements pursuant to the City's Zero Water Footprint policy, which would help to ensure that there is no net increase in potable water demand within the City, as noted in the BDSP EIR. Assuming a density transfer within the BDSP, the project would not create demand for potable water beyond what was analyzed in the BDSP

EIR. The project would not require or result in the construction of new water facilities or the expansion of existing facilities. Therefore, the project would not introduce water impacts or create more severe impacts than those previously analyzed in the BDSP EIR. Impacts would be ***less than significant***.

Stormwater Drainage

The project would connect to existing stormwater facility along Napa Junction Road at the southern end of the property. As described in the Project Description, only stormwater from a 0.79-ac portion of the southern panhandle area of the property would be diverted to the existing Napa Junction Road stormwater system. The remainder would be treated and discharged on-site at the north end of the development. The City's Department of Public Works Engineering Standard 4.02 requires new development to contain stormwater runoff in the post improvement condition to not exceed 90% of the preconstruction condition. The project would not result in the construction of new stormwater drainage facilities or the expansion of existing facility beyond what was analyzed in the BDSP EIR. Therefore, the project would not introduce new impacts to stormwater drainage or create more severe impacts than those previously analyzed in the BDSP EIR. Impacts would be ***less than significant***.

c) **Summary of BDSP Analysis**

According to the BDSP EIR, the municipal sewer system has been modified over time to serve growth but has also aged and deteriorated. Peak flows have increased due to infiltration and inflow (I/I) caused by rainwater and groundwater, which has resulted in a reduction in available hydraulic capacity and a higher potential for sanitary sewer overflow (SSO). In addition, capacity to accommodate future growth has been reduced. The Sewer Master Plan analyzed the existing sewer collection system using two flow scenarios, Peak Dry Weather Flow (PDWF) and Peak Wet Weather Flow (PWWF). In general, in a majority of the existing pipelines, velocities were below the recommended minimum for the PDWF scenario, which is primarily the result of minimal pipe slopes throughout the system. Hydraulic deficiencies were identified in Broadway (Main Basin 3). In addition, based on modeling, peak flows exceeded the capacity of three of the five pump stations. According to the BDSP EIR, the City has several planned capital improvement projects that would address the deficiencies in the sewer collection system. Additionally, the BDSP EIR determined that new development that occurs pursuant to the BDSP would be required to either contribute fees to the City of American Canyon to fund these improvements or install them in conjunction with project implementation (subject to reimbursement for costs outside of its equitable share). This would ensure that adequate wastewater collection and treatment is provided. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

The project would connect to the existing sanitary sewer line along Napa Junction Road at the southern end of the property. The project applicant would pay applicable development fees for capital improvements. The project would not result in a determination by a wastewater treatment provider that there is inadequate capacity to serve the project's projected demand in addition to existing commitments. Impacts would be ***less than significant***.

d, e) **Summary of BDSP Analysis**

It was determined in the BDSP EIR that the BDSP area would be served by a landfill with sufficient permitted capacity to accommodate solid waste disposal needs. According to the BDSP EIR, using an average of 3.89 pounds of debris per square foot for nonresidential construction and 4.38 pounds of debris per square foot of residential construction, buildout of the BDSP EIR would generate an estimated 10,299 cubic feet of waste. The BDSP EIR determined that the construction waste generated by buildout of the BDSP (10,299 cubic yards) would represent less than 0.01 percent of the remaining capacity at the Potrero Hills Landfill, and that the operational waste generated by buildout of the BDSP (7,304 cubic yards annually) would represent less than 0.01 percent of the remaining capacity at the Potrero Hills Landfill. The BDSP EIR concluded that impacts would be less than significant.

Project-Specific Analysis

Construction and operational waste generated by the project were considered in the BDSP EIR analysis. The project would be served by a landfill with sufficient capacity to accommodate the project's solid waste disposal needs and would not generate solid waste in excess of state or local standards or in excess of local infrastructure, nor would the project otherwise impair the attainment of solid waste reduction goals. Impacts would be ***less than significant***.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

XX. Wildfire Hazards

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

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

Background

California PRC 4201 - 4204 and Govt. Code 51175-89 direct the California Department of Forestry and Fire Protection (CAL FIRE) to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), define the application of various mitigation strategies to reduce risk associated with wildland fires. CAL FIRE is remapping Fire Hazard Severity Zones (FHSZ) for State Responsibility Areas (SRA) and Very High Fire Hazard Severity Zones (VHFHSZ) in Local Responsibility Areas (LRA) to provide updated map zones, based on new data, science, and technology. The project site and surrounding area are classified LRA and are mapped as in a "non-very high fire hazard zone." [26]

[26] https://osfm.fire.ca.gov/media/6732/fhszl_map28.pdf

The American Canyon Fire Protection District (ACFPD) provides fire protection and emergency medical services for the project site. The ACFPD station is located at 911 Donaldson Way East, approximately one mile south of the project site. The project would not require the provision of or need for new or physically altered facilities to continue to serve the project site.

Discussion

a-d) **Summary of BDSP Analysis**

According to the BDSP EIR, buildout of the BDSP would have no impact on any emergency response or evacuation plans and buildout would improve mobility for emergency response vehicles. Therefore, the BDSP EIR would not impair implementation or physically interfere with any adopted emergency response plans or emergency evacuation plans. The BDSP EIR concluded that impacts would be less than significant. Wildfire hazard checklist questions b, c, and d did not exist at the time that the BDSP EIR was certified. No conclusion was made about the significance level of environmental impacts regarding these wildfire topics.

Project-Specific Analysis

The project site is an urban area of the city and is not located within a High FHSZ, a VHFHSZ, or a SRA. Consistent with the BDSP EIR, any development in the BDSP plan area would have to comply with all fire codes and regulations related to emergency access. The project would result in ***no impact***.

Conclusions

As described above, the project would not have the potential to introduce new impacts or create more severe impacts that those described in the BDSP EIR.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Environmental Issue	Potentially Significant	Less Than Significant with Mitigation	Less Than Significant	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare or threatened species or eliminate important examples of the major periods of California history or prehistory?	X			
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c) Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?			X	

Discussion

a) The proposed project could affect special-status habitat or seasonal wetlands, as discussed above in Section IV. Biological Resources. The project also could adversely affect important historic resources associated with the relic railroad berms on the site, as discussed above in Section V. Cultural Resources. Compliance with the mitigation measures for the unearthing of any unknown archaeological resources as well as mitigation required for biological resources would ensure all potential impacts associated with biological and pre-historic archaeological resources would be reduced to ***less than significant***. However, the project may result in the elimination of an important historical feature, the railroad balloon loop, which may be ***a significant unavoidable impact***.

b) The following cumulative projects are proposed or under construction within a mile of the project site or within the BDSP (City of American Canyon, Development Projects, September 2022 https://www.cityofamericancanyon.org/government/community-development/development-projects):

- 352 Green Island Road – Core Tree Care Maintenance Yard: Approximately ¾ mile northwest of the project site – approved and awaiting building permits. The site is for the parking of vehicles and equipment that support a tree maintenance crew.

- Napa Junction and Lombard – Circle K Gas Station: Approximately 1/4 mile southwest of the project site – Convenience Building and Gas Station Canopy Building Permits issued October 2021.

- Hess Road -- Oat Hill Multifamily Project: Approximately 2/3 mile southwest of project site – approved and awaiting building permits. 291 multifamily dwelling units and associated infrastructure.

- Donaldson, Gisela & Surrounding Area Utility Project (Oceanview Estates): Approximately 3/4 mile southwest of project site – active construction. Drilling for verification of existing underground utilities, street trenching/bore holes/vault installation for service upgrades, and restoration.

- Watson Ranch Town Center & Homes: approved and under construction. Approximately 1/2 mile southeast of project site. Residential development project within the Watson Ranch Specific Plan – which runs adjacent to the east of the project site (opposite of the railroad tracks).

- Melvin Road – Napa Cove Apartments: approved and under construction. Approximately 9/10 mile southwest of project site within the BDSP. Development of 66 multifamily dwelling units near 3805 Broadway Street.

- 3443 Broadway Street – Hampton Inn Hotel: approved and awaiting building permits. Approximately 1.1 miles southwest of project site within the BDSP. Development of a 106-room three story hotel.

The BAAQMD considers air quality impacts to be cumulatively significant if a project exceeds BAAQMD's project-level significance thresholds. As discussed in the Air Quality section, construction and operational emissions with the project would be below all significance thresholds and would not be cumulatively considerable. GHG emissions are a global pollutant and all GHG emissions and their associated contribution to climate change, are inherently a cumulative impact. As noted in the GHG Emissions section, the project would do its "fair share"

of implementing the goal of carbon neutrality by 2045 and GHG emissions impacts would be less than significant. Construction noise generation from the project would be limited to the project site vicinity and would not combine with other cumulative projects to produce significant cumulative noise impacts. Traffic noise from project operation would result in a negligible increase in roadway traffic noise and would not be cumulatively considerable.

The projects would result in a cumulative loss of habitats for foraging bird species, however sufficient foraging habitat exists in the project area such that this impact would not be significant.

The project would not contribute to cumulative loss of cultural resources or health risk/hazards. The project's cumulative traffic impacts are considered in the IS VMT analysis. The project's contribution to cumulative water quality impacts would be reduced to less-than-significant via construction and operational stormwater requirements. Stormwater runoff from the site would be limited to 90% of existing peak flows, and therefore would not contribute to cumulative runoff impacts. All of these impacts would be consistent with cumulative development of the BDSP, as discussed in the BDSP EIR.

c) The proposed project would generate an increase in air pollutant emissions and greenhouse gasses associated with project construction and operation. These emissions would not be considered great enough to directly or indirectly have an adverse health effect on residents living in the area. Hazards associated with soil contamination on the site would be mitigated as detailed in this IS. The project's hazards impacts would be consistent with those described in the BDSP EIR, as described in this IS. The impact is considered ***less than significant*.**

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Appendix A

Air Quality Model Output Data

Appendix A-1

Supporting CalEEMod Outputs

CalEEMod Version 2020.4.0

1. Project Annual Emissions Output (34 pages)
2. Project Summer Emissions Output (27 page)
3. Project Winter Emissions Output (27 page)

American Canyon Residences at Napa Junction - Napa County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

American Canyon Residences at Napa Junction

Napa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Day-Care Center	4.55	1000sqft	0.10	4,548.00	0
Enclosed Parking Structure	40.89	1000sqft	0.00	40,890.00	0
Parking Lot	460.00	Space	4.14	184,000.00	0
Recreational Swimming Pool	21.96	1000sqft	0.50	21,964.00	0
Apartments Mid Rise	453.00	Dwelling Unit	8.70	453,000.00	1296

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.6	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2027
Utility Company	MCE				
CO2 Intensity (lb/MWhr)	289.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 453 dwelling units, 8,342 SF community center/clubhouse, 4,548 sf chidcare center, and 753 parking spaces (spaces are also within the building footprint [covered or garage]) on a 13.441 acres of the 15 acre site.

Construction Phase - No demolition

Grading - Worst case scenario

Vehicle Trips - CHS Consuting Group, The Residences at Napa Junction, Trip Generation Memo, June 2022.

Woodstoves - none

Energy Use - No natural gas, electric only.

American Canyon Residences at Napa Junction - Napa County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Solid Waste - The swimming pool is used by the residents so the solid waste generation is captured by the residential solid waste generation.

Construction Off-road Equipment Mitigation - BDSP EIR MM AIR-2

Energy Mitigation - Required to exceed Title 24 by 15%.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblEnergyUse	NT24NG	3,155.00	0.00
tblEnergyUse	NT24NG	0.93	0.00
tblEnergyUse	T24NG	5,226.68	0.00
tblEnergyUse	T24NG	17.34	0.00
tblFireplaces	FireplaceDayYear	11.14	0.00
tblFireplaces	FireplaceHourDay	3.50	0.00
tblFireplaces	FireplaceWoodMass	228.80	0.00
tblFireplaces	NumberGas	67.95	0.00
tblFireplaces	NumberNoFireplace	18.12	0.00
tblFireplaces	NumberWood	77.01	0.00
tblGrading	MaterialExported	0.00	11,165.00
tblGrading	MaterialImported	0.00	45,145.00
tblLandUse	LandUseSquareFeet	4,550.00	4,548.00
tblLandUse	LandUseSquareFeet	21,960.00	21,964.00
tblLandUse	LotAcreage	0.94	0.00
tblLandUse	LotAcreage	11.92	8.70
tblSolidWaste	SolidWasteGenerationRate	125.17	0.00
tblVehicleTrips	ST_TR	4.91	3.93
tblVehicleTrips	ST_TR	6.22	5.51
tblVehicleTrips	ST_TR	9.10	0.00
tblVehicleTrips	SU_TR	4.09	3.27
tblVehicleTrips	SU_TR	5.84	5.17
tblVehicleTrips	SU_TR	13.60	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	5.44	4.35
tblVehicleTrips	WD_TR	47.62	42.17
tblVehicleTrips	WD_TR	28.82	0.00
tblWoodstoves	NumberCatalytic	9.06	0.00
tblWoodstoves	NumberNoncatalytic	9.06	0.00
tblWoodstoves	WoodstoveDayYear	14.12	0.00
tblWoodstoves	WoodstoveWoodMass	582.40	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.3518	2.9693	3.5398	0.0112	0.7473	0.0890	0.8363	0.2426	0.0833	0.3259	0.0000	1,038.2584	1,038.2584	0.1108	0.0691	1,061.6322
2026	3.4217	0.7838	1.2125	3.1200e-003	0.1661	0.0271	0.1933	0.0447	0.0255	0.0702	0.0000	286.7344	286.7344	0.0323	0.0129	291.3830
Maximum	**3.4217**	**2.9693**	**3.5398**	**0.0112**	**0.7473**	**0.0890**	**0.8363**	**0.2426**	**0.0833**	**0.3259**	**0.0000**	**1,038.2584**	**1,038.2584**	**0.1108**	**0.0691**	**1,061.6322**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2025	0.3518	2.9693	3.5398	0.0112	0.6140	0.0890	0.7030	0.1842	0.0833	0.2675	0.0000	1,038.2580	1,038.2580	0.1108	0.0691	1,061.6318
2026	3.4217	0.7838	1.2125	3.1200e-003	0.1661	0.0271	0.1933	0.0447	0.0255	0.0702	0.0000	286.7343	286.7343	0.0323	0.0129	291.3828
Maximum	**3.4217**	**2.9693**	**3.5398**	**0.0112**	**0.6140**	**0.0890**	**0.7030**	**0.1842**	**0.0833**	**0.2675**	**0.0000**	**1,038.2580**	**1,038.2580**	**0.1108**	**0.0691**	**1,061.6318**

American Canyon Residences at Napa Junction - Napa County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**14.59**	**0.00**	**12.95**	**20.33**	**0.00**	**14.75**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2025**	**3-31-2025**	1.3618	1.3618
2	**4-1-2025**	**6-30-2025**	0.6459	0.6459
3	**7-1-2025**	**9-30-2025**	0.6530	0.6530
4	**10-1-2025**	**12-31-2025**	0.6670	0.6670
5	**1-1-2026**	**3-31-2026**	0.6465	0.6465
6	**4-1-2026**	**6-30-2026**	3.5683	3.5683
		Highest	3.5683	3.5683

American Canyon Residences at Napa Junction - Napa County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.2657	0.0388	3.3652	1.8000e-004		0.0187	0.0187		0.0187	0.0187	0.0000	5.5038	5.5038	5.2900e-003	0.0000	5.6359
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	270.2084	270.2084	0.0308	3.7300e-003	272.0879
Mobile	0.7924	1.1281	7.1858	0.0149	1.6657	0.0128	1.6785	0.4463	0.0119	0.4582	0.0000	1,422.8926	1,422.8926	0.0905	0.0768	1,448.0425
Waste						0.0000	0.0000		0.0000	0.0000	43.5010	0.0000	43.5010	2.5708	0.0000	107.7718
Water						0.0000	0.0000		0.0000	0.0000	9.8376	31.2332	41.0708	1.0140	0.0243	73.6583
Total	**3.0581**	**1.1668**	**10.5510**	**0.0150**	**1.6657**	**0.0314**	**1.6972**	**0.4463**	**0.0306**	**0.4769**	**53.3386**	**1,729.8380**	**1,783.1766**	**3.7113**	**0.1048**	**1,907.1964**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.2657	0.0388	3.3652	1.8000e-004		0.0187	0.0187		0.0187	0.0187	0.0000	5.5038	5.5038	5.2900e-003	0.0000	5.6359
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	266.6265	266.6265	0.0303	3.6800e-003	268.4810
Mobile	0.7924	1.1281	7.1858	0.0149	1.6657	0.0128	1.6785	0.4463	0.0119	0.4582	0.0000	1,422.8926	1,422.8926	0.0905	0.0768	1,448.0425
Waste						0.0000	0.0000		0.0000	0.0000	43.5010	0.0000	43.5010	2.5708	0.0000	107.7718
Water						0.0000	0.0000		0.0000	0.0000	9.8376	31.2332	41.0708	1.0140	0.0243	73.6583
Total	**3.0581**	**1.1668**	**10.5510**	**0.0150**	**1.6657**	**0.0314**	**1.6972**	**0.4463**	**0.0306**	**0.4769**	**53.3386**	**1,726.2560**	**1,779.5946**	**3.7109**	**0.1048**	**1,903.5895**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.21**	**0.20**	**0.01**	**0.05**	**0.19**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2025	1/14/2025	5	10	
2	Grading	Grading	1/15/2025	2/25/2025	5	30	
3	Building Construction	Building Construction	2/26/2025	4/21/2026	5	300	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Paving	Paving	4/22/2026	5/19/2026	5	20	
5	Architectural Coating	Architectural Coating	5/20/2026	6/16/2026	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 4.14

Residential Indoor: 917,325; Residential Outdoor: 305,775; Non-Residential Indoor: 19,335; Non-Residential Outdoor: 6,445; Striped Parking Area: 13,493 (Architectural Coating – sqft)

OffRoad Equipment

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

Trips and VMT

Appendix A-2

Construction HRA Technical Report

Health Risk Assessment
for the
Residences at Napa Junction Project

American River Canyon, California

Prepared For:

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November 2022

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ASF	Age Sensitivity Factor
ATCM	Airborne Toxics Control Measure
BAAQMD	Bay Area Air Quality Management District
CAA	Clean Air Act
CARB	California Air Resources Board
DPM	Diesel Particulate Matter
FAH	Fraction of time at home
GLC	Ground Level Concentration
HAP	Hazardous Air Pollutant
HARP2	Hot Spots Analysis & Reporting Program
HRA	Health Risk Assessment
MSAT	Mobile Source Air Toxic
NAAQS	National Ambient Air Quality Standards
NESHAPs	National Emissions Standards for Hazardous Air Pollutants
OEHHA	Office of Environment Health Hazard Assessment
PM	Particulate Matter
PM_{10}	Coarse Particulate Matter
$PM_{2.5}$	Fine Particulate Matter
Project	Residences at Napa Junction Project
REL	Reference Exposure Level
SB	Senate Bill
SFBAAB	San Francisco Bay Area Air Basin
TAC	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey

1.0 INTRODUCTION

This report documents the results of a Construction Health Risk Assessment (HRA) completed for the Residences at Napa Junction Project (Project), which includes the construction of a residential housing development on a 15.05-acre parcel in American Canyon, California. The purpose of this HRA is to evaluate potential health risks associated with exposure of toxic air contaminants (TACs) (or hazardous air pollutants [HAPs] in the federal parlance), including diesel particulate matter (DPM), generated by the construction equipment on the Project Site and construction vehicular traffic traversing the Project vicinity roadways; Napa Junction Road, Reliant Way and Highway 29. This Construction HRA was prepared in accordance with the requirements of the Office of Environmental Health Hazard Assessment (OEHHA) to determine if health risks are likely to occur to existing residents and workers in the vicinity of the Project Site. Technical data is included as Attachment A and Attachment B.

1.1 Project Location and Description

The Project Site is located in the City of American Canyon, located in Napa County, at the east end of Napa Junction Road and Highway 29. The site is surrounded by an active railroad corridor to the north and east, residential and commercial developments to the south, and Highway 29 to the west. The Project Site is relatively flat with no structures.

The Project proposes the construction of a residential housing development consisting of 453 rental units, a community center with both indoor and outdoor amenities, and associated circulation and parking infrastructure. The proposed residential units would include 141 one-bedroom, 252 two bedroom, and 60 three-bedroom apartments. The community center, located at the north end of the Project Site, would be composed of a clubhouse, pool house, childcare center, lap pool, rock pool, and a variety of outdoor spaces. The Project would be accessible from Napa Junction Road and Reliant Way, at the existing terminus of each road.

2.0 HEALTH RISK ASSESSMENT

2.1 Environmental Setting

Air quality in a region is determined by its topography, meteorology, and existing air pollutant sources. These factors are discussed below, along with the current regulatory structure that applies to the San Francisco Bay Area Air Basin (SFBAAB), which encompasses the Project Site, pursuant to the regulatory authority of the Bay Area Air Quality Management District (BAAQMD).

Ambient air quality is commonly characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The air basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following section describes the pertinent characteristics of the air basin and provides an overview of the physical conditions affecting pollutant dispersion in the Project Area.

2.1.1 San Francisco Bay Area Air Basin

The Project Site is located in the City of American River Canyon, located in Napa County, which lies in the SFBAAB. The SFBAAB is approximately 5,600 square miles in area and consists of nine counties that surround the San Francisco Bay, including all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties; the southwestern portion of Solano County; and the southern portion of Sonoma County. The topography of the SFBAAB is characterized by complex terrain, consisting of coastal mountain ranges, inland valleys and bays. This complex terrain, especially the higher elevations, distorts the normal wind flow patterns in the SFBAAB. The greatest distortions occur when low-level inversions are present and the air beneath the inversion flows independently of air above the inversion, a condition that is common in the summertime (BAAQMD 2017).

The air flowing in from the coast to the Central Valley, called the sea breeze, begins developing at or near ground level along the coast in late morning or early afternoon. As the day progresses, the sea breeze layer deepens and increases in velocity while spreading inland. The depth of the sea breeze depends in large part upon the height and strength of the inversion. If the inversion is low and strong, and hence stable, the flow of the sea breeze will be inhibited and stagnant conditions are likely to result (BAAQMD 2017).

Summertime temperatures in the SFBAAB are determined by the effect of differential heating between land and water surfaces. Because land tends to heat up and cool off more quickly than water, a large-scale gradient (differential) in temperature is often created between the coast and the Central Valley, and small-scale local gradients are often produced along the shorelines of the ocean and bays (BAAQMD 2017).

During the summer, winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately south of Mount Tamalpais, the northwesterly winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. This channeling of wind through the Golden Gate produces a jet that sweeps eastward and splits off to the northwest toward Richmond and to the southwest toward San Jose when it meets the East Bay hills. Wind speeds may be strong locally in areas where air is channeled through a narrow opening, such as the Carquinez Strait, the Golden Gate, or the San Bruno Gap.

An inversion is a layer of warmer air over a layer of cooler air. Inversions affect air quality conditions significantly because they influence the mixing depth, i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground. The highest air pollutant concentrations in the SFBAAB generally occur during inversions. The areas having the highest air pollution potential tend to be those that experience the highest temperatures in the summer and the lowest temperatures in the winter. The coastal areas are exposed to the prevailing marine air, creating cooler temperatures in the summer, warmer temperatures in winter, and stratus clouds all year. The inland valleys are sheltered from the marine air and experience hotter summers and colder winters. Thus, the topography of the inland valleys creates conditions conducive to high air pollution potential.

2.1.2 Toxic Air Contaminants

In addition to the criteria pollutants discussed above, TACs are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis. Carcinogenic TACs can also have noncarcinogenic health hazard levels.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Additionally, diesel engines emit a complex mixture of air pollutants composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children, whose lungs are still developing, and the elderly, who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's fine particulate matter ($PM_{2.5}$) air quality problems. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage, and death.

2.1.2.1 Diesel Exhaust

Most recently, the California Air Resources Board (CARB) identified DPM as a TAC. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (i.e., heavy-duty, light-duty), engine operating conditions (i.e., idle, accelerate, decelerate), fuel formulations (i.e., high/low sulfur fuel), and the year of the manufacture of the engine (USEPA 2002). Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and

lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs; due to their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. Project construction would be a source of DPM emissions.

2.1.3 Sensitive Receptors

Sensitive receptors are defined as facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. CARB has identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, athletes, and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis.

The nearest sensitive land uses to the Project Site is an apartment building (Canyon Ridge at Napa Junction) located south of the Project Site fronting Eucalyptus Drive and Napa Junction Road.

2.2 Regulatory Framework

2.2.1 Federal

2.2.1.1 Clean Air Act

The Federal Clean Air Act (CAA) was amended in 1990 to address a large number of air pollutants that are known to cause or may reasonably be anticipated to cause adverse effects to human health or adverse environmental effects. 188 specific pollutants and chemical groups were initially identified as HAPs, and the list has been modified over time. The CAA Amendments included new regulatory programs to control acid deposition and for the issuance of stationary source operating permits.

In 2001, the U.S. Environmental Protection Agency USEPA issued its first Mobile Source Air Toxics Rule, which identified 21 mobile source air toxic (MSAT) compounds as being HAPs that required regulation. A subset of six of these MSAT compounds were identified as having the greatest influence on health and included benzene, 1,3-butadiene, formaldehyde, acrolein, acetaldehyde, and diesel particulate matter. More recently, the USEPA issued a second MSAT Rule in February 2007, which generally supported the findings in the first rule and provided additional recommendations of compounds having the greatest impact on health. The rule also identified several engine emission certification standards that must be implemented. Unlike the criteria pollutants, toxics do not have National Ambient Air Quality Standards (NAAQS) making evaluation of their impacts more subjective.

National Emissions Standards for Hazardous Air Pollutants (NESHAPs) were incorporated into a greatly expanded program for controlling toxic air pollutants. The provisions for attainment and maintenance of the NAAQS were substantially modified and expanded. Other revisions included provisions regarding stratospheric ozone protection, increased enforcement authority, and expanded research programs.

Section 112 of the CAA Amendments governs the federal control program for HAPs. NESHAPs are issued to limit the release of specified HAPs from specific industrial sectors. These standards are technology-based, meaning that they represent the best available control technology an industrial sector could afford. The level of emissions controls required by NESHAPs are not based on health risk considerations because allowable releases and resulting concentrations have not been determined to be safe for the general public. The CAA does not establish air quality standards for HAPs that define legally acceptable concentrations of these pollutants in ambient air.

2.2.2 State

2.2.2.1 California Clean Air Act

California Air Resources Board

CARB's statewide comprehensive air toxics program was established in 1983 with AB 1807 the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an airborne toxics control measure (ATCM) for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics "Hot Spots" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the "Hot Spots" Act was amended by Senate Bill (SB) 1731 which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

Diesel Risk Reduction Plan

The identification of DPM as a TAC in 1998 led CARB to adopt the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (Risk Reduction Plan) in October 2000. The Risk Reduction Plan's goals included an 85 percent reduction in DPM by 2020 from the 2000 baseline. The Risk Reduction Plan includes regulations to establish cleaner new diesel engines, cleaner in-use diesel engines (retrofits), and cleaner diesel fuel.

Truck and Bus Regulation Reducing Emissions from Existing Diesel Vehicles

On December 12, 2008, CARB approved the Truck and Bus Regulation to significantly reduce particulate matter (PM) and oxides of nitrogen emissions from existing diesel vehicles operating in California. The regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Heavier trucks had to be retrofitted with PM filters beginning in January 1, 2012, and older trucks had to be

replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating greater than 14,000 pounds. Small fleets with three or fewer diesel trucks can delay compliance for heavier trucks by reporting and there are a number of extensions for low-mileage construction trucks, early PM filter retrofits, adding cleaner vehicles, and other situations. Privately and publicly owned school buses have different requirements.

Tanner Air Toxics Act & Air Toxics "Hot Spot" Information and Assessment Act

CARB's Statewide comprehensive air toxics program was established in 1983 with Assembly Bill (AB) 1807, the Toxic Air Contaminant Identification and Control Act (Tanner Air Toxics Act of 1983). AB 1807 created California's program to reduce exposure to air toxics and sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an ATCM for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate T-BACT to minimize emissions.

CARB also administers the state's mobile source emissions control program and oversees air quality programs established by state statute, such as AB 2588, the Air Toxics Hot Spots Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a HRA and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings. In September 1992, the Hot Spots Act was amended by SB 1731, which required facilities that pose a significant health risk to the community to reduce their risk through a risk management plan.

2.2.3 Local

2.2.3.1 Bay Area Air Quality Management District

The BAAQMD is designated by law to adopt and enforce regulations to achieve and maintain ambient air quality standards. The BAAQMD responsibilities include preparing plans for the attainment of ambient air quality standards, adopting and enforcing air pollution rules, issuing permits for and inspecting stationary air pollution sources, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing state and federal programs and regulations. The BAAQMD has also adopted various rules and regulations that are designed to reduce and control pollutant emissions from construction and operational activities.

2.2.4 Threshold of Significance

The impact analysis provided below is based on the following local (BAAQMD) health risk thresholds. The BAAQMD has established the health risk thresholds to determine if the effects of nearby sources are significant to a proposed receptor.

Table 2-1. BAAQMD Health Risk Significance Thresholds		
Air Pollutant/Risk Parameter	**Value**	**Units**
Ambient $PM_{2.5}$	0.3	$\mu g/m^3$
Elevated Cancer Risk	10	In One Million
Chronic Hazard Quotient	1	Health Hazard Index

Cancer risk is expressed in terms of expected incremental incidence per million population. This threshold serves to determine whether Project sources of TACs (e.g., construction) potentially have significant impacts on a receptor. The 10-in-one-million standard is a very health-protective significance threshold. A risk level of 10 in one million implies a likelihood that up to 10 persons out of one million equally exposed people would contract cancer if exposed continuously (24 hours per day) to the levels of TACs over a specified duration of time. This risk would be an excess cancer that is in addition to any cancer risk borne by a person not exposed to these air toxics. To put this risk in perspective, the risk of dying from accidental drowning is 1,000 in a million, which is 100 times more than the BAAQMD's threshold of 10 in one million.

The BAAQMD has also established non-carcinogenic risk parameters for use in HRAs. Noncarcinogenic risks are quantified by calculating a *hazard index*, expressed as the ratio between the ambient pollutant concentration and its toxicity or Reference Exposure Level (REL). An REL is a concentration at, or below which health effects are not likely to occur. A hazard index less of than one (1.0) means that adverse health effects are not expected. Within this analysis, non-carcinogenic exposures of less than 1.0 are considered less than significant. In addition, the BAAQMD has established a threshold for nearby sources' contribution to ambient $PM_{2.5}$ concentrations.

2.2.5 Methodology

2.2.5.1 Road Emission and Construction Calculations

Offsite DPM concentrations resulting from construction vehicle traffic were modeled exiting the Project Site on Reliant Way and Napa Junction Road and continuing onto Highway 29 within approximately a half mile to the north and south. Average daily trips as a result of Project construction were provided by RCH Group (2022). CARB's EMFAC2021 was used to estimate emission rates for diesel vehicles. DPM emission rates were modeled using the coarse particulate matter (PM_{10}) idling exhaust emission factors as well as average speeds for the years that construction is proposed (2025 and 2026). Construction on-road equipment for offsite activities was modeled as 66-line volume sources traversing Napa Junction Road and Reliant Way from the Project Site onto Highway 29 in the north and south direction totaling 1.65 miles. Annual onsite PM_{10} exhaust emissions for onsite construction and $PM_{2.5}$ emissions were generated using the California Emissions Estimator Model (CalEEMod) (RCH Group 2022). The annual emissions for all phases and years of construction were used to conservatively estimate annual construction PM_{10} exhaust emissions and $PM_{2.5}$ emissions for the estimated Project construction duration of two years. Construction off-road equipment for onsite activities was modeled as 31-line volume sources traversing the entire perimeter of the Project Site. Detailed calculations for construction emissions can be found in Attachment B of this document.

2.2.5.2 Dispersion Modeling

The air dispersion modeling for the HRA was performed using the USEPA AERMOD Version 11.0.1 dispersion model. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. The USGS_NED_13_n38w123 file found at U.S. Geological Survey (USGS) was used for elevation data for all sources and receptors in the Project domain. All regulatory defaults were used for dispersion modeling.

AERMOD requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Pre-processed meteorological data files provided by BAAQMD using USEPA's AERMET program, designed to create AERMOD input files for the Napa County Airport monitoring station, were selected as being the most representative meteorology based on proximity. The location of the monitoring station in respect to the Project Site is presented in Attachment A of this document. The unit emission rate of one gram per second was utilized in AERMOD to create plot files containing the dispersion factor (X/Q) for each source group. Emissions for each source group as described above were input into HARP2 to calculate the ground level concentrations (GLC) related to Project operations. AERMOD summary files, calculations and figures can be found in Attachment B.

Based on the OEHHA methodology, the residential inhalation cancer risk from the annual average TAC concentrations is calculated by multiplying the daily inhalation or oral dose, by a cancer potency factor, the age sensitivity factor (ASF), the frequency of time spent at home, and the exposure duration divided by averaging time, to yield the excess cancer risk. These factors are discussed in more detail below. Cancer risk must be separately calculated for specified age groups, because of age differences in sensitivity to carcinogens and age differences in intake rates (per kilogram [kg] body weight). Separate risk estimates for these age groups provide a health-protective estimate of cancer risk by accounting for greater susceptibility in early life, including both age-related sensitivity and amount of exposure.

Exposure through inhalation (Dose-air) is a function the breathing rate, the exposure frequency, and the concentration of a substance in the air. For residential exposure, the breathing rates are determined for specific age groups, so Dose-air is calculated for each of these age groups, 3rd trimester, 0<2, 2<9, 2<16, 16<30 and 16-70 years. To estimate cancer risk, the dose was estimated by applying the following formula to each ground-level concentration:

$$\mathbf{Dose_{-air} = (C_{air} * \{BR/BW\} * A * EF * 10^{-6})}$$

Where:

Dose-air	=	dose through inhalation (mg/kg/day)
C_{air}	=	air concentration (µg/m^3) from air dispersion model
{BR/BW}	=	daily breathing rate normalized to body weight (L/kg body weight – day) (361 L\kg BW-day for 3rd Trimester, 1,090 L/kg BW-day for 0<2 years, 861 L/kg BW-day for 2<9 years, 745 L/kg BW-day for 2<16 years, 335 L/kg BW-day for 16<30 years, and 290 L/kg BW-day 16<70 years)
A	=	Inhalation absorption factor (unitless [1])
EF	=	exposure frequency (unitless), days/365 days (0.96 [approximately 350 days per year])

10^{-6} = conversion factor (micrograms to milligrams, liters to cubic meters)

OEHHA developed ASFs to consider the increased sensitivity to carcinogens during early-in-life exposure. In the absence of chemical-specific data, OEHHA recommends a default ASF of 10 for the third trimester to age 2 years, an ASF of 3 for ages 2 through 15 years to account for potential increased sensitivity to carcinogens during childhood and an ASF of 1 for ages 16 through 70 years.

Fraction of time at home (FAH) during the day is used to adjust exposure duration and cancer risk from a specific facility's emissions, based on the assumption that exposure to Project construction emissions are not occurring away from home. OEHHA recommends the following FAH values: from the third trimester to age <2 years, 85 percent of time is spent at home; from age 2 through <16 years, 72 percent of time is spent at home; from age 16 years and greater, 73 percent of time is spent at home.

To estimate the cancer risk, the dose is multiplied by the cancer potency factor, the ASF, the exposure duration divided by averaging time, and the frequency of time spent at home (for residents only):

$$\mathbf{Risk_{inh\text{-}res} = (Dose_{air} * CPH * ASF * ED/AT * FAH)}$$

Where:

$Risk_{inh\text{-}res}$ = residential inhalation cancer risk (potential chances per million)
$Dose_{air}$ = daily dose through inhalation (mg/kg-day)
CPF = inhalation cancer potency factor ($mg/kg\text{-}day^{-1}$)
ASF = age sensitivity factor for a specified age group (unitless)
ED = exposure duration (in years) for a specified age group (0.25 years for 3rd trimester, 2 years for 0<2, 7 years for 2<9, 14 years for 2<16, 14 years for 16<30, 54 years for 16-70)
AT = averaging time of lifetime cancer risk (years)
FAH = fraction of time spent at home (unitless)

Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The following equation was used to determine the non-cancer risk:

$$\mathbf{Hazard\ Quotient = Ci/RELi}$$

Where:

Ci = Concentration in the air of substance i (annual average concentration in $\mu g/m^3$)
RELi = Chronic noncancer Reference Exposure Level for substance i ($\mu g/m^3$)

2.2.5.3 Cancer Risk

Construction cancer risk calculations for existing residential and worker receptors were done so for the total time that construction is proposed, 2 years. The calculated cancer risk accounts for 350 days per year of exposure to residential worker receptors. While the average American spends 87 percent of their life indoors (USEPA 2001), neither the pollutant dispersion modeling nor the health risk calculations account for the reduced exposure structures provide. Instead, health risk calculations account for the equivalent exposure of continual outdoor living and working. The calculated carcinogenic risk at Project vicinity receptors is depicted in Table 2-2.

Table 2-2. Maximum Cancer Risk Summary	
Maximum Exposure Scenario	**Total Maximum Risk**
2-Year Exposure Resident	3.54
2-Year Exposure Worker	0.62
Significance Threshold	*10*
Exceed Threshold?	**No**

Source: ECORP Consulting 2022. See Attachment B.

As shown, the existing residents and workers would not experience a significant amount of cancer risk from construction of the Proposed Project.

2.2.5.4 Non-Carcinogenic Hazards

In addition to cancer risk, the significance thresholds for TAC exposure requires an evaluation of non-cancer risk stated in terms of a hazard index and incremental $PM_{2.5}$ concentration. Non-cancer chronic impacts are calculated by dividing the annual average concentration by the REL for that substance. The REL is defined as the concentration at which no adverse non-cancer health effects are anticipated. The potential for acute non-cancer hazards is evaluated by comparing the maximum short-term exposure level to an acute REL. RELs are designed to protect sensitive individuals within the population. The calculation of acute non-cancer impacts is like the procedure for chronic non-cancer impacts.

Table 2-3. Maximum Non-Cancer Risk Summary		
Maximum Exposure Scenario	**Noncancer Risk**	
	Chronic HI	**$PM_{2.5}$ (ug/m^3)**
2-Year Exposure Resident	0.02	0.13
2-Year Exposure Worker	0.02	0.15
Total Risk	***0.04***	***0.28***
Significance Threshold	*1*	*0.3*
Exceed Threshold?	**No**	**No**

Source: ECORP Consulting 2022. See Attachment B.

A chronic hazard index of 1.0 is considered individually significant. The hazard index is calculated by dividing the chronic exposure by the REL. The highest maximum chronic hazard indexes for residents and workers in the Proposed Project vicinity as a result of construction emission exposure is shown in Table 2-3. No acute health risk is associated with DPM under current OEHHA guidelines, thus acute health risk cannot be quantified for the Project. As shown in Table 2-3, impacts related to non-cancer risk (chronic hazard index) because of the Project are less than significant.

3.0 REFERENCES

Bay Area Air Quality Management District (BAAQMD). 2017. Bay Area Air Quality Management District CEQA Air Quality Guidelines.

California Air Pollution Control Offices Association (CAPCOA). 2022. HARP Air Dispersion Modeling and Risk Tool 22118. https://ww2.arb.ca.gov/resources/documents/harp-air-dispersion-modeling-and-risk-tool

California Air Resources Board (CARB). 2008. Health Risk Assessment for the City of Industry Railyard Union Pacific Railroad.

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U.S. Environmental Protection Agency (USEPA). 2002. Health Assessment Document for Diesel Engine Exhaust. https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=300055PV.TXT.

_____. 2001. National Human Activity Pattern Survey.

LIST OF ATTACHMENTS

Attachment A – Health Risk Figures Attachment

B – Health Risk Analysis Output Files

These attachments are available for review at the

City offices

Appendix B

Biological Resources Reports

BIOLOGICAL RESOURCES ASSESSMENT

CANYON CROSSINGS

CITY OF AMERICAN CANYON

NAPA COUNTY, CALIFORNIA

Submitted to:

Branagh Development
3800 Mt. Diablo Blvd., #200
Lafayette, California 94549

Prepared by:

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Project No. BRD1603

LSA

May 2018

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1.0 INTRODUCTION

This report presents the results of biological surveys conducted by LSA on the Canyon Crossings site. The site is located in the northeastern portion of the City of American Canyon east of Highway 29, north of Napa Junction Road, and southwest of the California Northern/Union Pacific Railroad tracks (Figures 1 and 2). The approximately 15.7-acre site comprises Napa County Assessor's Parcel Number 059-020-037-000 (15.04 acres) plus contiguous area that might be impacted by the proposed development.

A jurisdictional delineation was conducted in 2017 by LSA to evaluate the potential for the presence of Corps jurisdictional area (Appendix A). LSA has conducted several biological resource surveys on a property directly adjacent to the east of the site. These surveys include a 2014 rare plant survey, a 2014 California red-legged frog site assessment, a 2014 biological resource assessment, and a 2015 bat roost survey report. Information from these surveys and other relevant sources are summarized in the Watson Ranch Specific Plan Draft Environmental Impact Report (ESA 2016). Information from the jurisdictional delineation and the other sources listed here were used in the preparation of this biological resource assessment.

This report 1) describes survey methodologies, 2) discusses survey results including vegetative communities and wildlife habitats present on the site and special-status species potentially present, 3) discusses any constraints to development presented by existing biological resources, 4) makes recommendations for any additional biological resource surveys that may be necessary prior to development, 5) suggests possible mitigation for potential impacts to biological resources that could result from the proposed project.

1.1 REGULATORY CONTEXT

The Canyon Crossing site is within the geographic range of several sensitive plant communities and special-status plant and animal species. It also contains other resources subject to the jurisdiction of state and federal natural resource agencies. These biological resources may fall under agency jurisdictions and regulations listed below, and are further detailed in Appendix B.

- The U.S. Fish and Wildlife Service (USFWS). Species listed as endangered, threatened or proposed under the federal Endangered Species Act (ESA) as well as species covered by the Eagle Protection Act and Species protected by the Migratory Bird Treaty Act (MBTA).

- California Department of Fish and Wildlife (CDFW). Species listed as endangered, threatened or rare (plants) under the State Endangered Species Act (CESA) as well as designated species of special concern. Additional species and potentially all nesting birds are protected under the Fish and Game Code. Resources requiring Lake and Streambed Alteration Agreements.

- California Environmental Quality Act (CEQA).

- U.S. Army Corps of Engineers (Corps). Fill of waters/wetlands subject to the jurisdiction of Section 404 of the Clean Water Act.

- Regional Water Quality Control Board (RWQCB). Water quality certification under Section 401 of the Clean Water Act, State Porter-Cologne water quality standards.

- Species with a state rare plant rank of 1A, 1B or 2. Impacts to these species are considered significant under CEQA.

LSA

FIGURE 1

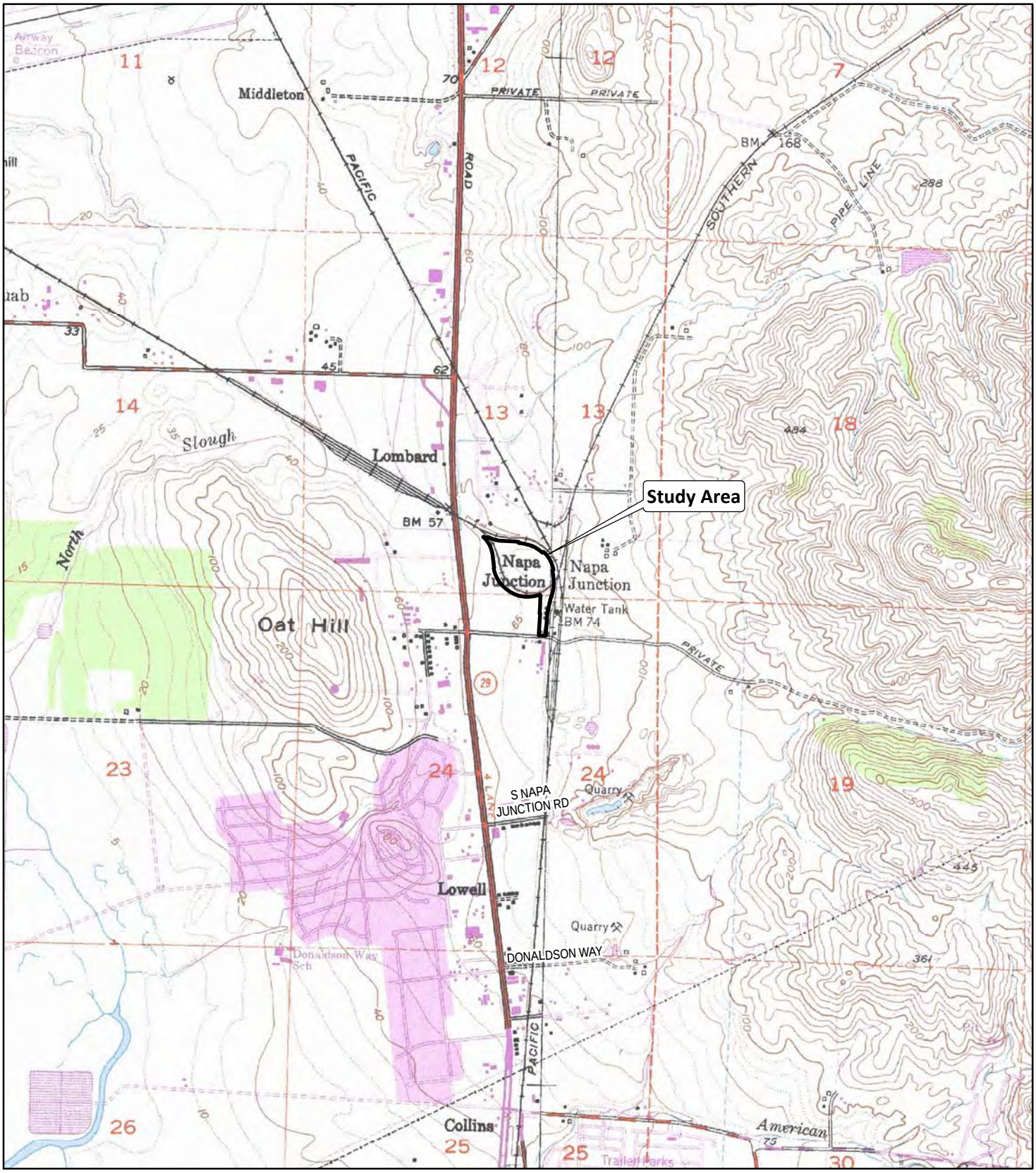
N

0 1000 2000
FEET

SOURCE: ESRI StreetMap North America (2012).

I:\BRD1603\GIS\Maps\Regional Location.mxd (10/19/2017)

Canyon Crossings
American Canyon, Napa County, California
Regional Location



LSA

LEGEND

Study Area

FIGURE 2

N

0 1000 2000

FEET

Union Pacific Property
American Canyon, Napa County, California

Site Location

SOURCE: 7.5-minute Quads: *Cuttings Wharf, Calif.* (1981) and *Cordelia, Calif.* (1980).

I:\BRD1603\GIS\Maps\Delineation\Figure 2_Site Location.mxd (11/3/2017)

2.0 METHODS

Prior to the field visits, LSA searched CDFW's California Natural Diversity Data Base (CNDDB) and the California Native Plant Society's Electronic Inventory of Rare and Endangered Vascular Plants of California for records of special-status species or habitats in the area of the Canyon Crossing site. Using information from these databases and LSA staff knowledge of plants and wildlife in Napa County, the potential occurrence of special-status species and habitats were evaluated.

The following additional documents were reviewed for this assessment:

- Watson Ranch Specific Plan Draft EIR - Section 4.3 - Biological Resources (ESA 2016)
- California red-legged frog Site Assessment, Watson Ranch, American Canyon, CA (LSA 2013)
- CWA Section 404 Jurisdictional Delineation Canyon Crossings (LSA 2018; Appendix A)
- *Results of a Field Survey for Sensitive Botanical Resources at the Napa Junction Site* (LSA 2016)
- *Reconnaissance of Project Site APN 059-020-037-000, Job MOF0602* (LSA 2007)

On January 17, 2018, LSA biologist Bernhard Warzecha and botanist Tim Milliken surveyed the entire site for evidence of the presence of special-status species and the presence of suitable habitats for these species. They mapped the extent of different habitat types. All observed wildlife and plant species (or indicators of their presence) were documented in field notes. A list of all plants observed on the site is included in Appendix C.

3.0 RESULTS

3.1 PLANT COMMUNITIES

Vegetation/land cover types identified within the project site were classified to the alliance level according to the second edition of *A Manual of California Vegetation* (MCV2, Sawyer et al. 2009). These communities were classified to best align with the descriptions in the MCV2, if applicable; otherwise, the names of vegetation types were selected based on the most common species present.

The scientific and vernacular nomenclature for plant species in this document are derived from Baldwin et al. (2012) and updates listed on the Jepson Herbarium website (Jepson Herbarium 2017). A list of all plant species observed during the survey is included as Appendix C.

Vegetation communities and associated wildlife habitats on the project site include:

- Ruderal/developed;
- Grasslands (including non-native and native grasslands);
- Fremont cottonwood forest; and
- wetlands

Ruderal/Developed

The ruderal/developed land cover type refers to the areas of the site that are covered with hard packed gravel or areas of previously disturbed soils with weedy, non-native (alien) plant species forming the predominant plant cover. Plant species present in this land cover type consists of shrubs, broadleaved species and grasses, many of which are found within other vegetation types on the project site. Species observed in this land cover type include wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), perennial rye grass (*Festuca perennis*), and Himalayan blackberry (*Rubus armeniacus*). A patch of introduced giant reed (*Arundo donax*) grows in the southern area of the project site. It is associated with a deposit of broken concrete.

Stands of introduced Himalayan blackberry (*Rubus armeniacus*) occur in several locations and is most often associated with the old railroad berm where it grows adjacent to seasonal wetlands. Pampas grass forms single-species stands and there are also clusters of individual pampas grass plants scattered throughout the project site.

Grasslands

Grasslands on the project site consist of a mix of non-native and native grassland plant species. The plant community categorized as non-native grassland is the most prevalent vegetation type on the project site. Species indicative of the non-native grasslands include wild oats, perennial rye grass, medusa head (*Festuca caput-medusae*), ripgut brome, and Italian thistle (*Carduus pycnocephalus*).

Other non-native plant species observed include yellow star-thistle (*Centaurea solstitialis*), tall wheat grass (*Elymus pontica*), Harding grass (*Phalaris aquatica*), English plantain (*Plantago lanceolata*), and milk thistle (*Silybum marianum*).

Two native plant species were observed throughout the grassland areas and four native plant species are concentrated within a portion of the southern part of the grassland area. Hayfield tarweed (*Hemizonia congesta* subsp*. luzulifolia*) and blue-eyed grass (*Sisyrinchium bellum*) were consistently observed throughout the grassland area. A concentration of California oatgrass (*Danthonia californica*), bearded ryegrass (*Elymus triticoides*), meadow barley (*Hordeum brachyantherum*), and slender rush (*Juncus tenuis*) was observed in the southern part of the grassland area.

Fremont Cottonwood Forest (*Populus Fremontii Forest Alliance*)

This vegetation type is dominated by Fremont's cottonwood (*Populus fremontii*) and has an understory consisting of ruderal/developed and non-native grassland. Two stands of cottonwood trees occur on the project site, one in the south and one in the west. Fremont cottonwood in the southern portion of the project site consists of a grove of small diameter trees (less than 12 inches in diameter) and isolated large diameter trees (between 24 and 52 inches in diameter) that have been topped. The other stand occurs in the western portion of the project site west of the old railroad berm. This grove consists of approximately 15 trees that range in size form 6 inches to 48 inches in diameter. A patch of poison oak (*Toxicodendron diversilobum*) is present on the old railroad berm east of the woodland's edge.

Several scattered trees also occur on the site including Northern California black walnut (*Juglans hindsii*), coast live oak (*Quercus agrifolia*), red willow (*Salix laevigata*), and yucca (*Yucca* sp.). The trees are located west of the old railroad berm, on the north arm of the seasonal wetland, and in the southern part of the project site.

Wetlands

This vegetation type consists of a large wish-bone shaped, south-east to north-west seasonal wetland and several other smaller seasonal wetlands located along the northern boundary of the site that were created by excavating areas during use of the site by the railroad. A jurisdictional delineation has been conducted and a total of 1.47 acres of jurisdictional area was mapped on the property (LSA, 2018). Species within the wetlands include nut sedge (*Cyperus eragrostis*), spike rush (*Eleocharis macrostachya*), coyote thistle (*Eryngium* sp.), toad rush (*Juncus bufonius*), brown-headed rush (*J. phaeocephalus*), iris-leaf rush (*J. xiphioides*), pennyroyal (*Mentha pulegium*), narrowleaf cattail (*Typha angustifolia*), and cocklebur (*Xanthium strumarium*).

3.2 SPECIAL-STATUS PLANTS

The CNDDB (CDFW 2018) search provided occurrence records for 18 species of special-status plants from the region of the project site. Eleven of these 18 species are not expected to occur due to the absence of suitable habitat (i.e., chaparral, coastal prairie and salt marsh conditions, serpentine soils, and rocky slopes) (Appendix D). The project site provides potential valley grassland and seasonal wetland habitat for 7 of the 18 special-status plant species evaluated. The presence of

potentially suitable habitat does not mean the species is present, only that the existing ecological conditions may support these species. The seven plant species that potentially could occur are addressed in Table A.

Table A: Special-Status Plant Species

Species	Status* (Federal/State/CRPR)	Habitat/Blooming Period	Potential to Occur
Astragalus tener var. tener Alkali milkvetch	--/--/1B.2/	**Jepson Ecology:** Alkaline flats, vernally moist meadows. **CNPS Habitats:** Alkaline • Playas • Valley and foothill grassland (adobe clay) • Vernal pools **Elevation:** 1--60 m. **Blooms:** March--June	None. Although grassland habitat is present on the site, alkaline wetland habitat is lacking. This species was not observed during protocol-level botanical surveys on the site in 2006, and is not expected to occur. No surveys are recommended for this species.
Downingia pusilla Dwarf downingia	--/--/2B.2	**Jepson Ecology:** Vernal pools, roadside ditches **CNPS Habitats:** Sometimes serpentinite. • Valley and foothill grassland (mesic) • Vernal pools **Elevation:** 1--445 m. **Blooms:** March--May	None. Mesic grassland habitat is present on the site. This species was not observed during protocol-level botanical surveys on the site in 2006. Prior disturbance on the site has reduced the quality of potential habitat. This species is not expected to occur. No surveys are recommended for this species.
Isocoma arguta Carquinez goldenbush	--/--/1B.1	**Jepson Ecology:** Alkaline soils, flats, low hills, grassland **CNPS Habitats**: • Valley and foothill grassland (alkaline) **Elevation:** 1--20 m. **Blooms:** August--December	None. Although grassland habitat is present on the site, alkaline wetland habitat is lacking. This species was not observed during protocol-level botanical surveys on the site in 2006, and is not expected to occur. No surveys are recommended for this species.
Lasthenia conjugens Contra Costa goldfields	FE/--/1B.1	**Jepson Ecology:** Vernal pools, wet meadows **CNPS Habitats:** mesic. • Cismontane woodland • Playas (alkaline) • Valley and foothill grassland • Vernal pools **Elevation:** 0--470 m. **Blooms:** March--June	None. Mesic grassland habitat is present on the site. This species was not observed during protocol-level botanical surveys on the site in 2006. Prior disturbance on the site has reduced the quality of potential habitat. This species is not expected to occur. No surveys are recommended for this species.
Legenere limosa Legenera	--/--/1B.1	**Jepson Ecology:** Wet areas, vernal pools, ponds **CNPS Habitats:** • Vernal pools **Elevation:** 1--880 m. **Blooms:** April--June	None. Vernal pool habitat is absent from the site. This species was not observed during protocol-level botanical surveys on the site in 2006. This species is not expected to occur. No surveys are recommended for this species.

Species	Status* (Federal/State/CRPR)	Habitat/Blooming Period	Potential to Occur
Trifolium amoenum Two-fork clover	FE/--/1B.1	**Jepson Ecology:** Moist, heavy soils, disturbed areas **CNPS Habitats:** • Coastal bluff scrub • Valley and foothill grassland (sometimes serpentine) **Elevation:** 5--415 m. **Blooms:** April--June	None. Although grassland habitat is present on the site, alkaline wetland habitat is lacking. This species was not observed during protocol-level botanical surveys on the site in 2006, and is not expected to occur. No surveys are recommended for this species.
Trifolium hydrophilum Saline clover	--/--/1B.2	**Jepson Ecology:** Salt marshes, open areas in alkaline soils **CNPS Habitats:** • Marshes and swamps • Valley and foothill grassland (mesic, alkaline) • Vernal pools **Elevation:** 0--300 m. **Blooms:** April--June	None. Although mesic grassland habitat is present on the site, alkaline conditions are lacking. This species was not observed during protocol-level botanical surveys on the site in 2006, and is not expected to occur. No surveys are recommended for this species.

Status:
Federal
FE = Federally listed as endangered.

California Rare Plant Rank (CRPR)
CRPR 1B.1 = Plant species rare, threatened, or endangered in California and elsewhere, seriously threatened in California.
CRPR 1B.2 = Plant species rare, threatened, or endangered in California and elsewhere, moderately threatened in California.
CRPR 2B.2 = CPlant species rare, threatened or endangered in California, but more common elsewhere, moderately threatened in California.

Table B: Sensitive Natural Communities Present in Project Region

Sensitive Natural Communities/Habitats	Status*	Presence within project site
Coastal Brackish March	G2 S2.1	None within project site.
Northern Coastal Salt Marsh	G3 S3.2	None within project site.
Northern Vernal Pool	G2 S2.1	None within project site.
Serpentine Bunchgrass	G2 S2.2	None within project site.

***Sensitive Natural Communities**

G2 Throughout its range, this natural community is imperiled and at a high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.

G3 Throughout its range, this natural community is imperiled with a high risk of extinction due to very restricted range, very few populations (often 20 or fewer), steep declines, or other factors.

3.3 SPECIAL-STATUS HABITATS

There are no special-status habitats on the site.

3.4 WILDLIFE

Wildlife on the site is found in association with the vegetation types present. Depending on specific habitat requirements, an animal may utilize several vegetative types or be restricted to just one. Bird species frequently are closely associated with single habitat types, while mammals will more often move between several.

The grassland areas serve as hunting and feeding areas for a variety of species as well as serving as the principal habitat for several small birds and mammals. They support populations of small rodents and other herbivores including botta pocket gopher, western harvest mouse, and California meadow mouse. Smaller bird species found in the grassland and adjacent shrubland include western meadowlark, red-winged blackbird, European starling, killdeer, and black phoebe. Common reptiles found here include western fence lizard and gopher snake. These species serve as the prey base for a variety of predators. They include resident raptors such as white-tailed kite, red-tailed hawk. Mammalian predators which hunt the grassland include coyote, gray fox and striped skunk.

Many species use the grassland for only part of their habitat requirements. They move between the grassland and other habitat types, generally using the grassland to feed or hunt and seeking cover in other vegetation types. The majority of the predators mentioned above exhibit this behavior pattern. Other species which also engage in this pattern include Audubon's cottontail, wild turkey, California scrub jay, and a variety of songbird species.

Several scattered older trees and snags are found on site. These trees have dead limbs and cavities which can be used as nesting or den sites.

Use of the trees by birds is highly variable and depends on a species' habitat requirements. Several species are found primarily in the crown canopy such as Nuttall's woodpecker and white-breasted nuthatch. Other species, such as Bewick's wren, spotted towhee, and fox sparrow, are found primarily in the shrub and herbaceous understory, while others move between the crown canopy and the ground such as the northern flicker, western bluebird and American robin or the crown canopy and the brush understory such as the bushtit or ruby-crowned kinglet. Some species such as the scrub jay move between all plant layers.

The seasonal wetlands on site potentially support aquatic invertebrates and amphibious wildlife, including pacific tree frog. The four shallow seasonal ponds may contain water for a sufficiently long period for successful tree frog breeding depending on the timing and amount of rainfall.

3.4.1 Nesting Birds

Native nesting birds are protected under the California Fish and Game Code.

The project site is used by a variety of resident and migratory bird species, including native raptor species. Native raptors observed on or in the vicinity of the property during our field work include white-tailed kite and red-tailed hawk. The scattered large trees on site could support raptor nesting.

3.5 SPECIAL-STATUS ANIMALS

Table C lists 12 special-status animal species that have been found in the site vicinity (CNDDB 2018). Of these, 7 were determined to not be present (or not nest) because the site lacks habitat suitable to support them. The potential for California red-legged frog occurring on the site is discussed below. The potential for the remaining six species is described in Table C.

3.5.1 California Red-legged Frog

California red-legged frog (*Rana draytonii*) is federally listed as threatened. This species is listed as a Species of Special Concern by CDFW.

Eleven California red-legged frog occurrences have been recorded within 5 miles of the site, and two occurrences are within 1 mile. CNDDB occurrence #1062 is from North Slough Creek, approximately 0.59 mile north-north-east of the Canyon Crossing site. The second occurrence is recorded from a cement tank close to an abandoned quarry pond, approximately 0.28 mile from the project site. It is possible that dispersing individual California red-legged frogs could find their way to the project site and use the wetlands as non-breeding dispersal habitat.

The seasonal wetlands on site do not pond long enough and are not deep enough for successful California red-legged frog breeding. Breeding adults are most often associated with water deeper than two feet (U.S. Fish and Wildlife Service 2002), and tadpoles require 11 to 20 weeks to develop into terrestrial frogs (Bobzien and DiDonato 2007). These conditions are not present on the site. California red-legged frogs are not expected to breed here.

The Recovery Plan for the California red-legged frog (USFWS 2002) has been issued by the U.S. Fish and Wildlife Service. The Recovery Plan divides the range of the frog into eight recovery units. The Canyon Crossing site is located in the proposed North Coast and North San Francisco Bay Recovery Unit which includes all of Marin, and Sonoma counties, as well as portions of Napa and Solano counties. Within each recovery unit core areas are proposed where recovery actions will be focused. Canyon Crossing is not located in a core area. The closest core area is the Jameson Canyon - Lower Napa River core area, which is located east of the project site. The project site is also not located within critical habitat for this species.

Table C: Special-Status Animals

Species	Listing Status (Federal/State)*	Closest CNDDB Record (miles)	Potential to Occur
Invertebrates			
Callippe silverspot butterfly *Speyeria callippe callippe*	FE/None	4.38	Requires presence of larval host plant Viola pedunculata. None Found. No suitable habitat present. Unlikely to occur.
Amphibians			
California red-legged frog *Rana draytonii*	FT/SSC	0.28	No suitable aquatic breeding habitat on site. Marginal aquatic non-breeding habitat, upland habitat and dispersal habitat present. Presence of breeding California red-legged frog unlikely, dispersing individuals may occur.
Reptiles			
Western pond turtle *Emys marmorata*	None/SSC	0.85	Requires open water habitat. No suitable habitat present. Unlikely to occur.
Birds			
Northern harrier *Circus cyaneus*	None/SSC Nesting	3.70	May occur. Nest on the ground in dense, tall undisturbed herbaceous vegetation. Suitable nesting habitat may be present.
Swainson's hawk *Buteo swainsoni*	None/ST	2.97	Large trees could provide nesting habitat. No stick nests observed. May occur.
American peregrine falcon *Falco peregrinus anatum*	Delisted	Unspecified vicinity	Requires cliffs or tall structures for nesting. No suitable nesting habitat on site. Unlikely to occur.
Burrowing owl *Athene cunicularia*	None/SSC	2.00	Requires open grassland and burrows for nesting. No suitable nesting habitat on site. Unlikely to occur.
San Francisco (saltmarsh) common yellowthroat *Geothlypis trichas sinuosa*	None/SSC	2.28	Freshwater and salt marshes with nearby willow thickets. No suitable habitat present. Unlikely to occur.
Samuel's (San Pablo) song sparrow *Melospiza melodia samuelis*	None/SSC	3.02	Occurs in tidal and muted tidal marshes. No suitable habitat present. Unlikely to occur.
Tricolored blackbird *Agelaius tricolor*	None/CA	1.05	The seasonal wetlands on site provide no suitable breeding habitat. Unlikely to occur.
Mammals			
Suisun shrew *Sorex ornatus sinuosus*	None/SSC	2.58	Requires salt marsh habitat. No suitable habitat present. Unlikely to occur.
American badger *Taxidea taxus*	None/SSC	4.70	Large areas of uncultivated grassland with abundant rodent populations. No suitable habitat present. Unlikely to occur.

*Status:
FE = federally listed as "endangered"
FT = federally listed as "threatened"
ST = State listed as "threatened"
CA = State candidate for listing
SCC = State listed as "species of special concern"

3.5.2 Special-Status Nesting Birds

The following section addresses potential nesting on site by the following special-status bird species:

- Swainson's hawk (listed as "threatened" by the State)
- Northern Harrier (listed as "Species of Special Concern" by the State)

No large stick nests made by a raptor were observed. However Swainson's hawk has the potential to nest on site, either utilizing large mature trees or snags. Northern harrier could potentially nest in the grassland/seasonal wetland areas.

The reconnaissance survey was conducted before the start of the nesting season, therefore no active nests were detected.

4.0 POTENTIAL IMPACTS

The Canyon Crossings project is proposing to develop a residential subdivision on the site. Construction activities related to the development, such as grading, will result in loss of habitat, and may result in impacts to special-status species and their habitats. Additionally, potential adverse impacts to jurisdictional water resources may occur.

4.1 IMPACTS TO SPECIAL-STATUS PLANTS

There are no special-status plants that are expected to occur on the site and none were found during a botanical survey (LSA 2007a). Site development will not result in impacts to special-status plants.

4.2 IMPACTS TO SENSITIVE PLANT COMMUNITIES

There are no special-status plant communities on the site and as a result site development will have no impact on a special-status plant community.

4.3 IMPACTS OF WETLANDS AND OTHER JURISDICATIONAL AREA

Site development as proposed will result in the fill of 0.49 acre of seasonal wetland/other waters.

4.4 IMPACTS TO SPECIAL-STATUS ANIMALS

The project could potentially result in impacts to California red-legged frog and nesting northern harrier and Swainson's hawk (see Section 3.5 above).

The project site contains potential upland dispersal and non-breeding aquatic habitats that could be used by dispersing California red-legged frog. The project will result in the loss of a small amount of California red-legged frog upland dispersal and non-breeding aquatic habitat.

Two special-status raptor species; Swainson's hawk and northern harrier are present in the project vicinity. They have not been found nesting on the site but potentially could in the future. A variety of other native bird species could also potentially nest on the site.

4.5 IMPACTS TO JURISDICTIONAL AREAS

Development of the site as proposed would result in the fill of 0.49 acres of jurisdictional area. The fill of this area will require obtaining Clean Water Act Section 404 and 401 permits from the Corps of Engineers and the Regional Water Quality Control Board. The proposed modifications to the drainage crossing the "panhandle" which provides access to the site will require obtaining a Streambed Alteration Agreement from the California Department of Fish and Wildlife.

5.0 RECOMMENDATIONS

1. Dispersing California red-legged frog individuals have the potential to occur on the site. Project development will need to include appropriate mitigation for any impacts to this species. This will include the preservation/creation of suitable habitat, and measures to avoid direct take of individuals of this species during construction. Suitable area is available on-site for this purpose.

2. Preconstruction surveys for nesting birds, including raptors, should be conducted prior to any construction activities. If birds are observed nesting, appropriate buffers around active nest locations will need to be established until the young have fledged. The size of the buffer will depend on the species and the nest location. If Swainson's hawk are found nesting on the property the California Department of Fish and Wildlife will need to be consulted about the possible need to obtain an Incidental Take Permit.

3. The fill of 0.49 acre of jurisdictional waters and wetlands will require mitigation. Resource agency staff at the projects Interagency Meeting indicated a mitigation ration of 1.5:1 could be acceptable if on-site, in-kind mitigation is provided. The project is proposing this approach.

6.0 REFERENCES

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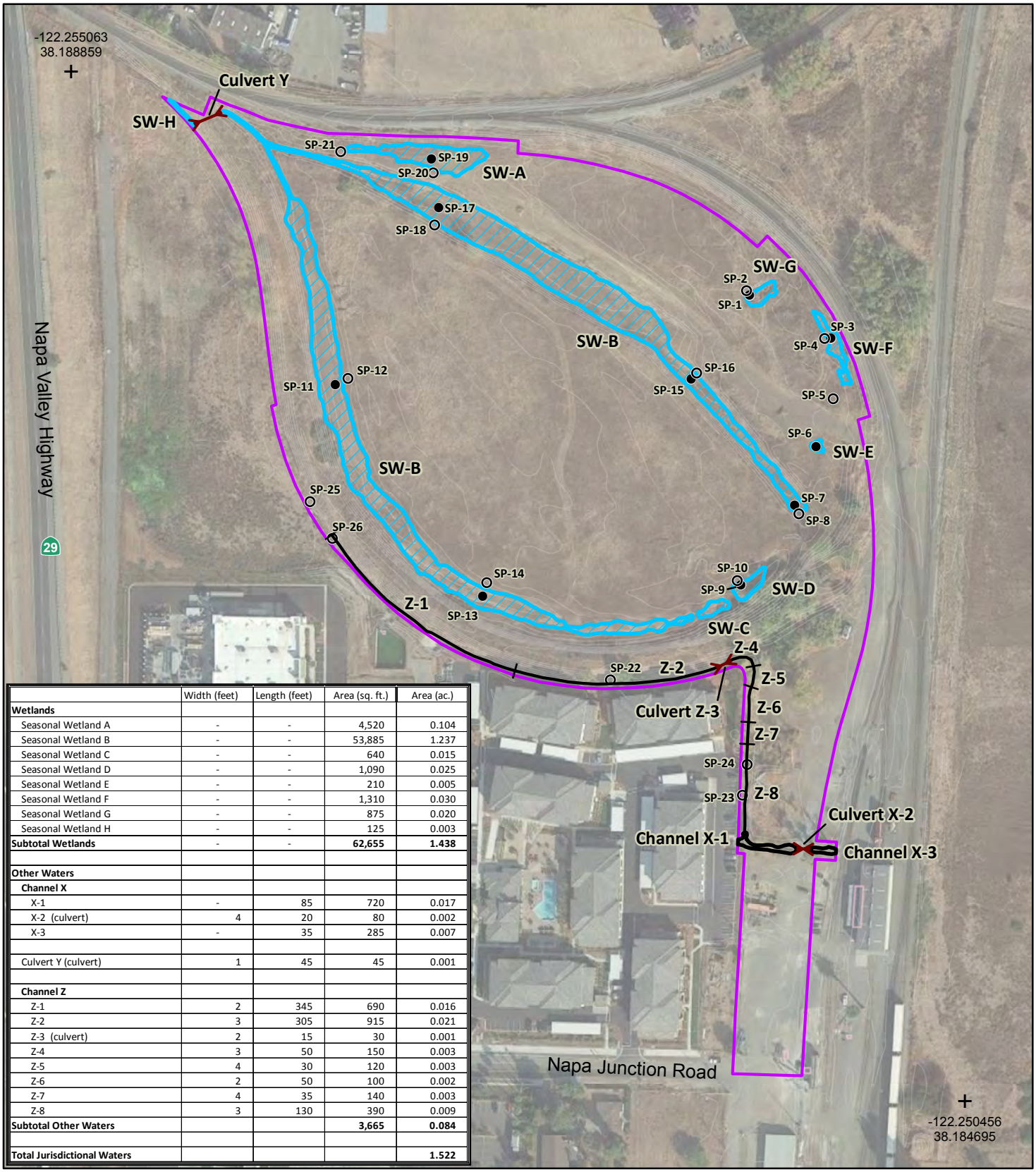
APPENDIX A

JURISDICTIONAL DELINEATION FOR CANYON CROSSINGS, NAPA COUNTY, CALIFORNIA



	Width (feet)	Length (feet)	Area (sq. ft.)	Area (ac.)
Wetlands				
Seasonal Wetland A	-	-	4,520	0.104
Seasonal Wetland B	-	-	53,885	1.237
Seasonal Wetland C	-	-	640	0.015
Seasonal Wetland D	-	-	1,090	0.025
Seasonal Wetland E	-	-	210	0.005
Seasonal Wetland F	-	-	1,310	0.030
Seasonal Wetland G	-	-	875	0.020
Seasonal Wetland H	-	-	125	0.003
Subtotal Wetlands	-	-	**62,655**	**1.438**
Other Waters				
Channel X				
X-1	-	85	720	0.017
X-2 (culvert)	4	20	80	0.002
X-3	-	35	285	0.007
Culvert Y (culvert)	1	45	45	0.001
Channel Z				
Z-1	2	345	690	0.016
Z-2	3	305	915	0.021
Z-3 (culvert)	2	15	30	0.001
Z-4	3	50	150	0.003
Z-5	4	30	120	0.003
Z-6	2	50	100	0.002
Z-7	4	35	140	0.003
Z-8	3	130	390	0.009
Subtotal Other Waters			**3,665**	**0.084**
Total Jurisdictional Waters				**1.522**

LSA

LEGEND

Delineation Study Area

Wetland Sample Point

Non-wetland Sample Point

WATERS OF THE UNITED STATES

Wetlands

Seasonal Wetland

Other Waters

Channel X

Channel Z

Culvert

N

1 INCH = 200 FEET

0 100 200

FEET

SOURCE: Google Orthoimagery (05/2017).

I:\BRD1603\GIS\Maps\Delineation\Figure 3_Waters of the US.mxd (5/7/2018)

FIGURE 3

Union Pacific Property
American Canyon, Napa County, California

Waters of the United States
(Field verified by Corps staff April 19, 2018)

APPENDIX B

REGULATORY CONTEXT

APPENDIX B

REGULATORY CONTEXT

The project site is within the general geographic range of several sensitive plant communities and special-status plant and wildlife species. Biological resources on the project site may fall under the jurisdictions and regulations of the agencies listed below:

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over federally-listed threatened and endangered species under the federal Endangered Species Act. The Endangered Species Act protects listed species from harm or "take" which is broadly defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct." An activity can be defined as a "take" even if it is unintentional or accidental.

An endangered species is one which is in danger of becoming extinct throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered within the foreseeable future. Federal candidate species, species which have been proposed for listing, are not afforded legal protection under the federal Endangered Species Act.

California Department of Fish and Wildlife

The CDFW has jurisdiction over state-listed threatened, endangered, and rare (plant) species under the state Endangered Species Act. In addition, species proposed for listing under the State act are also protected until a determination is made on the listing proposal. The State and federal lists are generally similar, although a few species present on one list may be absent from the other list. The State also maintains lists of special-status wildlife species identified as Species of Special Concern. These are species whose status is being monitored due to one or more threats. Species on these lists are not afforded legal protection.

The CDFW also exerts jurisdiction over the bed and bank of watercourses according to the provisions of Section 1601 to 1603 of the Fish and Game Code. The CDFW typically requires a Streambed Alteration Agreement for the fill or removal of material from any natural drainage. The jurisdiction of the CDFW under Section 1600 of the Fish and Game Code extends to the top of bank of a stream.

U.S. Army Corps of Engineers

Under Section 404 of the Clean Water Act, the Corps is responsible for regulating the discharge of fill material into waters of the United States. Waters of the U.S. and their lateral limits are defined in 33 Code of Federal Regulations (CFR) Part 328.3 (a) and include streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed 'isolated wetlands' and may be subject to Corps jurisdiction.

In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit depends on the acreage involved and the purpose of the proposed fill. Nationwide Permits are available for projects that are anticipated to have minimal impacts on waters of the U.S. and wetlands and meet the general terms of the specific Nationwide Permit and the standard conditions for all Nationwide Permits. An Individual Permit is required for projects that result in more than a "minimal" impact on wetlands. The Corps will be required to consult with the USFW under Section 7 of the ESA if a project subject to Clean Water Act permitting may result in take of a federally listed species.

Regional Water Quality Control Board

Pursuant to Section 401 of the Clean Water Act, projects that require a permit from the Corps under Section 404 must also obtain water quality certification from the Regional Water Quality Control Board (RWQCB). This certification ensures that the project will uphold state water quality standards. The RWQCB requires mitigation for any loss of jurisdictional area.

National Oceanic and Atmospheric Administration: Fisheries. Like the U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration: Fisheries (NOAA) has jurisdiction over federally listed threatened and endangered fish species under the federal Endangered Species Act. The NOAA jurisdiction is restricted to marine and anadromous species such as salmon and steelhead.

APPENDIX C

LISTS OF PLANTS OBSERVED

APPENDIX C

LIST OF PLANTS OBSERVED

Plant Species Observed at the Canyon Crossings Project on May 5 and July 6, 2006, November 1, 2016, October 20, 2017, and January 19, 2018

Family/Species Name - Scientific	Family/Common Name	Native
EUDICOTS		
ANACARDIACEAE	**SUMAC/CASHEW FAMILY**	
Toxicodendron diversilobum	Poison oak	yes
APIACEAE	**CARROT FAMILY**	
Apium graveolens	Celery	no
Eryngium sp.	Coyote thistle	yes
Foeniculum vulgare	Fennel	no
ASTERACEAE	**SUNFLOWER FAMILY**	
Baccharis pilularis	Coyote brush	yes
Carduus pycnocephalus	Italian thistle	no
Centaurea solstitialis	Yellow star-thistle	no Invasive Species
Cichorium intybus	Chicory	no
Cirsium vulgare	Bull thistle	no
Deschampsia sp.	Hairgrass	yes
Dittrichia graveolens	Stinkwort	no
Helminthotheca echioides	Bristly ox-tongue	no
Hemizonia congesta subsp. *luzulifolia*	Hayfield tarweed	yes
Holocarpha virgata	Pigland tarweed	yes
Hypochaeris radicata	Hairy cat's ear	no
Xanthium strumarium	Smooth cocklebur	yes
BRASSICACEAE	**MUSTARD FAMILY**	
Brassica nigra	Black mustard	no
DIPSACACEAE	**TEASEL FAMILY**	
Dipsacus fullonum	Wild teasel	no
FABACEAE	**LEGUME FAMILY**	
Genista monspessulana	French broom	no Invasive Species
Lotus corniculatus	Bird's-foot trefoil	no
Vicia sativa	Spring vetch	no
FAGACEAE	**OAK FAMILY**	
Quercus agrifolia	Coast live oak	yes
GENTIANACEAE	**GENTIAN FAMILY**	
Zeltnera muehlenbergii	Muehlenberg's centaury	yes

Family/Species Name - Scientific	Family/Common Name	Native
GERANIACEAE	**GERANIUM FAMILY**	
Erodium moschatum	White-stem filaree	no
Geranium dissectum	Cutleaf geranium	no
HALORAGACEAE	**WATER-MILFOIL FAMILY**	
Myriophyllum aquaticum	Parrot's feather	no Invasive Species
JUGLANDACEAE	**WALNUT**	
Juglans hindsii	Northern California black walnut	yes
LAMIACEAE	**MINT FAMILY**	
Mentha pulegium	Pennyroyal	no
LINACEAE	**FLAX FAMILY**	
Linum bienne	Flax	no
LYTHRACEAE	LOOSETRIFE	
Lythrum hyssopifolia	Hyssop loosetrife	no
MALVACEAE	**MALLOW FAMILY**	
Malvella leprosa	Alkali mallow	yes
ONAGRACEAE	**EVENING PRIMROSE FAMILY**	
Epilobium brachycarpum	Willowherb	yes
PLANTAGINACEAE	**PLANTIAN FAMILY**	
Plantago lanceolata	English plantain	no
POLYGONACAE	**BUCKWHEAT FAMILY**	
Rumex crispus	Curly dock	no
ROSACEAE	**ROSE FAMILY**	
Rubus armeniacus	Himalayan blackberry	no
RUBIACEAE	**MADDER FAMILY**	
Sherardia arvensis	Blue fieldmadder	no
SALICACEAE	**WILLOW FAMILY**	
Populus fremontii	Fremont's cottonwood	yes
Salix laevigata	Red willow	yes
MONOCOTS		
AGAVACEAE	**CENTURY PLANT FAMILY**	
Chlorogalum pomeridianum	Soap plant	yes
Yucca sp.	Yucca	no
ALISMATACEAE	**WATER PLANTAIN**	
Alisma triviale	Western water-plantain	yes
CYPERACEAE	**SEDGE FAMILY**	
Bolboschoenus maritimus	Alkali bulrush	yes
Cyperus eragrostis	Tall flatsedge	yes
Eleocharis macrostachya	Common spikerush	yes
IRIDACEAE	**IRIS FAMILY**	
Sisyrinchium bellum	Blue-eyed grass	yes

Family/Species Name - Scientific	Family/Common Name	Native
JUNCACEAE	**RUSH FAMILY**	
Juncus bufonius	Toad rush	yes
Juncus effuses	Common rush	yes
Juncus xiphioides	Irisleaf rush	yes
Juncus phaeocephalus	Brown head rush	yes
Juncus tenuis	Poverty rush	yes
JUNCAGINACEAE		
Triglochin scilloides	Flowering-quillwort	yes
TYPHACEAE	**CATTAIL FAMILY**	
Typha angustifolia	Narrowleaf cattail	yes
POACEAE	**GRASS FAMILY**	
Arundo donax	Giant reed	no
Avena fatua	Common wild oat	no
Bromus diandrus	Ripgut brome	no
Bromus hordeaceus	Soft chess	no
Cortaderia jubata	Purple pampas grass	no
Crypsis schoenoides	Swamp picklegrass	no
Cynodon dactylon	Bermuda Grass	no
Danthonia californica	California oat grass	yes
Elymus caput-medusae	Medusa head	no
Elymus ponticus	Tall wheat grass	no
Elymus triticoides	Creeping wildrye	yes
Festuca arundinacea	Tall fescue	no
Festuca myuros	Rat's-tail fescue	no
Festuca perennis	Italian ryegrass	no
Gastridium phleoides	Nitgrass	no
Hordeum brachyantherum	Meadow barley	yes
Hordeum marinum subsp. *gussoneanum*	Mediterranean barley	no
Paspalum dilatatum	Dallisgrass	no
Phalaris aquatica	Harding grass	no
Polypogon monspeliensis	Rabbit's-foot grass	no

APPENDIX D

SPECIAL-STATUS PLANTS NOT CONSIDERED FURTHER

APPENDIX D

SPECIAL-STATUS PLANTS NOT CONSIDERED FURTHER

Special-Status Plant Species found in Project Area but suitable habitat not present on the project site and as a result are not considered further.

Scientific Name	Common Name
Balsamorhiza macrolepis	big-scale balsamroot
Brodiaea leptandra	narrow-anthered brodiaea
Carex lyngbyei	Lyngbye sedge
Castilleja affinis var. neglecta	Tiburon paintbrush
Chloropyron molle ssp. molle	soft bird's-beak
Erigeron greenei	Greene's narrow-leaved daisy
Extriplex joaquinana	San Joaquin spearscale
Lathyrus jepsonii var. jepsonii	Delta tule pea
Lilaeopsis masonii	Mason's lilaeopsis
Polygonum marinense	Marin knotweed
Symphyotrichum lentum	Suisun Marsh aster

Site Biological Resource Documentation

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Appendix C

Traffic Memoranda

THE RESIDENCES AT NAPA JUNCTION

TRIP GENERATION MEMORANDUM

Consulting Group
1617 Clay Street
Oakland, CA 94612
(510) 272-9597

SEPTEMBER 2022

Study Purpose and Project Description

The purpose of this technical memorandum is to provide a preliminary assessment of the proposed Residences at Napa Junction in American Canyon (proposed project) in terms of potential vehicular traffic generation. The development is located northeast of the intersection of Napa Junction Road and Broadway (Highway 29) in the City of American Canyon. The proposed project is located to the northeast of the intersection of Napa Junction Road and Highway 29 in American Canyon, California on 15.051 acres within the Broadway District Specific Plan area (BDSP). The project site is located within the Downtown Core subarea and the Business Park Zoning District of the BDSP.

The proposed project would develop the existing vacant land with a new three-story and four-story multifamily residential community consisting of 453 dwelling units, 4,548 gross-square-foot (gsf) childcare center, 6,225 gsf community center, and 768 onsite parking spaces. The childcare center would have capacity for up to six infants, eight toddlers, and 32 preschoolers. The community center would include an exercise room (1,131 gsf plus outdoor exercise space), meeting room and co-working spaces (2,651 gsf), lounge with full kitchen (1,270 gsf), a lap pool (with furnished outdoor spaces), a children's rock/wading pool (with furnished outdoor space), and a pool house (with 850 gsf party room and outdoor party room).

The residential buildings would include 141 one-bedroom, 252 two-bedroom, and 60 three-bedroom units. The proposed project would provide 46 dwelling units at 50 percent of Area Median Income (AMI). Of the 768 onsite parking spaces, 753 would be for resident use, including 167 private garages, 90 covered spaces, 76 tandem spaces, and 17 ADA-accessible spaces. The remaining 15 onsite parking spaces would be for staff and visitors, including 14 childcare facility spaces and one leasing office space. The proposed project would also provide approximately 216 long-term (Class 1) bicycle parking spaces within seven “bicycle sheds”, 42 short-term (Class 2) bicycle parking spaces, and four bicycle repair stations. The proposed project would construct a pedestrian-friendly internal roadway and sidewalk network that connects to the existing City of American Canyon roadway and sidewalk networks at Napa Junction Road and Reliant Way.

The proposed project would also implement a TDM program that includes proximity to transit, proximity to commercial uses, pedestrian access improvements, bicycle facilities, wayfinding, TDM coordinator, and TDM communication, and unbundled parking. As detailed in the June 2022 Parking and TDM memorandum prepared for the proposed project, the TDM plan would achieve 11 points from the menu of TDM strategies meeting the required 10-point target established in the BDSP. Based on CAPCOA methodology, the proposed project’s TDM program is expected to reduce single occupancy vehicle trips (SOVs) by up to 20 percent.

ITE Trip Generation Estimate

CHS used the *ITE Trip Generation Manual*, 10th Edition to estimate the expected vehicular trip generation for the proposed project on a typical weekday and during both the AM and PM peak hours. For the market rate housing, CHS used the Midrise Multifamily Residential land use (ITE Code 221) in general Urban / Suburban (with no nearby rail transit) setting. This land use generates 5.44 daily vehicle trips per unit, 0.36 AM peak

hour vehicle trips per unit (26 percent inbound and 74 percent outbound), and 0.44 PM peak hour vehicle trips per unit (61 percent inbound and 39 percent outbound). For affordable housing, CHS used the Affordable Housing[1] land use (ITE Code 223) in a General Urban / Suburban setting. This land use generates 5.44 daily vehicle trips per unit, 1.02 AM peak hour vehicle trips per unit (70 inbound and 30 percent outbound), and 0.62 PM peak hour vehicle trips per unit (61 percent inbound and 39 percent outbound). For the childcare center, CHS used the Day Care Center land use (ITE Code 565) in a General Urban / Suburban setting. This land use generates 4.09 daily vehicle trips per student, 0.78 AM peak hour vehicle trips per student (53 percent inbound and 47 percent outbound), and 0.79 PM peak hour vehicle trips per student (47 percent inbound and 53 percent outbound).

Figure 1 shows the proposed project is expected to generate up to 2,652 daily vehicle trips, including 229 AM peak hour (90 inbound and 139 outbound) and 243 PM peak hour (143 inbound and 100 outbound) vehicle trips.

Figure 1: ITE Trip Generation Estimate

Land Use	ITE Code	Size	Unit	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Midrise Multi-Family Residential	221	407	units	2,214	38	108	146	109	70	179
Affordable Housing	223	46	units	250	33	14	47	17	11	28
Childcare Center	565	46	students	188	19	17	36	17	19	36
			Total	**2,652**	**90**	**139**	**229**	**143**	**100**	**243**

Source: ITE Trip Generation Manual, 10th Edition; CHS Consulting Group, 2022.

However, **Figure 1** does not factor trip reductions from the proposed project's TDM program. The proposed project's TDM program is expected to reduce residential SOV trips by 20 percent. **Figure 2** shows the proposed project with the TDM program implemented would generate up to 2,160 daily vehicle trips, including 190 AM peak hour (75 inbound and 115 outbound) and 202 PM peak hour (118 inbound and 84 outbound) vehicle trips.

Figure 2: ITE Trip Generation Estimate with TDM Reductions

Land Use	ITE Code	Size	Unit	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Midrise Multi-Family Residential[1]	221	407	units	1,771	30	87	117	87	56	143
Affordable Housing[1]	223	46	units	200	26	11	37	14	9	23
Childcare Center	565	46	students	188	19	17	36	17	19	36
			Total	**2,160**	**75**	**115**	**190**	**118**	**84**	**202**

Source: ITE Trip Generation Manual, 10th Edition; CHS Consulting Group, 2022.
Notes:

1. Assumes 20 percent trip reduction from proposed project TDM program

[1] Affordable Housing (income limited) includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing is a function of limited household income.

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THE RESIDENCES AT NAPA JUNCTION

PARKING AND TRANSPORTATION DEMAND MANAGEMENT MEMORANDUM

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SEPTEMBER 2022

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1.0 Introduction

The purpose of this technical memorandum is to provide a preliminary assessment of whether the on-site parking supply for the subject development would be expected to adequately serve residents without affecting surrounding parking supply on adjacent streets. The development is located northeast of the intersection of Napa Junction Road and Broadway (Highway 29) in the City of American Canyon, (herein referred to as the proposed project). This memorandum also provides a preliminary list and evaluation of recommended transportation demand management (TDM) measures intended to reduce estimated project-generated drive-alone mode share and vehicle parking demand.

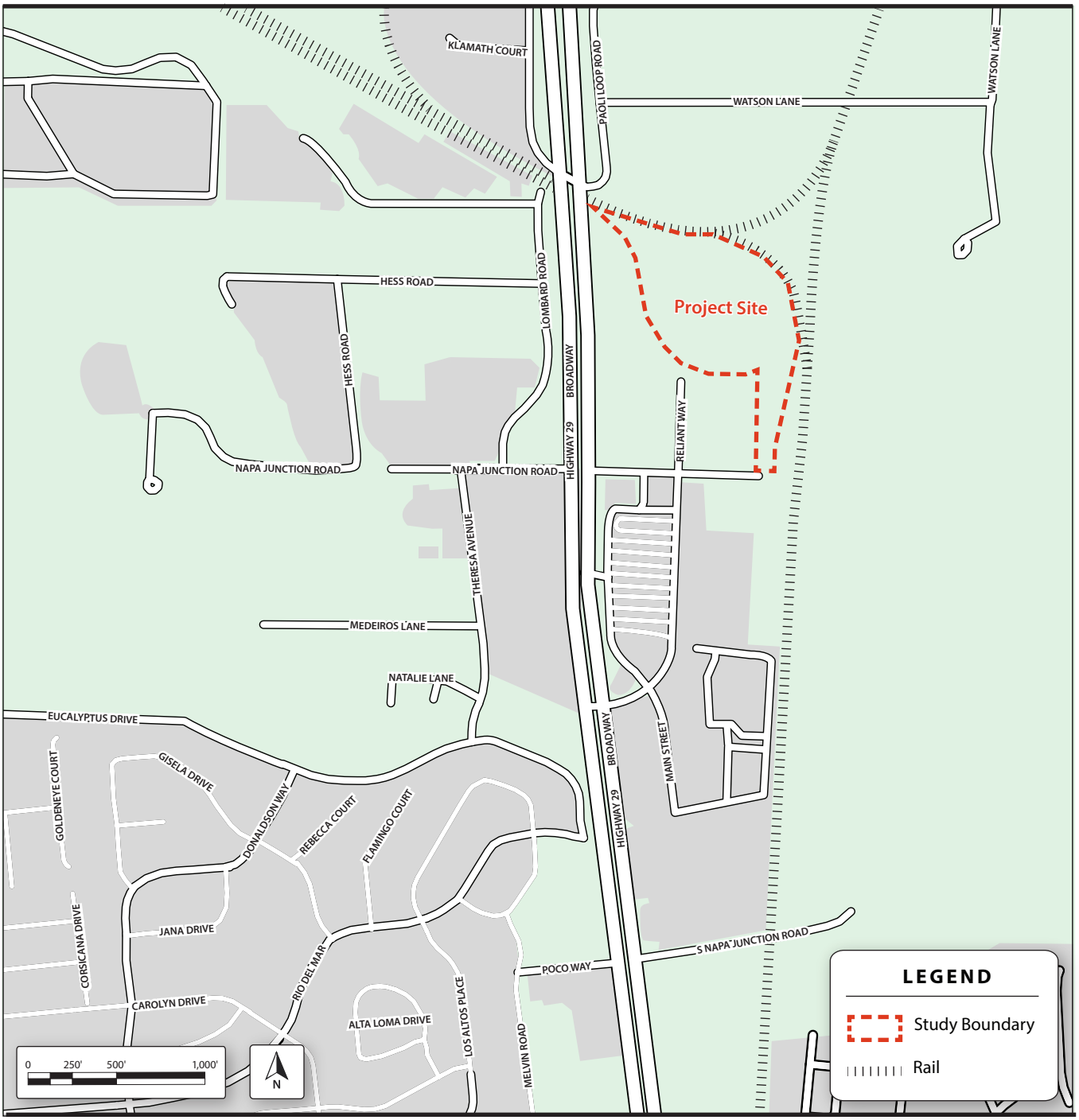
2.0 Project Description

The proposed project is located to the northeast of the intersection of Napa Junction Road and Highway 29 in American Canyon, California on 15.051 acres within the Broadway District Specific Plan area (BDSP). The project site is located within the Downtown Core subarea and the Business Park Zoning District of the BDSP. **Figure 1** shows the Project location.

The proposed project would develop the existing vacant land with a new three-story and four-story multifamily residential community consisting of 453 dwelling units, 4,548 gross-square-foot (gsf) childcare center, 6,225 gsf community center, and 768 onsite parking spaces. The childcare center would have capacity for up to six infants, eight toddlers, and 32 preschoolers. The community center would include an exercise room (1,131 gsf plus outdoor exercise space), meeting room and co-working spaces (2,651 gsf), lounge with full kitchen (1,270 gsf), a lap pool (with furnished outdoor spaces), a children's rock/wading pool (with furnished outdoor space), and a pool house (with 850 gsf party room and outdoor party room).

The residential buildings would include 141 one-bedroom, 252 two-bedroom, and 60 three-bedroom units. The proposed project would provide 46 dwelling units at 50 percent of Area Median Income (AMI). Of the 768 onsite parking spaces, 753 would be for resident use, including 167 private garages, 90 covered spaces, 76 tandem spaces, and 17 ADA-accessible spaces. The 76 tandem spaces would be enforced through resident rental agreements to ensure all onsite tandem spaces are used to park vehicles only, prohibiting their use for the storage of any other items. The remaining 15 onsite parking spaces would be for staff and visitors, including 14 childcare facility spaces and one leasing office space. The proposed project would also provide approximately 216 long-term (Class 1) bicycle parking spaces within seven "bicycle sheds", 42 short-term (Class 2) bicycle parking spaces, and four bicycle repair stations. The proposed project would construct a pedestrian-friendly internal roadway and sidewalk network that connects to the existing City of American Canyon roadway and sidewalk networks at Napa Junction Road and Reliant Way.

Figure 2 shows the Project ground-level site plan.



American Canyon Parking & TDM Study

Figure 1
Study Location

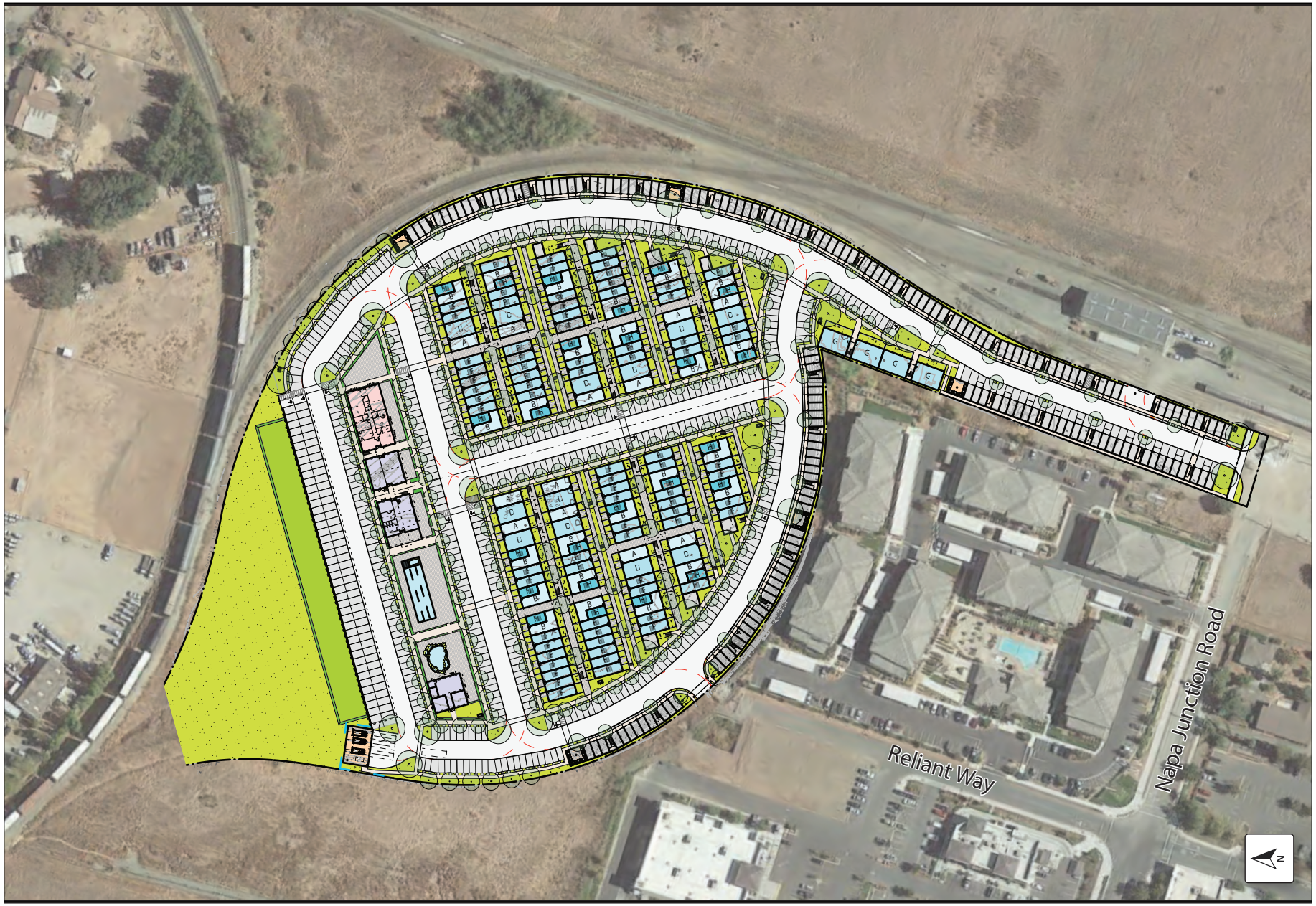


Figure 2
Proposed Project Site Plan

2.1 Municipal Code Parking Requirement

This section describes the City of American Canyon's parking requirements, established in Chapter 19.21.030 of the American Canyon Municipal Code (City Code). American Canyon has various parking requirements for different land uses. For multifamily residential, American Canyon requires new developments to provide 1.0 covered space per studio unit, 1.0 covered space and 0.5 uncovered spaces per one-bedroom unit, 1.0 covered space and 1.0 uncovered space for units with two or more bedrooms, and 0.25 guest spaces per unit. **Figure 3** shows the proposed project would be required by City Code to provide a total of 949 onsite parking spaces for residential use. Therefore, the proposed project's 753 residential parking spaces would be short by 196 spaces or approximately 20 percent of the minimum required by City Code.

Figure 3: Project Residential Parking Requirements – American Canyon City Code

Land Use	Size	Unit	Rate	Spaces
Multi-Family Residential				
1-Bedroom	*141*	*du*	*1.5*	*212*
2-Bedroom	*252*	*du*	*2*	*504*
3-Bedroom	*60*	*du*	*2*	*120*
Guest Parking	*453*	*du*	*0.25*	*113*
Total Required Supply				**949**
Residential Parking Supply				**753**
Surplus / (Deficit)				**(196)**

Notes: DU = dwelling units

However, the proposed project would provide affordable housing units meeting California's Density Bonus Law requirements, per California Government Code Section 65915(p)(1)(A&B).[1] The law allows development projects that meet minimum affordable housing requirements to provide no more than 1.0 space for each studio and one-bedroom unit, 1.5 spaces for each two- to three-bedroom unit, and 2.0 spaces for each four and more bedroom unit. **Figure 4** shows the proposed project would be required by the Density Bonus Law to provide a minimum of 609 onsite parking spaces for residential use. Therefore, the proposed project's 753 residential parking spaces would meet the Density Bonus Law requirements, with a surplus of 144 spaces.

Figure 4: Project Residential Parking Requirements – State Density Bonus

Land Use	Size	Unit	Rate	Spaces
Multi-Family Residential				
1-Bedroom	*141*	*du*	*1*	*141*
2-Bedroom	*252*	*du*	*1.5*	*378*
3-Bedroom	*60*	*du*	*1.5*	*90*
Total Required Supply				**609**
Residential Parking Supply				**753**
Surplus / (Deficit)				**144**

Notes: DU = dwelling units

[1] Source: https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=65915&lawCode=GOV ,amended by SB 728, effective January 1, 2022.

3.0 EXISTING TRANSPORTATION SYSTEM

This section describes the existing transportation system in the vicinity of the proposed project, including transit service, bicycle facilities, and pedestrian facilities. **Figure 5** shows the existing transit network serving the study area.

3.1 TRANSIT SERVICE

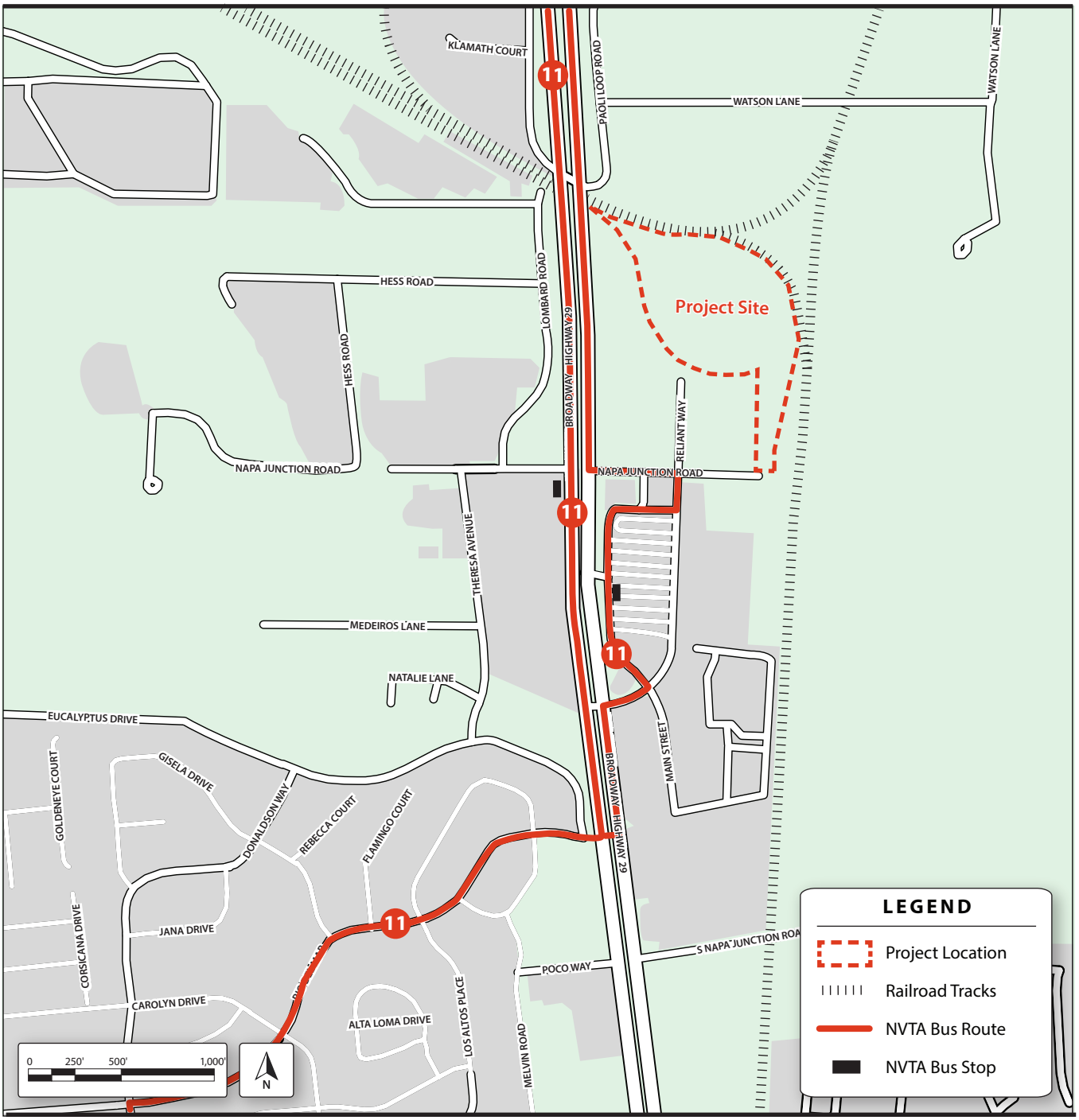
The study area for transit generally covers a one-third mile radius from the project site. Local transit is provided by the Vine Transit system, operated by the Napa Valley Transportation Authority (NVTA), which serves more than one million passengers each year. NVTA provides local fixed-route service in Napa, door-to-door paratransit and community shuttles, and regional express bus service throughout the valley to key transportation hubs including the San Francisco Bay Ferry Terminal in Vallejo, the El Cerrito del Norte BART station, and Amtrak Capital Corridor trains at the Fairfield/Suisun train station. The following NVTA/Vine Transit bus and shuttle routes make stops within walking distance of the project site.

Route 11 provides service connecting the cities of Napa, American Canyon, and Vallejo. It also provides transfers to Routes 10, 21, and 29 at the Soscol Gateway Transit Center and to ferry services at the Vallejo Ferry Terminal[2]. This route operates between 6:30 a.m. and 9:30 p.m. with one-hour headways in each direction. The nearest northbound stop to the project site is located on Main Street, approximately 1,600 feet south of the project site. The nearest southbound stop to the project site is located at the southwest corner of the Napa Junction Road and Highway 29 intersection, approximately 1,300 feet west of the project site.

American Canyon Transit is an on-demand, door-to-door transit service that operates within specific areas of the city. The service also operates limited fixed-route service on weekdays between 8:30 a.m. and 5:30 p.m. with the nearest stop to the project site located at the Walmart on Napa Junction Road, approximately 1,300 feet south of the project site.

The BDSP established goals and strategies to improve transit access in the Downtown Core subarea, including reconfiguring Broadway with pedestrian sidewalks, bicycle lanes, and bus stops to provide the convenient bicycle and pedestrian access needed to provide regularly scheduled bus service. The BDSP also established strategies to work with NVTA to improve bus transit, including additional routes and new stops within the Broadway District as needed, as well as participation in any rail service plans that may emerge from the NVTA in the future.

[2] The Vallejo Ferry Terminal is served by Vine Transit Routes 11 and 11X and provides ferry service between Vallejo and the Ferry Building in Downtown San Francisco.



Residences at Napa Junction Parking & TDM Study

Figure 5
Transit Network

3.2 BICYCLE FACILITIES

Bicycle facilities include bicycle lanes, trails, and paths as well as bicycle parking, bicycle lockers, and showers for cyclists at the site level. On-street bicycle facilities include Class I bikeways (trails or shared-use paths with exclusive right-of-way for use by bicyclists or pedestrians); Class II bikeways (bicycle lanes striped within the paved areas of roadways and established for the preferential use of bicycles); Class III bikeways (signed bicycle routes that allow bicycles to share travel lanes with vehicles); and Class IV separated bikeways (on-street bike facilities that are physically separated from traffic by curbs, plant boxes, bollards, grade separation, or parked cars and provide exclusive right-of-way for bicyclists). Existing bicycle facilities near the project site include:

Class I Bike Paths:

- Broadway (east side of roadway), between Napa Junction Road and Eucalyptus Drive

The American Canyon Bicycle Plan and DTPP identified several planned and proposed bicycle facilities in the study area, including:

Class I Bike Paths:

- Paoli Loop Road, between Green Island Road and Watson Lane
- Watson Lane, between Paoli Loop Road and Railroad Right-of-Way
- Railroad Right-of-Way, between Green Island Road and the City of Vallejo boundary
- Broadway, between Paoli Loop Road and Eucalyptus Drive
- Eucalyptus Drive (includes bridge over Broadway), between Theresa Avenue and Main Street
- Main Street, between Eucalyptus Drive and Railroad Right-of-Way

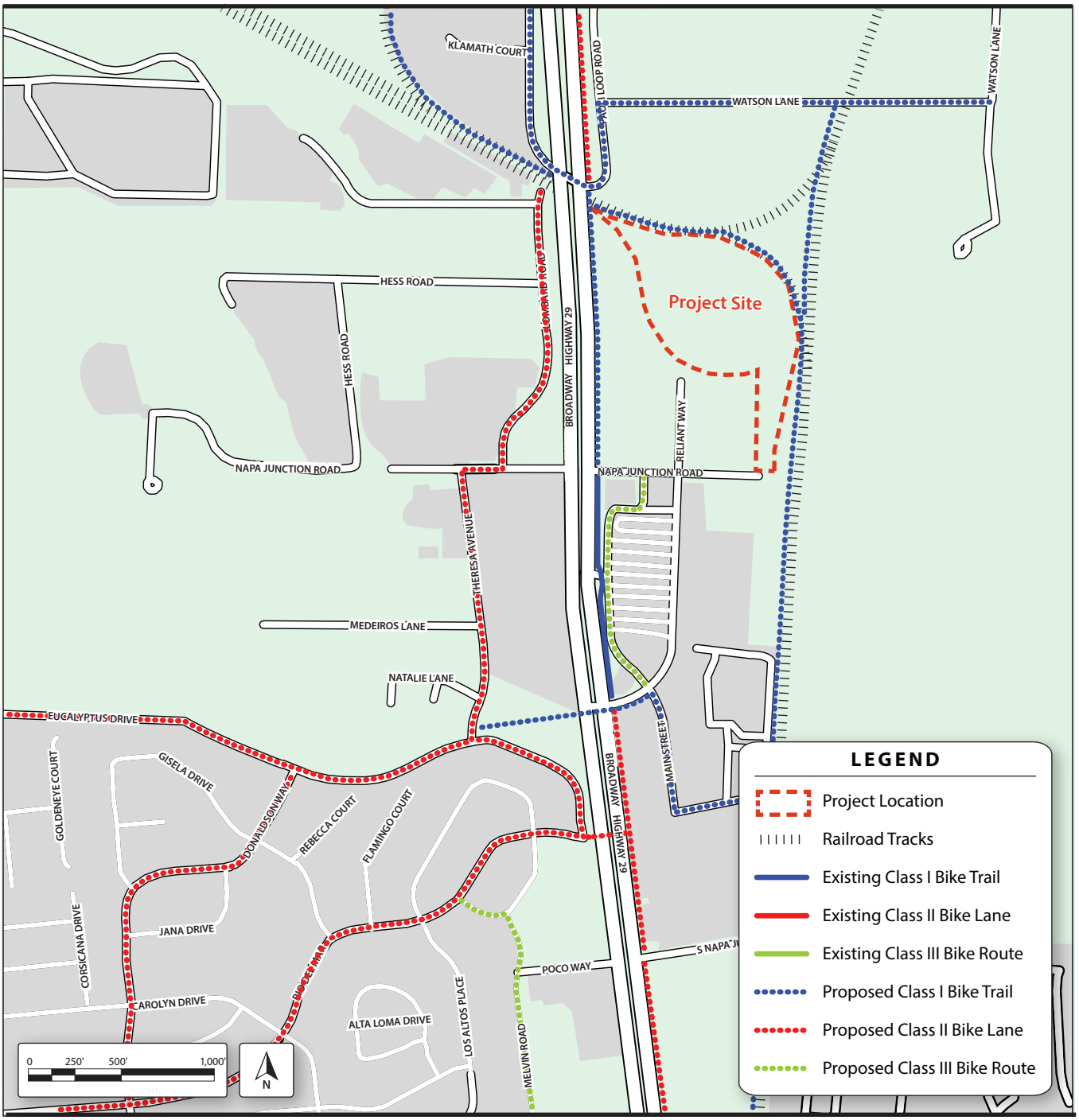
Class II Bike Lanes:

- Broadway, between Paoli Loop Road and Green Island Road
- Broadway, between Eucalyptus Drive and American Canyon Road
- Lombard Road, between Railroad Right-of-Way and Napa Junction Road
- Napa Junction Road, between Lombard Road and Theresa Avenue
- Theresa Avenue, between Napa Junction Road and Eucalyptus Drive
- Eucalyptus Drive, between Wetlands Edge Road and Rio Del Mar
- Rio Del Mar, between Broadway and Wetlands Edge Road
- Donaldson Way, between Eucalyptus Drive and Benton Way

Class III Bike Routes:

- Main Street, between Napa Junction Road and Eucalyptus Drive
- Melvin Road, between Rio Del Mar and Marla Drive

Figure 6 shows existing and proposed bicycle facilities in the study area.



Residences at Napa Junction Parking & TDM Study

Figure 6
Bicycle Network

3.3 Pedestrian Facilities

Pedestrian facilities generally include sidewalks, crosswalks, curb ramps, pedestrian signals, and streetscape and landscape amenities (i.e., benches, tree-lined buffers, planters, bulb-outs, and street lighting). The proposed project is located in a suburban setting and within the Downtown Core subarea of the BDSP with a continuous sidewalk network. Sidewalks are provided near the project site along Napa Junction Road and Reliant Way. However, these sidewalks currently terminate at the project site where the proposed project would construct new connections to the proposed internal sidewalk network. Outside of the Downtown Core subarea of the BDSP, the sidewalk network becomes discontinuous with some incomplete sidewalk segments resulting from older auto-oriented land uses or the general absence of development.

The project site is located near the intersection of Reliant Way and Napa Junction Road (approximately 600 feet south of the project site). This intersection is two-way stop controlled and provides standard pedestrian crosswalks at the north and east legs, as well as a high-visibility crosswalk at the south leg. ADA-accessible curb ramps are provided at each corner of the intersection where crosswalks are present. The intersection of Broadway (Highway 29) and Napa Junction Road (approximately 1,100 feet southwest of the project site) is signal controlled and provides standard pedestrian crosswalks at the east, south, and west legs. ADA-accessible curb ramps are provided at each corner of the intersection where crosswalks are present. Pedestrian signal heads with pushbuttons are also provided at all three crosswalk locations.

The BDSP has established goals for improving mobility within the district, including reducing speed limits, providing alternative access for drivers to businesses off Broadway, promoting safe access routes for pedestrians through the area, beautifying Broadway and emphasizing aesthetic place-making through landscaping and gateway treatments, and providing parallel pedestrian-oriented routes to retail that are located one-block from Broadway. The BDSP proposes a paseo/alleyway program to interconnect neighboring parcels and a revised roadway cross section for Broadway as a six-lane arterial with a 35mph design speed, separated bicycle lanes, and landscaped median. Overall, the BDSP will enhance and expand pedestrian facilities to provide a viable and attractive alternative to driving.

4.0 Transportation Demand Management (TDM) Plan

TDM is an initiative that aims to reduce project impacts from added single-occupant vehicles (SOVs) and vehicle miles traveled (VMT)[3] on a transportation network. The initiative is designed to provide people with more transportation choices in order to achieve a mode shift towards alternative transportation options such as public transit, biking, walking, carpooling, vanpooling, and carshare services.

4.1 TDM Quantification Methodology

CHS estimated the proposed project's VMT and parking demand reductions using guidance from the California Air Pollution Control Officers Association (CAPCOA) and Victoria Transport Policy Institute (VTPI).

[3] Vehicle miles traveled (VMT) per capita is calculated as the total miles of vehicle travel in a given time period (day, month, or year) divided by the total population in a given geographic location (i.e., state, county, municipality, or district/zone) and is used to measure transportation impacts associated with development.

CHS used CAPCOA's "Quantifying Greenhouse Gas Mitigation Measures" report (CAPCOA report)[4] and VTPI's "Parking Management" report[5] to quantify both VMT and parking demand reductions.

The CAPCOA report methodology and research is designed to quantify VMT reductions attributable to TDM measures according to project type and location. The analysis assumes a half-mile radius from the project site and includes other land uses within that radius as inputs for design, density, and diversity calculations.

The methodology considers the proposed project's location and applies a location-based cap representing the average and maximum reductions that will be expected in urban, compact infill, suburban center, and suburban locations. For example, projects located in an urban setting will be expected to have a higher VMT and parking demand reduction when compared to the same project located in a suburban setting. For the purposes of this analysis, the proposed project is considered to be located in a suburban center setting, characterized by limited clusters of complementary land uses surrounded by dispersed, low-density, single-use, automobile dependent land use patterns, typically 20 miles or more from the central city. The suburban center setting has a maximum reduction cap of 20 percent for all associated TDM measures. It assumes that the project's distance from high-frequency transit, density, design, and lack of mixed-use destinations will limit the effect of any strategies or combination of strategies.

CAPCOA is an air quality management association, and thus, the CAPCOA report focuses on quantifying VMT and related greenhouse gas emission reductions. Generally, a one percent reduction in SOV trips is equal to a one percent reduction in VMT. However, these strategies reduce dependence on automobiles and, in turn, can reduce demand for parking. Providing better access to alternative modes and improving the resident's mode choice (e.g., walking, biking, carpooling, transit, etc.) can result in residents forgoing vehicle ownership or purchasing a second vehicle that they would otherwise rely on to complete trips.

To understand the potential parking demand reductions from the Project's TDM plan, CHS used parking reduction impact estimates from VTPI's Parking Management report to quantify the reductions. VTPI's parking reduction impacts vary depending on geographic and demographic factors. Impacts are higher where greater alternative travel options are available and financial incentives tend to have greater impacts on lower-income households. Note that total parking reduction impacts are multiplicative, not additive. For example, unbundling parking can reduce parking demand by 30 percent and bicycle facilities can reduce parking demand by 15 percent, but when implemented together the reduction would reduce parking demand by 40 percent, not 45 percent.

4.2 Project TDM Measures

The proposed project's TDM plan will implement measures to reduce residential parking demand to a level that can be accommodated by the proposed supply, including land use location strategies (e.g., density, affordable housing, proximity to commercial uses, etc.), unbundled parking, enhanced bicycle facilities,

[4] California Air Pollution Control Officers Association (CAPCOA) August 2010 report, *Quantifying Greenhouse Gas Mitigation Measures – A Resource for Local Government to Assess Emission Reductions from Greenhouse Gas Mitigation Measures*
[5] Victoria Transport Policy Institute (VTPI) November 2021 report, *Parking Management Strategies, Evaluation, and Planning*

improved walking conditions, information and marketing, onsite amenities, and a dedicated onsite drop-off area. As described above, the proposed project is in a suburban center setting with limited transit access and moderate pedestrian facilities. Therefore, the proposed project's TDM measures have been chosen to leverage available facilities in the study area with a focus on measures that reduce residential parking demand.

4.2.1 Mobility Management / Information and Marketing

Transportation Coordinator (preparation of TDM Plan and On-Site Information)

The proposed project would implement a TDM Plan and appoint a TDM Coordinator. The appointed TDM Coordinator is typically the on-site building manager. The TDM plan would encompass a combination of individual measures and strategies to reduce drive-alone mode share and parking demand, and encourage alternative modes of transportation such as carpooling, taking transit, walking, and biking. The TDM Plan and Coordinator provide residents and employees with assistance in using alternative modes of travel.

The TDM coordinator would be appointed by the building manager or property owner. This person would be responsible for implementing and managing the proposed project's TDM plan, ensure new residents and tenants are aware of all available transportation options, and serve as the point of contact for all residents and employees to answer any TDM-related questions. The following services would be provided by the TDM Coordinator:

- Provide information packets to all new residents and employees.
- Set up and maintain an onsite and/or online TDM board/kiosk with information on non-auto transportation alternatives and promotional programs.
- Provide trip planning assistance to residents and employees considering an alternative mode, including carpool/vanpool ride-matching and bicycle buddy matching services.
- Provide information to residents about available transit options and subsidized transit programs, if applicable.
- Conduct annual resident commute surveys and parking occupancy counts to determine if parking reduction goals are being met and track actual parking demand. These results would be used to improve the effectiveness of existing measures and determine if any additional TDM measures are required.

Transportation Information Packets (New Tenant Packets)

The appointed Transportation Coordinator would provide transportation information packets to all new residents and employees upon move-in. The packets would include local and regional bikeway maps, 511 bicycling resources, local and regional transit maps, locations of nearest transit stops, local and regional transit schedules of adjacent routes, trip planning resources, ride-matching/sharing programs, and contact information for the Transportation Coordinator. The new tenant information packets would also be made available to residents and employees via the onsite and/or online TDM board/kiosk.

TDM Board/Kiosk

The Transportation Coordinator would setup and maintain an onsite and/or online bulletin board with information on non-auto transportation alternatives. The TDM board/kiosk would provide up-to-date transportation information (including updated transportation information packets), transportation news, and commuter alerts. The TDM board/kiosk would provide site-specific transportation resources to all residents and employees, and would contain information regarding all proposed project TDM measures, services, and facilities discussed in the TDM plan, including:

- Local and regional transit services
- Local and regional bikeway maps and information about onsite bike lockers
- Information and links to ride-matching services and any available incentive programs for carpools/vanpools
- Information on other trip planning resources available in Napa County and the Bay Area
- Bicycle resources on 511.org
- Bicycle safety tips
- Information about taking bicycles on public transit
- Tips on selecting bicycles, commuter gear, and clothing
- Bicycle buddy matching services
- Links to local bicycle organizations such as the Napa County Bicycle Coalition.

Trip Planning Resources

The Transportation Coordinator would provide residents and employees with information on free trip planning resources to be included in the new tenant information packets, onsite and online TDM board/kiosk, or upon request. Free trip planning resources available to residents and employees include the 511 Trip Planner, 511 Mobile, and Dadnab[6].

- 511 Transit Trip Planning provides online transit trip planning services throughout the greater Bay Area at 511.org. This service enables riders to input their origin and destination and choose the best route based on fastest trip, fewest transfers, or least walking.
- 511 Mobile provides access to 511.org services via a smart phone or other mobile device, enabling commuters to receive real-time transit departure predictions, plan public transit trips, receive real-time traffic conditions on a live traffic map, and estimate current drive times for popular routes.
- Dadnab enables users to receive transit directions via free text messages. Residents and retail tenants send a text message with their origin and destination locations, as well as optional departure or arrival time, and Dadnab replies with a detailed itinerary that includes the bus or train route to take, stop locations, and departure times.

[6] Dadnab is a free text-messaging service that provides transit information in several major metropolitan areas throughout the United States.

Ridematching and Sharing Programs

Increasing vehicle occupancy through ridematching and sharing reduces the number of vehicles driving the same trip and the need for some residents to own a vehicle or second vehicle, resulting in decreased VMT and parking demand. To encourage carpool/vanpool formation, the proposed project would provide a designated onsite passenger loading space and waiting area (drop-off area) near the community center and provide an onsite and/or online message board for coordinating rides.

The Transportation Coordinator would provide residents with information on the 511.org RideMatch service as part of the transportation information packet. The free-to-use 511.org RideMatch service provides commuters with interactive, on-demand tools for locating carpools, vanpools, and bicycling partners. The service matches registered users with a list of other commuters near their place of employment or residential zip code, along with the closest cross street, email address, phone number, and hours they are available to commute to and from work. Additional ride-matching services are available from Scoop and Waze Carpool, which provide similar carpool/vanpool matching services via mobile applications that can be downloaded directly to the user's smart phone or other mobile devices.

The 511 Regional Rideshare Program also offers incentive programs to encourage people to try carpooling and vanpooling. It includes a Vanpool Formation Incentive that offers up to $500 in gas cards to new vanpools that meet their eligibility requirements and complete three to six months of consecutive operation. A Vanpool Seat Subsidy provides up to $100 per month, with a limit of three months per van during the program year, to cover the fare of a lost participant, with funds distributed on a first-come, first-served basis. The program also offers free or discounted tolls on seven Bay Area bridges for vanpools with 11-15 people who have registered with 511.org. Additional discounts on eight Bay Area bridges are available to carpools with three or more people during the peak commute hours.

Dedicated Onsite Drop-Off Area

Providing dedicated onsite drop-off facilities for transportation network companies (TNC), carpool/vanpool, and shuttles encourages ridesharing and reduces vehicle trips and associated parking demand. Making ridesharing safer and more convenient can reduce the drive-alone commute mode share and can reduce the need for households to own a vehicle or second vehicle. The proposed project would provide a dedicated passenger loading zone adjacent to the community center for residents, visitors, and employees.

CAPCOA estimates that implementation of a required TDM program that meets established VMT targets, including onsite TDM coordinator, bicycle facilities, commute trip planning assistance and ridematching services can reduce VMT by up to 21 percent. Additionally, CAPCOA estimates that TDM information and marketing measures, including TDM orientation, education and materials, commute planning assistance and ridematching information, and onsite wayfinding systems can reduce VMT by up to four percent. Considering the proposed project would implement a TDM program that meets BDSP standards, assign an onsite TDM Coordinator, provide ample onsite bicycle facilities and trip planning assistance, CAPCOA estimates this measure in combination with other proposed TDM measures can reduce VMT by up to 21 percent. Additionally, considering the proposed project's information and marketing measures – including new tenant packets, onsite and/or online TDM board/kiosk, trip planning resources, and onsite wayfinding,

CAPCOA estimates this measure in combination with other proposed TDM measures can reduce VMT by up to four percent.

Similar to CAPCOA, VTPI groups many of the above measures into two general strategies, including mobility management and improve information and marketing. VTPI's mobility management strategy is similar to CAPOA's required TDM program that meets established VMT targets measure, including onsite TDM coordinator and commute trip planning assistance and ridematching services. VTPI estimates that mobility management can reduce parking demand by up to 30 percent. Considering the proposed project would implement a TDM program that meets BDSP standards, assign an onsite TDM Coordinator, provide trip planning assistance, and location in a suburban center location, this measure is expected to reduce parking demand by up to **four percent**. VTPI's improved information and marketing measure is similar to CAPCOA's TDM information and marketing measure and includes new tenant packets, onsite and/or online TDM board/kiosk, trip planning resources, and onsite wayfinding. VTPI estimates that improved information and marketing can reduce parking demand by up to 15 percent. Considering the proposed project's information and marketing measures, location in a suburban setting, and other TDM measures, this measure is expected to reduce parking demand by up to **four percent**.

4.2.2 Unbundled Parking

Bundled parking means that a certain number of parking spaces are automatically included with each housing unit, requiring residents to pay for onsite parking whether or not they use it. Since residents already pay for a parking space, bundled parking encourages vehicle ownership and use. By contrast, unbundled parking means that parking is sold or rented separately from a housing unit. The Project would unbundle residential parking, which would be leased or sold separately from monthly rental fees for the life of the proposed project. Therefore, those residents who wish to purchase parking spaces would do so at an additional cost. The unbundling of parking is intended to provide a price signal to tenants on the actual cost of providing onsite parking. It not only provides greater commute choice, but has the effect of reducing car ownership, which in turn can reduce project generated VMT and parking demand.

CAPCOA used VTPI research on parking requirement impacts on housing affordability[7] and estimates that unbundled parking can reduce VMT by up to 13 percent. This measure is dependent on the monthly cost of onsite parking and whether surrounding streets charge for on-street parking or prohibit on-street parking. On-street parking near the Project site is prohibited and there are no available overflow parking lots nearby that residents could reasonably access. Based on this and the average unbundled parking cost of $10 per space, the CAPCOA formula estimates the Project's unbundled parking measure would reduce VMT by one percent.

According to VTPI research, unbundled parking can reduce parking demand by up to 30 percent. Similar to CAPCOA, this measure is dependent on the monthly cost of onsite parking and whether surrounding streets charge for on-street parking or prohibit on-street parking. Considering the proposed project's inclusion of

[7] Victoria Transport Policy Institute (VTPI) May 2022 report, *Parking Requirements Impacts on Housing Affordability*

unbundled parking at an average cost of $10 per space and location in a suburban center setting, this measure is expected to reduce parking demand by **one percent**.[8]

4.2.3 Enhanced Onsite Bicycle Facilities

The proposed project would provide onsite bicycle facilities and resources to encourage bicycle use and reduce vehicle trips and parking demand. Chapter 19.14.090 of the City Code establishes minimum parking requirements for commercial and employment areas but does not stipulate minimum bicycle parking requirements for residential land uses. The proposed project would provide secure bicycle storage for residents and employees with up to 216 long-term (Class 1) bicycle parking spaces within seven "bicycle sheds" and 42 short-term (Class 2) bicycle parking spaces located throughout the project site. To further encourage bicycling, the proposed project would also provide a bicycle repair station within four of the bicycle sheds where bicycle maintenance tools and supplies would be readily available for shared use by residents and employees. Tools and supplies shall include, at a minimum, those necessary for fixing a flat tire, adjusting a chain, and performing other basic bicycle maintenance. The TDM Coordinator shall be responsible for maintaining the bicycle repair stations, ensuring that tools and supplies are consistently available and in working condition.

Providing onsite bicycle facilities and resources encourages bicycle use and makes residents less dependent on automobiles, which can also lessen parking demand by reducing the need for residents to own a vehicle or second vehicle. CAPCOA does not provide direct VMT reductions for onsite bicycle facilities and instead groups bicycle facilities within the commute trip reduction program strategy, which includes TDM Coordinator, carpooling encouragement, ride-matching services, and meeting required trip reduction requirements through implementation of a TDM plan. CAPCOA estimates that the required commute trip reduction program can reduce VMT by up to 21 percent.

VTPI estimates that enhanced bicycle facilities can reduce parking demand by up to 15 percent. Considering the proposed project's ample supply of bicycle parking, bicycle repair station, and location in a suburban center setting with limited existing bicycle facilities, this measure is expected to reduce parking demand by up to **four percent**.[9]

4.2.4 Improve Walking Conditions

Providing a safe and accessible pedestrian network that links the project site to other areas encourages people to walk instead of driving. Providing a safe and accessible pedestrian network also improves the effectiveness of other TDM measures, as it improves safety and access to other modes. The proposed project would provide design elements that enhance walkability and connectivity, including small internal block sizes, low-speed internal roadways, internal sidewalk network, marked internal pedestrian crosswalks, and

[8] One percent reduction based on CAPCOA formula; % reduction = change in vehicle cost (0.03) * elasticity (-0.4) * adjustment from vehicle ownership to VMT (85%); Change in vehicle cost = Monthly parking cost * (12/$4,000) with $4,000 representing the annual vehicle cost per VTPI. Therefore, $10 * 12/$4000 * 0.4 * 0.85 = 1%.

[9] Enhanced Onsite Bicycle Facility reductions may increase in the future if additional bicycle facilities are constructed in the vicinity of the project site, as proposed in the American Canyon Bicycle Plan and BDSP (see Section 3.2).

pedestrian-friendly lighting and landscaping. The project site will consist of a contiguous internal sidewalk network that creates a pedestrian-friendly environment, connecting individual buildings with other onsite amenities, and connecting to the existing city sidewalk network to provide access to nearby complimentary land uses and transit stops.

CAPCOA estimates that improving walking conditions can reduce VMT by up to two percent. VTPI estimates that improving walking conditions to expand access to nearby destinations can reduce parking demand by up to 15 percent. Considering the proposed project's focus on pedestrian safety and accessibility, proximity to adjacent commercial land uses (adjacent to a shopping center consisting of at least three tenant spaces, including retail, restaurants, and services), and location in a suburban center setting with limited existing pedestrian facilities, this measure is expected to reduce parking demand by up to **two percent**.

4.2.5 Onsite Amenities that Reduce Trips (Density and Diversity)

Providing onsite amenities can reduce vehicle trips and reliance on vehicle ownership by providing products and services that residents would otherwise need to drive to access. This measure is similar to CAPCOA's diversity of land uses (also known as land use mix). Although many onsite amenities are not documented as specific land uses they provide the same benefits as a typical mixed-use development in that they may reduce VMT and parking demand by addressing particular challenges faced in making trips without a private vehicle. For example, childcare is not a general land use, although trips associated with these land uses typically function similar to office. While this land use may have some visitor trips associated with them (childcare drop-off/pick-up), those trips are often a side trip within a larger tour. Visitor trips are influenced by the origin (home) and destination (work) of those tours. Given the unmet need for childcare near the project site, locating childcare near a person's home or work may have a significant impact in shortening vehicle trip lengths or shifting vehicle trips to sustainable modes or reducing vehicle trips. This concept applies to other amenities that can fulfill resident needs onsite without requiring the use of an automobile, reducing the need to leave home or complete chain trips during their daily commutes.

The proposed project would provide a wide range of onsite amenities, including in-unit laundry facilities, a childcare center (with capacity for six infants, eight toddlers, and 32 preschoolers), and a community center consisting of an exercise room (plus outdoor exercise space), meeting room and co-working spaces, lounge with full kitchen, a lap pool (with furnished outdoor spaces), a children's rock/wading pool (with furnished outdoor space), a pool house (with indoor and outdoor party rooms), and shared open space. The proposed childcare center provides reductions on the upper end of this TDM measure.[10] The childcare center would be open to the general public, but residents would be given priority to available openings. These chain trips make it more difficult or infeasible to use alternative commute modes such as walking, biking, transit, and carpooling. Providing onsite childcare services removes the childcare stop from their commute trip, significantly increasing the likelihood that parents will use alternative modes. Therefore, families may make

[10] Childcare center parking demand reductions are based on the proximity of the childcare facility to the residential development and does not require the center to be exclusive to residents to attain parking demand reductions.

the choice of forgoing car ownership or owning a second vehicle that they may otherwise require to access childcare. As a result, this measure can also increase the effectiveness of other TDM measures.

CAPCOA research shows that an increased density and diversity of suburban development can reduce VMT by up to 30 percent. Considering the proposed project's density (30 units per acre), ample onsite amenities, and childcare center, CAPCOA estimates up to a 20 percent reduction in VMT.[11] VTPI groups this measures under "smart growth" which encourages compact, mixed, multi-modal developments to allow greater use of alternative modes. VTPI estimates that smart growth strategies can reduce parking demand by up to 30 precent. Considering the proposed project's density, ample onsite amenities, onsite childcare center, proximity to adjacent commercial land uses, and location in a suburban center setting, this measure is expected to reduce parking demand by up to **eight percent**.

Figure 7 shows the resulting CAPCOA estimation for VMT reductions generated by the proposed project's TDM plan. Note that CAPCOA methodology groups TDM strategies into four categories that have their own individual maximum reduction cap, including Land Use / Location (10 percent), Neighborhood / Site Enhancement (5 percent), Parking Policy / Pricing (20 percent), and Commute Trip Reduction (CTR) strategies (15 percent). Despite each of the subcategory maximum reduction caps adding up to a 50 percent reduction, the 20 percent global reduction cap for suburban center applies. Therefore, the proposed project would not benefit from additional TDM measures after reaching the 20 percent global cap. Based on the combination of selected TDM measures and the maximum reduction cap of 20 percent for suburban center settings, the proposed project's TDM plan is expected to reduce overall residential VMT by up to **20 percent**.

[11] Reduction based on CAPCOA formula: % reduction = number of housing units per acre – number of housing units per acre for typical ITE development / (number of housing units per acre for typical ITE development) [not to exceed 30%].

Figure 7: Project TDM Plan – CAPCOA VMT Reduction Estimate

TDM Measure / Strategy	Reduction Range	Estimated Reduction	Description
Land Use / Location			
Density	0.8-30%	20%	30 units per acre (7.6 units / acre suburban average)
Land Use and Location Subtotal	***0-10%***	***10%***	
Neighborhood / Site Enhancements			
Pedestrian Network Improvements	0-2%	2%	Project provides pedestrian improvements onsite and connecting off-site
Neighborhood / Site Enhancement Subtotal	***0-5%***	***2%***	
Parking Policy / Pricing			
Unbundled Parking Costs	0-13%	1%	$10 / month / space
Parking Policy / Pricing Subtotal	***0-13%***	***1%***	
Commute Trip Reduction (CTR) Programs			
Required CTR Program	4.2-21%	21%	BDSP required TDM program, TDM Coordinator, bicycle facilities, commute assistance and ridematching, onsite amenities
CTR Marketing	0.8-4%	4%	TDM orientation, education or materials, distribution of transit, wayfinding, and other TDM information (resident dashboard, transportation kiosk, welcome packet, etc.)
Land Use and Location Subtotal	***0-15%***	***15%***	
TDM Program Total	**0-20%**	**20%**	

Source: "Quantifying Greenhouse Gas Mitigation Measures," California Air Pollution Control Officers Association, 2010.

Notes:

1. The maximum expected parking demand reduction for the proposed project is capped at 20 percent, based on CAPCOA methodology for development projects located in a suburban center setting.

Figure 8 shows the resulting VTPI estimate for parking demand reductions generated by the proposed project's TDM plan. Based on the combination of selected TDM measures and the proposed project's location in a suburban center setting, the proposed project's TDM plan is expected to reduce overall residential parking demand by up to **20 percent**.

Figure 8: Project TDM Plan – VTPI Parking Demand Reduction Estimate

TDM Measure	Description	Reduction Range	Estimated Reduction
Smart Growth	Encourage compact, mixed, multi-modal development to allow greater parking sharing and use of alternative modes	0% to 30%	8%
Pedestrian Improvements	Improve walking conditions to expand access to nearby destinations	0% to 15%	2%
Unbundled Parking	Rent or sell parking facilities separately from building space	0% to 30%	1%
Mobility Management	Encourage more efficient travel patterns, including changes in mode, destination, and vehicle trip frequency (e.g., TDM program, TDM coordinator, commute assistance and ridematching.)	0% to 30%	4%
Information and Marketing	Provide convenient and accurate information on parking, transit, and other alternative modes using maps, signs, brochures, and the internet.	0% to 15%	4%
Bicycle Facilities	Provide bicycle storage and repair facilities	0% to 15%	4%
		Total[1]	**20%**

Source: "Parking Management Strategies, Evaluation, and Planning" Victoria Transport Policy Institute, Todd Litman, 2016.
Notes:

1. Total parking reduction impacts are multiplicative and not additive; thus, the total reduction does not equal the sum of individual parking demand reduction estimates.

Applying the 20 percent parking demand reduction to the City Code-required minimum parking supply of 949 spaces for residential use would reduce the required supply to 759 spaces (949 - [949*20%]), which would exceed the proposed project's 753 residential spaces by up to six spaces during the peak parking period. However, residential parking demand peaks during the overnight hours (9:00 p.m. to 6:00 a.m.) when the non-residential land uses would generate little to no demand. Therefore, the additional 15 onsite spaces for non-residential uses could be shared with the residential land use, accommodating peak parking demand. Note that the City Code minimum parking requirement is not equivalent to actual parking demand. The effectiveness of these TDM measures would also increase over time as the Broadway District Specific Plan area is realized into a walkable, mixed-use community that can also support greater transit access and frequency.

4.3 Broadway District Specific Plan (BDSP) TDM Requirements

The BDSP requires all new residential developments of ten or more units to implement a TDM Program. For residential developments with 100 or more units are required to achieve a minimum of 10 points from the menu of TDM strategies. **Figure 9** shows the proposed project's TDM Program would achieve 11 points from the menu of TDM strategies meeting the required 10-point target established in the BDSP.

Figure 9: Broadway District Specific Plan Menu of TDM Strategies

Transportation Demand Management Strategies		Points Possible	Points Earned
Proximity to Transit	Less than 0.25 miles to a transit stop	1	1
	Less than 0.5 miles to a major transit stop (15-minute headway)	5	
Affordable Housing	20% Affordable Housing Project	1	-
	40% Affordable Housing Project	2	
	60% Affordable Housing Project	3	
	80% Affordable Housing Project	4	
	100% Affordable Housing Project	5	
Proximity to Commercial Uses	Less than 0.5 miles from: 1. A shopping center consisting of at least three tenant spaces, or 2. Three separate retail/restaurant/service/recreational uses	1	3
	Less than 0.25 miles from: 1. A shopping center consisting of at least three tenant spaces, or 2. Three separate retail/restaurant/service/recreational uses	3	
Access Improvements	Close Gaps; Bicycle, Pedestrian, and/or Transit access improvements across project frontage	3	3
Bicycle Facilities	Provide an on-site bicycle repair station and secure bicycle parking	1	1
Wayfinding Station	On-site kiosk or information center with multi-modal wayfinding information and transit information	1	1
TDM Coordinator	On-site TDM Coordinator offering: multi-modal and wayfinding information, rideshare matching, walking/bicycling group coordination.	1	1
TDM Communication	Distribution of transit, wayfinding, and other TDM information materials to new residents as they move in and annually to all residents.	1	1
Transit Pass Program	Provide Clipper (or comparable program) membership to all residents for the first ten years following project completion.	5	-
Bicycle Share Program	Provide private or public bicycle share memberships to on-site residents	1	-
Proximity to Bike Share	Site is less than 0.5 miles from a bicycle share hub with bicycles available to on-site residents	1	-
Car Share Program	Providing private or public car share memberships to on-site residents	1	-
Proximity to Car Share	Less than 0.5 miles from a car share hub with cars available to on-site residents	1	-
		Total	**11**
		Required TDM Point Target	**10**
		Difference	**1**

Sources: Broadway District Specific Plan, September 2020 (Ordinance No. 2020-05); CHS Consulting Group, June 2022.

5.0 PARKING GENERATION ESTIMATE

This section provides a comparison of observed parking demand based on industry standard ITE parking generation rates and other San Francisco Bay Area planning resources.

5.1 ITE PARKING GENERATION

Proposed project parking demand was estimated using the *Institute of Transportation Engineers (ITE) Parking Generation Manual*, 5th Edition. CHS used the Midrise Multifamily Residential[12] (ITE Code 221) for market-rate units and Affordable Housing[13] (ITE Code 223) for BMR units. For the purposes of parking generation analysis, CHS used General Urban/Suburban[14] (with no nearby rail transit) setting data and unit counts to estimate peak parking demand. Midrise Multifamily Residential units generate demand for approximately 1.31 spaces per unit during the peak parking period. Affordable Housing units generate demand for approximately 1.0 spaces per unit during the peak parking period.

Figure 10 shows the proposed project's residential uses are expected to generate demand for up to 579 parking spaces during the peak of parking demand, before TDM discounts are applied. Therefore, the proposed project's supply of 753 residential spaces would accommodate peak parking demand for 579 spaces, with a surplus of at least 174 spaces.

Figure 10: ITE Parking Demand Estimate - Residential

Land Use	ITE Code	Size	Unit	Rate	Demand
Midrise Multi-Family Residential	221	407	du	1.31	533
Affordable Housing	223	46	du	1.0	46
				Total Peak Demand	**579**
				Proposed Supply	**753**
				Parking Surplus / (Deficit)	**174**

Source: ITE Parking Generation Manual, 5th Edition; CHS Consulting Group, 2022
Notes: DU = dwelling units

For the childcare center land use, CHS used the Daycare Center land use (ITE Code 565) in a General Urban / Suburban setting. This land use generates demand for approximately 0.24 parking spaces per student during the peak parking period. **Figure 11** shows the childcare center is expected to generate demand for up to 11 spaces during the peak parking period. Therefore, the 14 childcare center parking spaces would accommodate peak peaking demand for 11 spaces, with a surplus of at least three spaces.

[12] Midrise Multifamily housing includes apartments, townhomes, and condominiums located within the same building with at least three other dwelling units and between three and 10 levels of residences.

[13] Affordable Housing (income limited) includes all multifamily housing that is rented at below market rate to households that include at least one employed member. Eligibility to live in affordable housing is a function of limited household income.

[14] General Urban/Suburban (with no nearby rail transit) settings are associated with almost homogeneous vehicle-centered access, where all nearby person trips that enter or exit a development site are by personal passenger or commercial vehicle. The area can be fully developed (or nearly so) at low-medium density with a mix of residential and commercial uses. Commercial uses are typically concentrated at intersections or spread along commercial corridors, often surrounded by low-density, almost entirely residential development. Land uses are mixed only in terms of proximity, not in terms of function.

Figure 11: ITE Parking Demand Estimate – Non-Residential

Land Use	ITE Code	Size	Unit	Rate	Demand
Childcare Center	565	46	students	0.24	11
				Proposed Supply	**14**
				Parking Surplus / (Deficit)	**3**

Source: ITE Parking Generation Manual, 5th Edition; CHS Consulting Group, 2022

Note that CHS conservatively excluded potential internal trip capture reductions from project residents who are expected to use the onsite childcare center and thus not require additional parking. Furthermore, it is anticipated that most childcare center users would use onsite parking for short durations to complete pick-up/drop-off activities during typical AM and PM commute periods. Therefore, childcare center parking is expected to be shared with leasing office visitor parking which typically generates peak demand during the midday period or weekends when childcare center parking demand is low.

5.2 GreenTRIP Connect Parking Demand

CHS also used a San Francisco Bay Area planning resource to estimate the potential effect of implemented Project TDM measures on project-generated vehicle miles traveled (VMT) and parking demand while comparing them to completed residential developments. TransForm is a Bay Area nonprofit organization that assists policy makers, planners, and developers in promoting walkable communities with a variety of transportation choices. Their research focuses on reducing greenhouse gas emissions, reducing the combined cost of housing and transportation, increasing the rates and safety of walking and bicycling, and increasing access to jobs via public transportation. TransForm offers a data and policy tool called GreenTRIP Connect to help developers and planners quantify and realize the impacts of including Transportation Demand Management measures in new developments.[15]

CHS used the GreenTRIP Connect tool to estimate actual parking demand for the project site. The GreenTRIP Connect tool estimates the proposed project would generate peak parking demand for 1.3 spaces per unit, which is approximately 0.2 spaces per unit higher than the Napa County average (1.16 spaces per unit). **Figure 12** shows the proposed project is expected to generate demand for up to 589 parking spaces during the peak of parking demand, before TDM discounts are applied. Therefore, the proposed project's supply of 753 residential spaces would accommodate peak parking demand for 589 spaces, with a surplus of at least 164 spaces.

Figure 12: GreenTRIP Connect Parking Demand Estimate

Land Use	Size	Unit	Rate	Demand
Multifamily Residential	453	du	1.30	589
			Project Residential Parking Supply	**753**
			Parking Surplus / (Deficit)	**164**

Source: GreenTRIP Connect by TransForm; CHS Consulting Group, 2022
Notes: DU = dwelling units

[15] http://www.transformca.org/landing-page/greentrip

6.0 CONCLUSIONS

The proposed project would construct 753 onsite parking spaces for residential use but would be required by City Code to provide 949 spaces, resulting in a deficit of 196 spaces. However, the proposed project would provide affordable housing that meets the requirements of California's Density Bonus Law, which allows development projects to provide a reduced parking supply. Therefore, the proposed project's 753 residential parking spaces would meet the Density Bonus Law minimum parking requirements for 609 spaces, with a surplus of at least 144 spaces.

The proposed project would implement a TDM plan that includes proximity to transit, proximity to commercial uses, pedestrian access improvements, bicycle facilities, wayfinding, TDM coordinator, and TDM communication, and unbundled parking. The proposed project's TDM plan would achieve 11 points from the menu of TDM strategies meeting the required 10-point target established in the BDSP. Based on VTPI research, the TDM plan is expected to reduce residential parking demand by up to 20 percent. Applying the 20 percent reduction to the City Code required minimum of 949 spaces would reduce the required supply to 759 spaces, resulting in a deficit of up to six spaces. The effectiveness of these TDM measures is expected to increase over time as the Broadway District Specific Plan is realized into a walkable, mixed-use community that can support greater transit access and frequency.

CHS compared observed parking demand based on industry standard ITE parking generation rates and other San Francisco Bay Area planning resources to estimate actual parking demand for the proposed project. Based on ITE parking generation rates, the proposed project's residential uses would generate peak parking demand for up to 579 spaces, which would be accommodated by the proposed 753 residential spaces with a surplus of at least 174 spaces. Based on the GreenTRIP Connect tool by TransForm, the proposed project would generate peak parking demand for up to 589 spaces, which would be accommodated by the proposed 753 residential spaces with a surplus of at least 164 spaces. For the purposes of a conservative analysis, these estimates do not consider the parking demand reductions estimated for the proposed project's TDM plan.

The proposed project's TDM plan is expected to reduce parking demand to a level that can be accommodated by the 753 onsite residential parking spaces. Furthermore, actual observed parking demand for similar residential development projects is substantially lower than the minimum parking required by City Code. Therefore, the proposed project is expected to accommodate all parking demand onsite, and no parking spillover conditions are anticipated.

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Appendix D

Noise Appendices

Noise Appendix

1. Figure 1: Noise Measurement Locations
2. Construction Noise & Vibration Analysis
3. Long Term Noise Measurement Graphs for Sites 1 and 2

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FIGURE 1: NOISE MEASUREMENT LOCATIONS

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Source: RCH Group and Google Earth, 2022

AMERICAN CANYON RESIDENCES AT NAPA JUNCTION

CONSTRUCTION NOISE & VIBRATION IMPACT ANALYSIS

OCTOBER 2022

Prepared by:

RCH GROUP
planning & environmental consulting

Construction Noise Impacts

§ 8.12.080(B)(2)(a) of the City of American Canyon Municipal Code restricts construction activities that would create a noise disturbance across a residential or commercial property line between the hours of 7 a.m. to 7 p.m. § 8.12.080(B)(2)(b) establishes maximum noise limits for construction where technically and economically feasible, as shown in **Table 1**.

TABLE 1. CITY OF AMERICAN CANYON MAXIMUM NOISE LIMITS FOR CONSTRUCTION ACTIVITIES

Timeframe	Residential	Commercial	Industrial
Daily: 7 a.m. to 7 p.m.	75 dBA	80 dBA	85 dBA
Daily 7 p.m. to 7 a.m.	60 dBA	65 dBA	70 dBA

SOURCE: City of American Canyon Municipal Code § 8.12.080, Table 8.12.080.

Construction would result in a temporary increase in ambient noise levels in the vicinity of the Project. Construction would occur between the hours of 7:00 a.m. to 7:00 p.m., consistent with the City's adopted construction hours. Construction activities would require the use of numerous pieces of noise-generating equipment, such as excavating machinery (e.g., excavators, loaders, etc.) and other construction equipment (e.g., scrapers, dozers, compactors, trucks, etc.). The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment, and the prevailing wind direction.

Construction activities would occur as close as 20 feet from the Canyon Ridge apartment complex during construction of the southern perimeter homes and as close as 30 feet from the Canyon Ridge apartment complex during construction of the homes along the panhandle feature that extends to Napa Junction Road. The maximum noise levels for various types of construction equipment that would be used during Project construction at 20, 30 and 400 feet are provided in **Table 2**.

TABLE 2. TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT (LMAX)

Construction Equipment	Noise Level (dB, Lmax at 20[1] feet)	Noise Level (dB, Lmax at 30[2] feet)	Noise Level (dB, Lmax at 400[3] feet)
Air Compressor	88	84	55
Forklift[4]	87	83	54
Drill Rig Truck	89	85	56
Backhoe	88	84	55
Excavator	91	87	58
Dozer	92	88	59
Front End Loader	89	85	56
Water Truck	90	86	57
Crane	91	87	58
Manlift	85	81	52

Welder/Torch	84	80	51
Pneumatic Tools	95	91	62
Auger Drill Rig	94	90	61
Scraper	95	91	62
Dump Truck	86	82	53
Concrete Mixer Truck	89	85	56

NOTES:

L_{max} = maximum sound level

An attenuation rate of 7.5 per doubling distance was used to convert the FHWA noise levels at 50-feet to the noise levels at 600-feet.

1. Distance between the nearest construction on the southern perimeter homes and the Canyon Ridge apartment complex to the south.
2. Distance between the nearest construction on the homes located on the panhandle and the Canyon Ridge apartment complex to the west.
3. Distance between the approximate center of the project site and the Canyon Ridge apartment complex to the south.
4. Ldn Consulting Inc, Noise Assessment for Tractor Supply Commercial Development, March 28, 2016.

SOURCE: Federal Highway Administration (FHWA) Roadway Construction Noise Model User's Guide, 2006.

As shown in **Table 2**, noise from construction activities occurring as close as 20 and 30 feet from the Canyon Ridge apartment complex would generate noise levels of up to 95 dB, Lmax and 91 dB, Lmax, respectively. These noise levels would exceed the 75 dB, Lmax construction noise level limit outlined in the American Canyon Municipal Code. However, § 8.12.080(B)(2)(a) of the American Canyon Municipal Code indicates that maximum noise levels at affected properties shall not exceed those listed in **Table 1** "where technically and economically feasible." Due to the proximity of project construction to the Canyon Ridge apartment complex it would not be technically feasible to install noise barriers that would break the line of site between the project site and the Canyon Ridge apartment complex (a three-story apartment building) that would effectively attenuate noise levels below 75 dB, Lmax. The majority of construction activities would occur at distances much farther than 20 to 30 feet. Construction activities greater than 140 feet from the Canyon Ridge apartment complex would attenuate to below the 75 dB, Lmax threshold.

Furthermore, the BDSP EIR anticipated intermittent noise ranging from 70 to 105 dB from construction activity which would result in temporary noise increases where noise-sensitive land uses adjoin construction sites. Consistent with the BDSP EIR, heavy construction activities occurring within close proximity to the Canyon Ridge apartment complex (a noise-sensitive land use adjacent to a construction site) would result in a temporary substantial noise increase. However, this impact would be short-term and would cease upon completion of construction. The majority of construction would occur at distances where maximum noise levels from construction activity would attenuate to below 75 dB, Lmax threshold. The Project applicant shall implement the following noise control measures to reduce construction noise at the Canyon Ridge apartment complex.

Construction Noise Control Measure NOI-1. The applicant shall:

- Designate a "Construction Noise Coordinator" who would be responsible for responding to any local complaints about construction noise and vibration. The Construction Noise Coordinator shall determine the cause of the complaint and shall require implementation of reasonable measures to correct the problem. The telephone number for the Construction Noise Coordinator shall be conspicuously posted at the construction site.

The Construction Noise Coordinator shall work directly with an assigned City Staff Member.

- At least three weeks prior to the start of construction activities, provide written notification to all nearby facilities within 150 feet of the construction site informing them of the estimated start date and duration of construction activities.
- Limit all on-site construction activities, including the operation of any tools or equipment used in construction, drilling, repair, alteration, grading, or demolition work, to between the daytime hours of 7:00 a.m. to 7:00 p.m. Monday through Saturday. No construction shall be permitted on Sundays and federal holidays.
- Locate staging areas the greatest feasible distance away from noise-sensitive receptors adjacent to the project site.
- Locate stationary noise-generating equipment (e.g., generators, air compressors) the greatest feasible distance away from noise-sensitive receptors adjacent to the project site.
- Require noise dampening enclosures for stationary equipment within 150 feet of noise-sensitive receptors.
- Require "quiet" (less than 75 dB) models of air compressors, where technology exists, within 150 feet of noise-sensitive receptors.
- Require that all construction equipment powered by gasoline or diesel engines have sound control devices (i.e., mufflers) that are at least as effective as those originally provided by the manufacturer and that all equipment be operated and maintained to minimize noise generation.

Construction Vibration Impacts

Construction activities have the potential to result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. In most cases, vibration induced by typical construction equipment does not result in adverse effects on people or structures (Caltrans, 2013). The Project would not involve the use of construction equipment or processes that would result in potentially significant levels of ground vibration (i.e., pile drivers or blasting). At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. For vibration, a peak particle velocity (ppv) threshold of 0.5 inch per second or greater can cause architectural damage and minor structural damage. The Federal Transit Administration (FTA) recommends a threshold of 0.5 ppv for residential and commercial structures (FTA, 2006). The BDSP EIR used a threshold of 0.25 in/sec ppv as a threshold for vibration impacts. Construction activities could occur as close as 20 feet north and 30 feet east of the Canyon Ridge apartment complex. The estimated ppv for heavy construction equipment at 20 and 30 feet is summarized in **Table 3.**

TABLE 3. REPRESENTATIVE VIBRATION SOURCE LEVELS AT 20 AND 30 FEET

Construction Equipment		PPV at 20[1] feet (in/sec)	Exceeds 0.25 in/sec ppv?	PPV at 30[2] feet (in/sec)	Exceeds 0.25 in/sec ppv?
Bulldozer	Large	0.12	No	0.07	No
	Small	0.004	No	0.002	No
Loaded Trucks		0.11	No	0.06	No
Caisson Drilling		0.12	No	0.07	No
Vibratory Roller		0.29	**Yes**	0.16	No
Excavator[1]		0.24	No	0.13	No
Backhoe[1]		0.04	No	0.02	No
Loader[1]		0.04	No	0.02	No

NOTE:
1. Distance between the nearest construction on the southern perimeter homes and the Canyon Ridge apartment complex to the south.
2. Distance between the nearest construction on the homes located on the panhandle and the Canyon Ridge apartment complex to the west.
3. Construction Equipment PPV reference from NHDOT, *Ground Vibrations Emanating from Construction Equipment* (FHWA-NH-RD-12323W), 2012.

SOURCE: Federal Transit Administration, 2006.

As shown in **Table 3**, the vibratory roller would cause vibrations above the 0.25 ppv threshold at 20 feet. The Project applicant shall implement the following vibration control measures to ensure that construction vibration impacts are less than significant.

Construction Vibration Control Measure NOI-2. The applicant shall:

- Maintain at least a 25-foot buffer between vibratory rollers and the Canyon Ridge apartment complex.

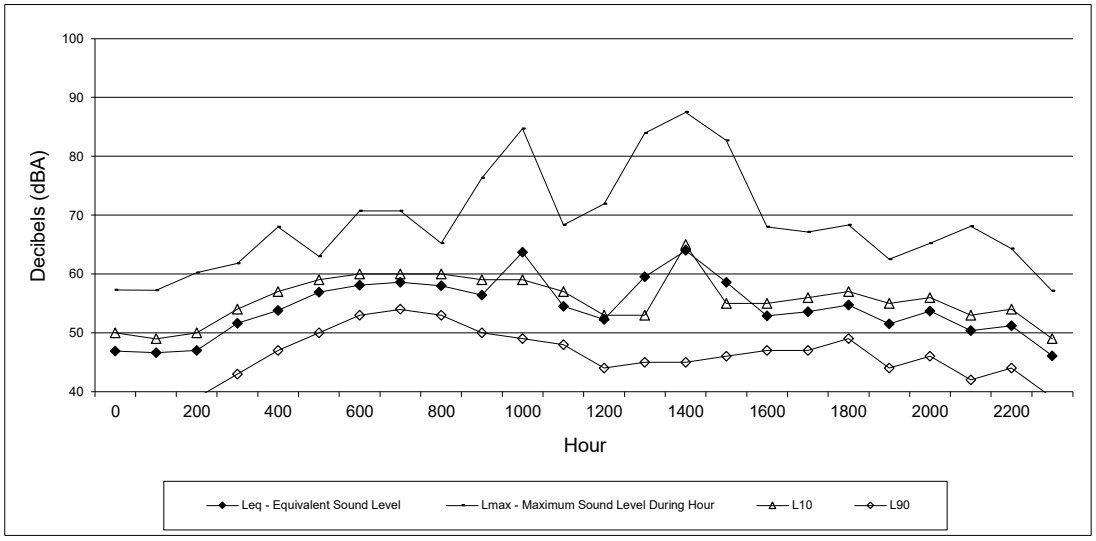
REFERENCES

Federal Highway Administration (FHWA). 2006. *Roadway Construction Noise Model User's Guide.*

Federal Transit Administration (FTA). 2006. *Transit Noise and Vibration Impact Assessment* (FTA-VA-90-1003-06).

Ldn Consulting. 2016. *Noise Assessment, Tractor Supply Commercial Development, Valley Center, CA.*

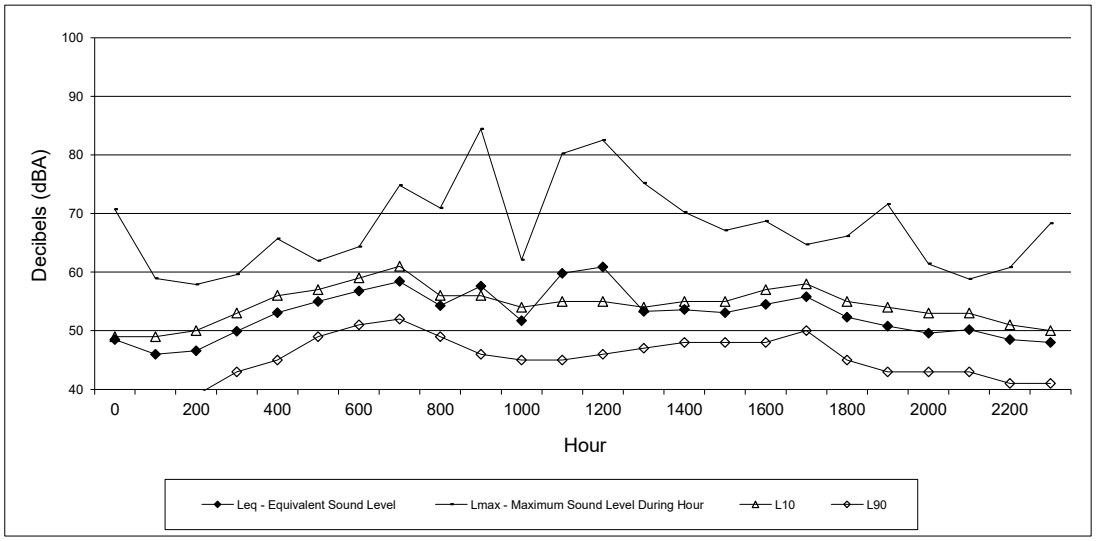
New Hampshire Department of Transportation (NHDOT). 2012. *Ground Vibrations Emanating from Construction Equipment* (FHWA-NH-RD-12323W).



Site 1: North area of the project site, approximately 150 feet south of railroad centerline
Tuesday September, 27 2022

Hour	Leq - Equivalent Sound Level	Lmax - Maximum Sound Level During Hour	L10	L90
0	47	57	50	39
100	47	57	49	39
200	47	60	50	39
300	52	62	54	43
400	54	68	57	47
500	57	63	59	50
600	58	71	60	53
700	59	71	60	54
800	58	65	60	53
900	56	76	59	50
1000	64	85	59	49
1100	55	68	57	48
1200	52	72	53	44
1300	60	84	53	45
1400	64	88	65	45
1500	59	83	55	46
1600	53	68	55	47
1700	54	67	56	47
1800	55	68	57	49
1900	52	63	55	44
2000	54	65	56	46
2100	50	68	53	42
2200	51	64	54	44
2300	46	57	49	39

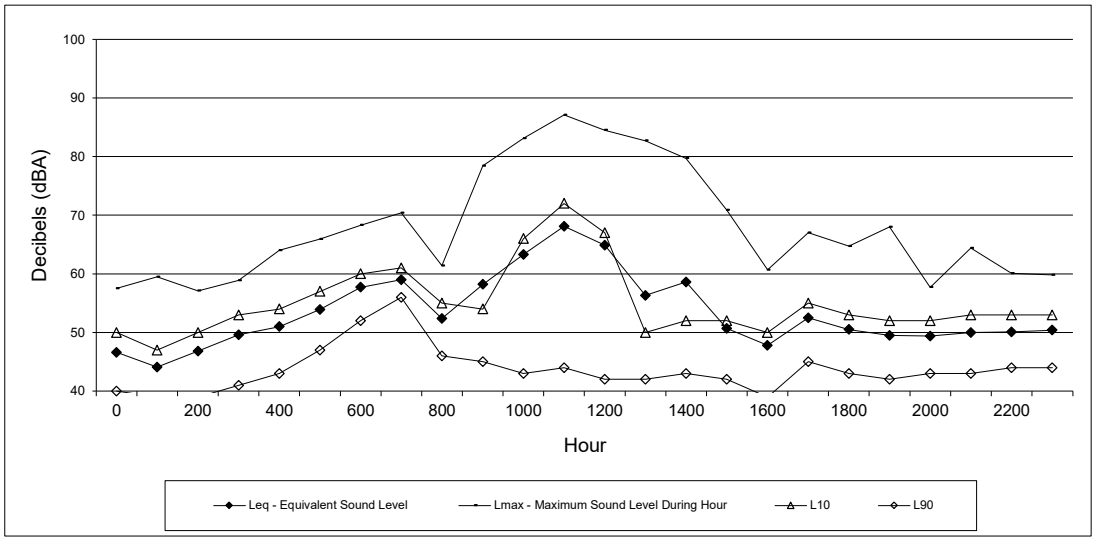
CNEL 61



Site 1: North area of the project site, approximately 150 feet south of railroad centerline
Wednesday September 28, 2022

Hour	Leq - Equivalent Sound Level	Lmax - Maximum Sound Level During Hour	L10	L90
0	49	71	49	39
100	46	59	49	39
200	47	58	50	39
300	50	60	53	43
400	53	66	56	45
500	55	62	57	49
600	57	64	59	51
700	58	75	61	52
800	54	71	56	49
900	58	84	56	46
1000	52	62	54	45
1100	60	80	55	45
1200	61	83	55	46
1300	53	75	54	47
1400	54	70	55	48
1500	53	67	55	48
1600	55	69	57	48
1700	56	65	58	50
1800	52	66	55	45
1900	51	72	54	43
2000	50	61	53	43
2100	50	59	53	43
2200	49	61	51	41
2300	48	68	50	41

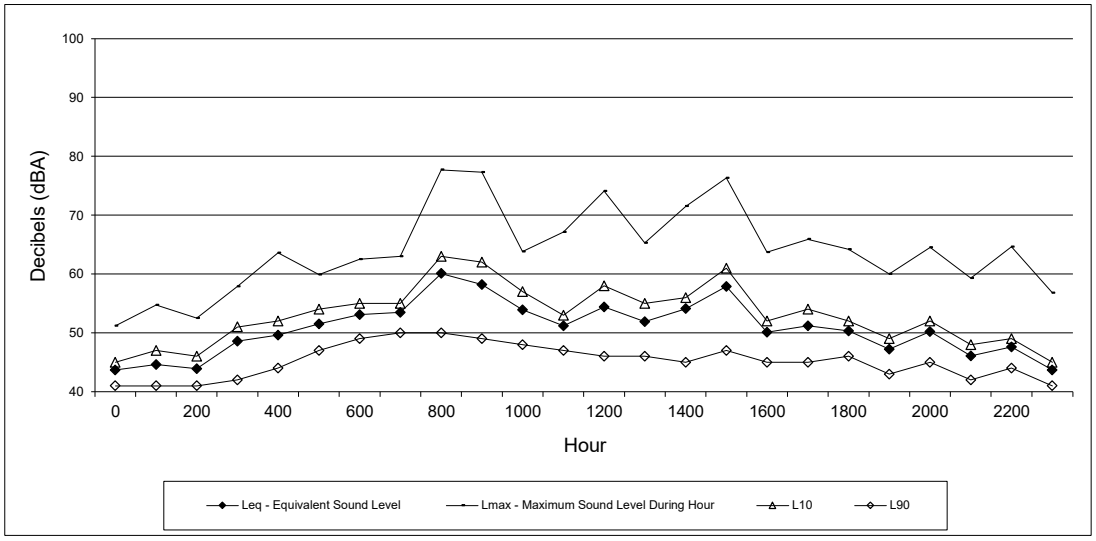
CNEL: 59



Site 1: North area of the project site, approximately 150 feet south of railroad centerline
Thursday September 29, 2022

Hour	Leq - Equivalent Sound Level	Lmax - Maximum Sound Level During Hour	L10	L90
0	47	58	50	40
100	44	60	47	39
200	47	57	50	39
300	50	59	53	41
400	51	64	54	43
500	54	66	57	47
600	58	68	60	52
700	59	70	61	56
800	52	61	55	46
900	58	78	54	45
1000	63	83	66	43
1100	68	87	72	44
1200	65	85	67	42
1300	56	83	50	42
1400	59	80	52	43
1500	51	71	52	42
1600	48	61	50	39
1700	53	67	55	45
1800	51	65	53	43
1900	50	68	52	42
2000	49	58	52	43
2100	50	64	53	43
2200	50	60	53	44
2300	50	60	53	44

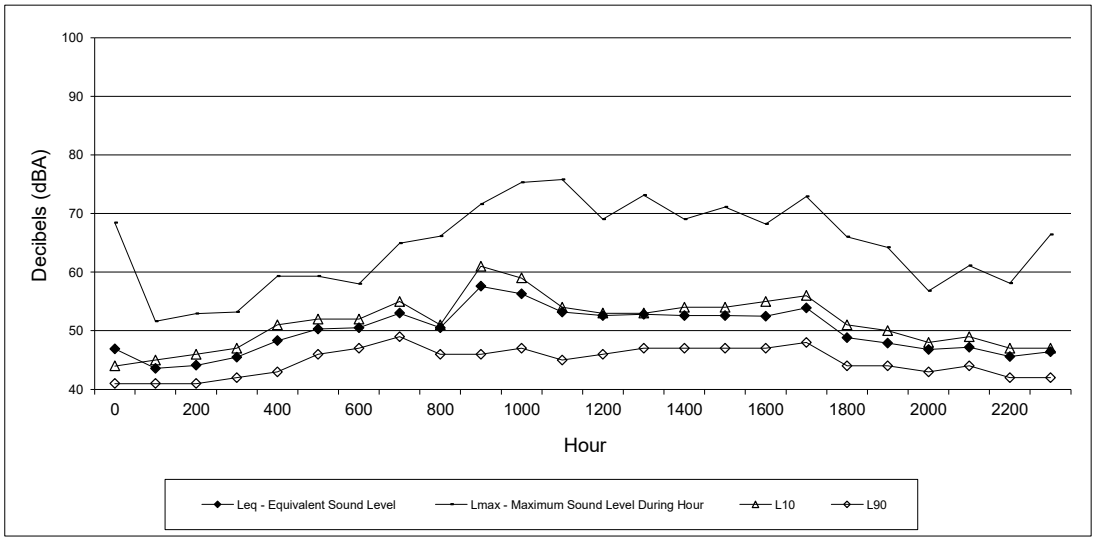
CNEL: 61



Site 2: East area of the project site, approximately 80 feet west of railroad centerline
Tuesday September, 27 2022

Hour	Leq - Equivalent Sound Level	Lmax - Maximum Sound Level During Hour	L10	L90
0	44	51	45	41
100	45	55	47	41
200	44	53	46	41
300	49	58	51	42
400	50	64	52	44
500	52	60	54	47
600	53	63	55	49
700	54	63	55	50
800	60	78	63	50
900	58	77	62	49
1000	54	64	57	48
1100	51	67	53	47
1200	54	74	58	46
1300	52	65	55	46
1400	54	72	56	45
1500	58	76	61	47
1600	50	64	52	45
1700	51	66	54	45
1800	50	64	52	46
1900	47	60	49	43
2000	50	65	52	45
2100	46	59	48	42
2200	48	65	49	44
2300	44	57	45	41

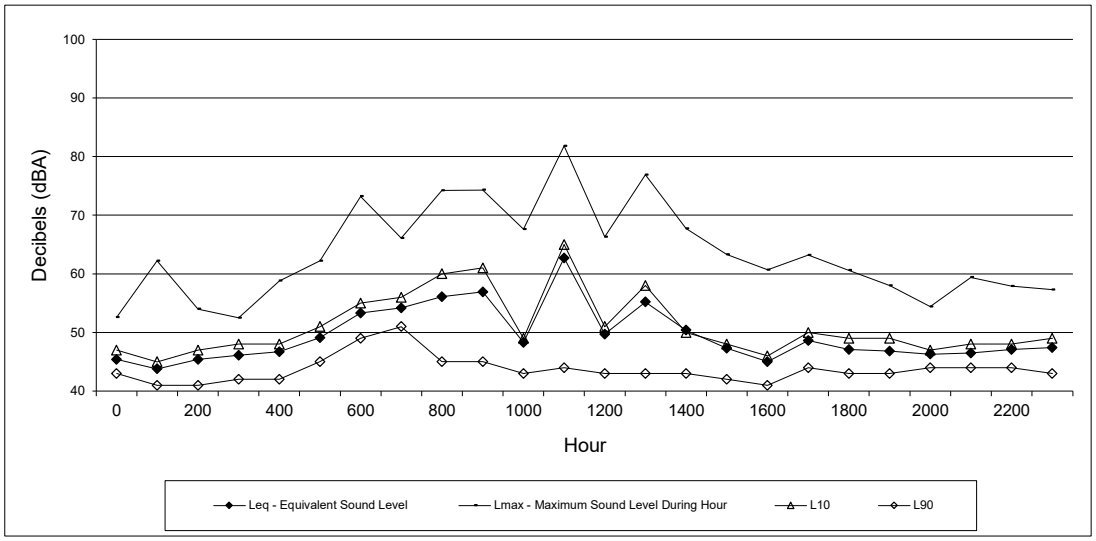
CNEL 57



Site 2: East area of the project site, approximately 80 feet west of railroad centerline
Wednesday September 28, 2022

Hour	Leq - Equivalent Sound Level	Lmax - Maximum Sound Level During Hour	L10	L90
0	47	68	44	41
100	44	52	45	41
200	44	53	46	41
300	46	53	47	42
400	48	59	51	43
500	50	59	52	46
600	51	58	52	47
700	53	65	55	49
800	51	66	51	46
900	58	72	61	46
1000	56	75	59	47
1100	53	76	54	45
1200	53	69	53	46
1300	53	73	53	47
1400	53	69	54	47
1500	53	71	54	47
1600	53	68	55	47
1700	54	73	56	48
1800	49	66	51	44
1900	48	64	50	44
2000	47	57	48	43
2100	47	61	49	44
2200	46	58	47	42
2300	46	66	47	42

CNEL: 55



Site 2: East area of the project site, approximately 80 feet west of railroad centerline
Thursday September 29, 2022

Hour	Leq - Equivalent Sound Level	Lmax - Maximum Sound Level During Hour	L10	L90
0	45	53	47	43
100	44	62	45	41
200	45	54	47	41
300	46	53	48	42
400	47	59	48	42
500	49	62	51	45
600	53	73	55	49
700	54	66	56	51
800	56	74	60	45
900	57	74	61	45
1000	48	68	49	43
1100	63	82	65	44
1200	50	66	51	43
1300	55	77	58	43
1400	50	68	50	43
1500	47	63	48	42
1600	45	61	46	41
1700	49	63	50	44
1800	47	61	49	43
1900	47	58	49	43
2000	46	54	47	44
2100	47	59	48	44
2200	47	58	48	44
2300	47	57	49	43

CNEL: 56

Appendix E

Water Supply Documentation

TECHNICAL MEMORANDUM

Date: July 13, 2022 **BKF Job Number: 20210939**

Deliver To: City of American Canyon, Public Works

From: Alyssa Jacobson, Project Manager

Subject: American Canyon Napa Junction - Water Demand and Fire Flow Demand

INTRODUCTION

The following memorandum presents calculations showing the proposed water demand for the American Canyon Napa Junction project's mixed-use project.

EXISTING CONDITIONS AND WATER DEMAND

The existing site is comprised of a landscape with isolated wetland areas. An abandoned railroad berm binds it to the west and south, and an active railroad binds it to the north and east. Napa Vallejo Highway, Route 29, is found to the west of the project site. The site is bordered to the south by a developed shopping area and residential subdivision and Napa Junction Road. There is no existing water usage at the site.

PROPOSED WATER DEMAND

The proposed buildings include 453 family residential units and 12,615 square-feet (SF) of commercial community space. Using the City of American Canyon Potable Water Master Plan, it is determined that the total proposed water demand for the project is approximately 72,899 gallons per day and a maximum potable water demand of 145,798 gallons per day, including the residential and commercial demand.

See Appendix A for Potable Water Demand calculations

RECYCLED WATER DEMAND

Napa Junction is in the Recycled Water Use Area in the City of American Canyon. A recycled water main was constructed as part of the Napa Junction Road improvements. The project will be installing a site-wide recycled water main that will connect to the existing main in Napa Junction Road. The project will utilize recycled water for irrigation throughout the site. Using the City of American Canyon Recycled Water Master Plan, the recycled water demand for the site is determined to be 8,675 gallons per day, reducing the potable water demand by approximately 12%. See Appendix B for recycled water demand calculations. Based on the City's Water Will Serve Application review, the project could further reduce its potable water usage using dual plumbing.

FIRE FLOW DEMAND

The following Fire Flow Calculations are based upon California Fire Code (2016 editions) – Section 507, App. B & C. All residential buildings, Buildings 1A-6 and A-AL, are Type-VA Construction. All other

buildings, including Buildings AM-AO, trash enclosures, and the compactor buildings, are Type-VB. The total gross area of building 4A is 57,392 square-feet, and the total gross area of the community center building AN is 8,315 square feet. Based on Table B105.1 of the 2019 CFC section B104.1 and B104.3, the required fire flow is 4,250 gallons per minute for type VA and 2,500 gallons per minute for VB. The fire flow calculation is based on the largest residential building footprint, Building 4A.

Fire Flow by Construction Type:

Building 4A	1.32 X 4,250 GPM = 5,610 GPM Combined Fire Flow*
Community Center Building AN	0.23 X 2,500 GPM = 575 GPM Combined Fire Flow*

*prior to fire sprinkler reduction

Fire Flow Reduction – CFC App. B – Table B105.1(2), & B105.2

Fire Flow Reduction based on Building 4A – Sprinkler System 903.3.1.1

5,610 GPM * 0.50 = 2,805 GPM Net Required Fire Flow (CFC)

Prior to fire sprinkler reduction, the fire flow by construction type is 5,610 gallons per minute. Since all buildings will be equipped with automatic fire sprinklers, the fire flow may be reduced up to 50%, making the required fire flow 2,805 gallons per minute.

Fire Hydrant Locations & Distribution – Appendix C – Table C102.1:

Fire Flow Required	= 2,805 GPM
Number of hydrants required (based on reduction)	= 3
Average Hydrant Spacing (with Spacing Increase)	= 600 FT (400 + 50% increase – C102.1(f))

APPENDICES

Appendix A – Potable Water Demands

Appendix B – Recycled Water Demands

Appendix A - American Canyon Potable Water Demands

ULUC	ADD (gpd/unit)	ADD (gpd/acre)	Units	Acres	ADD (gpd)	
Multi-Family	160		453		72480	
Commercial		1445		0.29	419	
					72899	Average Day Demand

	MDD (gpd)	
*MDD = ADD x 2.0 Per Table 7 below	145798	Maximum Day Demand

Table 7 Potable Water System Planning Criteria

Item	Criteria
Demand Scenarios	• Average day demand (ADD) – the average water demand for the year • Maximum day demand (MDD) – the daily demand representing the single highest demand day • Peak hour demand (PHD) – the highest hourly demand for the year, assumed to coincide with the MDD
Water Demand Peaking Factors	• Maximum day demand (MDD) = ADD x 2.0 • Peak hour demand (PHD) = MDD x 1.75

Table 12 Unit Demand Factors for Future Development (Total Water Use)

Utility Land Use Classification	ADD (gpd/unit)	ADD (gpd/acre)	ADD Indoor Use (gpd/acre)	Max Month Irrigation (gpd/acre)
Single-Family [1.]	266	1,680	1,415	530
Multi-Family [2.]	160	3,965	2,800	2,330
Commercial [3.]	-	1,445	900	1,075
Industrial [4.]	-	650	370	530
Institutional/Governmental [5.]	-	1,010	170	1,615
Landscape [6.]	-	1,575	-	3,570
Open Space [7.]	-	-	-	-
Watson Ranch [8.]	-	-	-	-
Recreation [9.]	-	1,575	-	3,570
Agriculture [10.]	-	-	-	-

1. Unit demands are based on City's building requirements and are consistent with Watson Ranch Specific Plan – Admin Draft, Nov 2014.
2. Unit demands are based on City's building requirements and are consistent with Watson Ranch Specific Plan – Admin Draft, Nov 2014.
3. Unit demands are based on average of existing demands for ADD including recycled water used for irrigation.
4. ADD per City zoning ordinance. Indoor use based on average existing indoor use, and maximum irrigation includes process water.
5. ADD and indoor use are based on average of existing demands including recycled water used for irrigation.
6. ADD based on average of existing demands including recycled water.
7. Open Space does not receive any water.
8. Watson Ranch demands are per the *Watson Ranch Specific Plan – Administrative Draft*, Nov 2014.
9. Parcels designated as Recreation are assumed to have similar demands as Landscaping.
10. Agricultural parcels will not receive potable water.

Appendix B - American Canyon Recycled Water Demands

ULUC	ADD (gpd/acre)	Acres	ADD (gpd)	
Landscape	3570	2.43	8675	
			8675	Average Day Demand

Table 10 Unit Demand Factors for Future Development

Utility Land Use Classification	Max Month Avg Day (gpd/acre)
Single-family	-
Multi-family	2,330
Commercial	1,075
Industrial	530
Institutional/Governmental	1,615
Landscape	3,570
Recreation	3,570