October 2013

DRAFT ENVIRONMENTAL IMPACT REPORT

Podva Property Residential Development

LEG12-0001(PUD)

SD 9309 (Major Subdivision)

SCH # 2012102028

PREPARED BY

RBF Consulting

A Company of Michael Baker Corporation

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PODVA PROPERTY RESIDENTIAL PROJECT

LED12-0001 (PUD)
SD 9309 (Major Subdivision)
STATE CLEARINGHOUSE #2012102028

OCTOBER 2013

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LIST OF ACRONYMS AND ABBREVIATIONS

2010 General Plan	Town of Danville 2010 General Plan
2010 Master Plan	2010 Collection System Master Plan Update
2010 UWMP	2010 Urban Water Management Plan
2030 General Plan	Town of Danville 2030 General Plan

A

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACE	Altamont Commuter Express
ACM	Asbestos-Containing Material
AFY	Acre-Feet per Year
AHERA	Asbestos Hazard Emergency Response Act
APE	Area of Potential Effects
APS	Alternative Planning Strategy
AQMP	Air Quality Management Plan
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
AWS	Alameda Whipsnake

B

BAAQMD	Bay Area Air Quality Management District
BACT	Best Available Control Technology
Balance	Balance Hydrologics, Inc.
BART	Bay Area Rapid Transit
Basin	San Francisco Bay Area Air Basin
Basin	South East Bay Plain Groundwater Basin
BAU	Business As Usual
BCDC	Bay Conservation and Development Commission
BMP	Best Management Practice

C

CA	California
CAAQS	California Ambient Air Quality Standards
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CAT	Climate Action Team
CBC	California Building Code
CCAA	California Clean Air Act
CCCSD	Central Contra Costa Sanitary District
CCCSWA	Central Contra Costa Solid Waste Authority
CCCTA	Central Contra Costa Transit Authority
CCCWP	Contra Costa Clean Water Program

CCHS – HMP	Contra Costa County Health Services – Hazardous Materials Programs
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CE	California Endangered
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFAI	Commission on Fire Accreditation International
CFC	Chlorofluorocarbon
CFC	California Fire Code
CFR	Code of Federal Regulations
cfs	Cubic Feet per Second
CH_4	Methane
CHP	California Highway Patrol
CHRIS	California Historical Resources Information System
CIP	Capital Improvement Plan
CKH Act	Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000
Clean Air Plan	2010 Bay Area Clean Air Plan
CMA	Congestion Management Agency
CNDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon Monoxide
Code	Danville Municipal Code
County	Contra Costa County
CPUC	California Public Utilities Commission
CR	California Rare
CRLF	California Red-Legged Frog
CRPR	California Rare Plant Ranks
CSC	California Species of Special Concern
CT	California Threatened
CTR	California Toxics Rule
CTS	California Tiger Salamander
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWIB	California Workforce Investment Board
CY	Cubic Yards

D

dB	Decibel
dBA	A-weighted Decibel
DDT	Dichlorodiphenyltrichloroethane
District	San Ramon Valley Fire Protection District
DRB	Design Review Board
DTSC	Department of Toxic Substances Control

E

EBMUD	East Bay Municipal Utility District
EBRPD	East Bay Regional Park District

EIR	Environmental Impact Report
ENGEO	ENGEO Incorporated
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
EVMA	Emergency Vehicle Maintenance Access

F

FC	Federal Candidate
FCAA	Federal Clean Air Act
FE	Federally Endangered
FEMA	Federal Emergency Management Agency
FIMA	Federal Insurance and Mitigation Administration
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FOE	Finding of Effect
FPE	Federally Endangered (Proposed)
FRPP	Farm and Ranch Land Protection Program
FT	Federally Threatened
ft	Feet
FTA	Federal Transit Administration

G

GCJC	Green Collar Jobs Council
General Permit	Statewide General Construction Activity Stormwater Permit
General Plan	Town of Danville 2030 General Plan
GHAD	Geologic Hazard Abatement District
GHG	Greenhouse Gas
GWP	Global Warming Potential

H

H_2O	Water
HAP	Hazardous Air Pollutant
Hazmat Team	Hazardous Materials Response Team
HCD	State Department of Housing and Community Development
HCFC	Hydrochlorofluorocarbon
HCM	Highway Capacity Manual
HFC	Hydrofluorocarbon
HMTA	Hazardous Materials Transportation Act
HOA	Homeowners' Association
HortScience	HortScience, Inc.
HPSR	Historic Property Survey Report
HSG	Hydrologic Soil Group

I

I-680	Interstate 680
IBC	International Building Code
IMP	Integrated Management Practice
IPCC	Intergovernmental Panel on Climate Change

IS	Initial Study
ISO	Insurance Services Office

K

km	Kilometer

L

LAFCO	Local Agency Formation Commission
LBP	Lead-Based Paint
lbs/day	Pounds Per Day
LCA	Land Conservation Act
LCFS	Low Carbon Fuel Standard
L_{dn}	Day/Night Average Sound Level
L_{eq}	Equivalent Sound Level
LID	Low Impact Development
L_{max}	Maximum Sound Level
L_{min}	Minimum Sound Level
L_n	Exceedance Level
LOA	Live Oak Associates, Inc.
LOS	Level of Service
LTRC	Long Term Renewal Contract

M

MACT	Maximum Available Control Technology
MBTA	Migratory Bird Treaty Act
MGD	Million Gallons per Day
MLD	Most Likely Descendant
mm	Millimeter
mph	Miles Per Hour
MPO	Metropolitan Planning Organization
MRP	Municipal Regional Stormwater Permit
msl	Mean Sea Level
MT	Metric Tons
MTC	Metropolitan Transportation Commission
$MTCO_{2eq}$	Metric Tons of Carbon Dioxide Equivalent
MUTCD	2010 California Manual on Uniform Traffic Control Devices

N

N_2O	Nitrous Oxide
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NASS	National Agricultural Statistics Service
National Register	National Register of Historic Places
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NGVD 29	National Geodetic Vertical Datum of 1929

NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic and Safety Administration
NM	Not Measured
NO_2	Nitrogen Dioxide
NOC	Notice of Completion
NOI	Notice of Intent
Noise Study	Traffic Noise Assessment Study
NOP	Notice of Preparation
NO_X	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NWIC	Northwest Information Center

O

O_3	Ozone
OPR	Office of Planning and Research
OSHA	Occupational Safety and Health Administration

P

Pb	Lead
PCB	Polychlorinated Biphenyl
PEIR	Program Environmental Impact Report
PFC	Perfluorocarbon
Phase I ESA	Phase I Environmental Site Assessment
Planning Area	Danville Planning Area
PM_{10}	Particulate Matter 10 Microns in Diameter or Less
$PM_{2.5}$	Particulate Matter 2.5 Microns in Diameter or Less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
ppb	Parts Per Billion
ppm	Parts Per Million
PPV	Peak Particle Velocity
PRC	Public Resources Code
Project	Podva Property Residential Development
PST	Pacific Standard Time

R

Rapanos Decision	Rapanos v. United States and Carabell v. U.S. Army Corps of Engineers
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
RH	Relative Humidity
RHNA	Regional Housing Needs Allocation
ROG	Reactive Organic Gas
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board

S

SARA	Superfund Amendment and Reauthorization Act
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF_6	Sulfur Hexafluoride
SIP	State Implementation Plan
SO_X	Sulfur Oxides
SRVFPD	San Ramon Valley Fire Protection District
SSU	Sonoma State University
SWANCC Decision	Soild Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers
SWCP	Stormwater Control Plan
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board

T

TAC	Toxic Air Contaminant
TMDL	Total Maximum Daily Load
Town	Town of Danville
tpy	Tons Per Year
TVTC	Tri-Valley Transportation Council

U

U.S.	United States
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
UWMP	Urban Water Management Plan

V

V/C	Volume to Capacity ratio
VdB	Vibration Decibels
VOC	Volatile Organic Compound

W

WPT	Western Pond Turtle
WSMP	Water Supply Management Program
WWTP	Wastewater Treatment Plant

U

$\mu g/m^3$	Micrograms Per Cubic Meter

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1 SUMMARY

1.1 PROJECT DESCRIPTION

The Podva Property Residential Development project (project) is a proposed development of 20 single-family homes on approximately ten acres and the dedication of approximately 99 acres as permanent open space in the Town of Danville (Town). An existing barn on the property and adjacent metal storage building would be demolished, a small number of trees would be removed and a 56" oak tree would be preserved and incorporated into the development. The following entitlements would be required to facilitate the project:

- Preliminary Development Plan – Rezoning (to rezone the project site from A-2; General Agricultural District to P-1; Planned Unit Development District;
- Final Development Plan – Major Subdivision (to subdivide the 109-acre site to create up to 20 single-family homes on approximately nine acres and dedicate approximately 99 acres to permanent open space); and,
- A Tree Removal Permit.
- Annexation into the CCCSD current service area for sanitary sewer service; and
- An annexation of the project site into the East Bay Municipal Utility District's (EBMUD) current service area for water service.

1.2 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Chapter 4 of this Draft EIR presents a description of the existing environmental setting, an analysis of environmental impacts resulting from development of the proposed project, and required or proposed mitigation measures. These impacts and mitigation measures are summarized in Table 1-1. Impacts are identified as either "Less Than Significant Impact With Mitigation Incorporation," or "Less Than Significant Impact". If an impact is Less Than Significant With Mitigation Incorporation, mitigation measures are identified to reduce the potentially significant impact to less-than-significant levels. Within Chapter 6 of this Draft EIR, Table 6-1 addresses the extent to which alternatives to the proposed project would mitigate the potentially significant effects associated with the proposed project.

CUMULATIVE IMPACTS

Cumulative impacts of the proposed project combined with past, present, and reasonably foreseeable future projects are evaluated in each section of Chapter 4 in this Draft EIR. In general, with implementation of the specified mitigation measures, the project's contribution to cumulative impacts would not be significant.

SIGNIFICANT UNAVOIDABLE ADVERSE ENVIRONMENTAL EFFECTS

§ 15126.2 (b) of the CEQA Guidelines requires an EIR to "describe any significant impacts, including those which can be mitigated but not reduced to a level of insignificance. Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the Project is being proposed, notwithstanding their effect, should be described."

The environmental impact analysis conducted for the proposed project did not identify any project-level significant and unavoidable impacts.

1.3 SUMMARY OF ALTERNATIVES EVALUATED

Chapter 6 of this Draft EIR evaluates alternatives to the proposed project in accordance with the CEQA Guidelines § 15126.6. The analysis of project alternatives takes into consideration the base assumption that all applicable mitigation measures associated with the project would be implemented with the appropriate alternatives. However, applicable mitigation measures may be scaled to reduce or avoid the potential impacts of the alternatives under consideration, and may not precisely match those identified for the project. If a specific impact is not raised within the discussion of an alternative, it is because the effect is expected to be the same as that associated with the implementation of the proposed project. Detailed descriptions and analyses of the project alternatives can be found in Chapter 6 (Alternatives to the proposed project). Following is a summary of the alternatives evaluated in this Draft EIR.

1.3.1 ALTERNATIVE 1: NO PROJECT/NO BUILD (STATUS QUO)

This alternative assumes that there would be no physical or operational changes at the project site and, thus, the existing conditions would remain unchanged. The existing 2030 General Plan land use designation of Rural Residential would remain unchanged, as would the existing A-2 (General Agricultural) District zoning designation.

1.3.2 ALTERNATIVE 2: DEVELOPMENT CONSISTENT WITH EXISTING A-2 (GENERAL AGRICULTURAL) DISTRICT

This alternative would require the development to be consistent with the Existing A-2 (General Agricultural) District. Alternative 2 would develop 20 single-family homes on lots that would be a minimum of five acres, consistent with the site's existing A-2 zoning. Figure 6-1 (Alternative 2 – Development Consistent with Existing A-2; (General Agricultural) District) illustrates a conceptual site plan for this alternative. The entire approximately 110 acre site would be developed with single-family homes under Alternative 2 at a density of less than one unit per acre (.18 units per acre). No open space would be set aside with this alternative. Although the specific storm drainage improvements proposed by the project would not be implemented under Alternative 2, different, but similar storm drainage improvements consistent with the Town's requirements and the requirements of the Contra Cost Clean Water Program (CCCWP) would be constructed. Substantially more trees would be removed, cut and fill amounts would greatly increase and the amount of excavated soil would also increase considerably compared to the proposed project.

Overall, lots would be larger than those proposed by the project and would be configured differently. Because the lots would be consistent with the A-2 zoning, homes could be constructed consistent with the height and size standards in the Zoning Ordinance. The houses would not be subject to the height and size limitations that would be imposed on the proposed project through the P-1; Planned Unit Development planned development zoning process. The project sponsor has indicated that if larger homes were built, they would likely have a larger floor plate (20,000 square foot building pads) rather than additional height.

This alternative would require subdivision of the project site and a Tree Removal Permit.

1.3.3 ALTERNATIVE 3: MORE CLUSTERED DEVELOPMENT/REDUCED LOT SIZE

Alternative 3 would involve the development of the project site with 20 single-family homes on lots sized a minimum of 6,000 square feet. The overall development footprint would be reduced compared to the proposed project; refer to Figure 6-2 (Alternative 3 (More Clustered Development/Reduced Lot Size) for a visual depiction of this alternative. This alternative would eliminate lots four through nine identified on the project site plans, along with their access road for a total reduction of approximately two acres. Thus, 20 lots would develop on approximately eight acres, for a density of approximately 2.5 units per acre. All other aspects of the proposed project would be implemented with this alternative, including the set aside of approximately 99 acres as permanent open space and storm drainage improvements consisting of a bio-swale and detention basin. However, this alternative would eliminate the need to remove four trees, including two Town-protected trees and one heritage tree. Similar to the proposed project, this alternative would require rezoning the site from A-2; General Agricultural District to P-1; Planned Unit Development District, subdivision of the project site, and a Tree Removal permit. This alternative would meet all of the project objectives except that with smaller lots and a higher density, it would make it difficult to be compatible with the surrounding neighborhood as the lots would be much smaller and the homes would be two story versus the single story homes proposed for the project. This alternative is intended to reduce overall site disturbance compared to the proposed project.

1.3.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of the environmentally superior alternative in an EIR, which is an alternative that would result in the fewest or least significant environmental impacts. If the "No Project" Alternative is the environmentally superior alternative, State CEQA Guidelines Section 15126.6 (e)(2) requires that another alternative that could feasibly attain most of the project's basic objectives be chosen as the environmentally superior alternative. Based on the above analysis, summarized in Table 6-1, the environmentally superior alternative is Alternative 3. The majority of impacts would be the same or reduced compared to those identified for the proposed project. Specifically, impacts associated with air quality, biological resources, greenhouse gas emissions, hazards and hazardous materials, land use and planning, noise, population and housing, public services, and transportation/traffic would be equivalent under Alternative 3 and the proposed project. However, Alternative 3 would result in reduced impacts compared to the proposed project in the following areas: cultural resources; geology and soils; and, hydrology and water quality. Potential impacts related to aesthetics would be slightly increased because of the need to develop two-story houses.

Table 6-1 (Comparison of Alternative Project Impacts to the Proposed Project) compares the potential environmental impacts of each Alternative to those of the proposed project for each of the environmental resource areas analyzed above. The comparison identifies whether the impacts associated with each alternative would be reduced, the same, or greater than those identified for the proposed project.

1.4 MITIGATION MONITORING

CEQA Guidelines § 15097 requires public agencies to set up monitoring and reporting programs to ensure compliance with mitigation measures, which are adopted or made as a condition of project approval, and designed to mitigate or avoid the significant environmental effects identified in environmental impact reports. A Mitigation Monitoring and Reporting Program (MMRP) incorporating the mitigation measures set forth in this Draft EIR will be considered and acted upon by Town of Danville decision-makers concurrent with adoption of the findings of this Draft EIR and prior to approval of the proposed project.

1.5 AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

Pursuant to CEQA Guidelines § 15123, this Draft EIR acknowledges the areas of controversy and issues to be resolved that are known to the Town of Danville and/or were raised during the Draft EIR scoping process. These issues were identified during the Notice of Preparation (NOP) review period. Eight comment letters were received from agencies in response to the NOP comment period from October 11, 2012 through November 9, 2012. These comments on the NOP are included in Appendix A.

The following subsections summarize the issues raised during the NOP review period:

- East Bay Municipal Utility District (EBMUD) service will require annexation into EBMUD's service area. EBMUD will not deliver water to any annexed property until a formal approval is issued by the U.S. Bureau of Reclamation and the Contra Costa County Local Agency Formation Commission (LAFCO).
- Some concerns regarding drainage on adjacent downhill properties were received.
- A resident expressed concern over the proposed project in regards to a change in community character.

SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

All significant and potentially significant impacts for the proposed project would be mitigated to a less-than-significant level with implementation of mitigation measures included in this EIR. No significant and unavoidable adverse impacts would occur as the result of the proposed project.

GROWTH-INDUCING IMPACTS

As required by Section 15126.2(d), an EIR must discuss ways in which a proposed project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. The EIR must also discuss the characteristics of the project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or precedents that directly or indirectly encourage additional growth. Typically, induced growth is considered a significant adverse impact if it:

- Provides infrastructure or capacity to accommodate growth beyond the levels currently permitted in applicable local and regional plans and policies.
- Encourages growth or a concentration of population in excess of what is planned for in the applicable general plan or other land use plan, or in projections made by regional planning agencies such as the Association of Bay Area Governments (ABAG).
- Adversely affects the ability of agencies to provide needed public services or infrastructure.
- In some other way significantly affects the environment, such as through a substantial increase in traffic congestion or deterioration of air quality

The Town of Danville's current population is approximately 42,450. The project would result in the ultimate development of 20 single family residential units. This housing would generate up to approximately 55 persons, based on approximately 2.73 persons per household. Increases in population can create additional demand for services and infrastructure, requiring construction of new facilities that may, in turn, induce growth or otherwise cause significant environmental effects. The project would result in a very small increase in the Town's

population, and does not constitute substantial population growth. The project would not generate any new employment except possibly during the construction phase.

The project site is located within the Town of Danville and would not result in an expansion of urban services or the pressure to expand beyond the Town's existing Sphere of Influence. It would not open additional undeveloped land to future growth or provide expanded utility capacity to serve future development that was not already contemplated. While the project site is not in the current service area for EBMUD and CCCSD, it is located within their ultimate service boundaries, and growth associated with development of the project site was anticipated within their long-term service plans.

The scale of population growth would not constitute significant or adverse growth inducement. The project would provide new infrastructure in the Town of Danville, including lateral extensions of water, storm, and sanitary sewer lines. The proposed utilities and related infrastructure would be planned and sized to accommodate the project requirements, and would not include oversized components designed to facilitative other development or further extensions of utilities or services. Adequate infrastructure and public services are generally available to meet the increased demands of the project. No significant additional impacts on services (such as water, wastewater, storm drainage, flood control, police, fire, parks and recreation) are expected beyond what has been planned for by the proposed project. The additional infrastructure for the project does not exceed what is necessary to serve and/or mitigate impacts of the project, and will not provide additional capacity to accommodate significant growth.

Finally, the project does not allow for development that creates population or other growth beyond what is currently permitted under the Town of Danville 2030 General Plan.

Based upon the above discussion, the project would not result in significant growth-inducing impacts.

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TABLE 1-1. SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Potential Impact	Significance	Mitigation Measure
Aesthetics		
Impact 4.1-1: The proposed project would not have an adverse affect on a scenic vista.	Less Than Significant Impact	Mitigation is not required.
Impact 4.1-2: The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	Less Than Significant Impact	Mitigation is not required.
Impact 4.1-3: The proposed project could degrade the existing visual character or quality of the project site.	Less Than Significant Impact With Mitigation Incorporation	Implement Mitigation Measure 4.4-13a.
Impact 4.1-4: The proposed project would not substantially degrade the existing visual character or quality of the project site's surroundings.	Less Than Significant Impact	Mitigation is not required.
Impact 4.1-5: The proposed project would not create a new source of light and glare that would adversely affect day or nighttime views in the project area.	Less Than Significant Impact	Mitigation is not required.
Impact 4.1-6: Implementation of the proposed project, in combination with other related cumulative projects, would not significantly impact a scenic vista and/or degrade the visual character or quality of the development sites and their surroundings.	Less Than Significant Impact	Mitigation is not required.
Agricultural Resources		
Impact 4.2-1: The proposed project would convert grazing land to non-agricultural use.	Less Than Significant Impact	Mitigation is not required.
Impact 4.2-2: Project implementation would not conflict with agricultural zoning or a Williamson Act Contract.	Less Than Significant Impact	Mitigation is not required.
Impact 4.2-3: Project implementation would not involve other changes to the environment, which due to their location or nature, could result in the conversion of farmland to non-agricultural use.	Less Than Significant Impact	Mitigation is not required.
Impact 4.2-4: Project implementation would not result in a cumulatively considerable impact on agricultural resources.	Less Than Significant Impact	Mitigation is not required.

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
Air Quality		
Impact 4.3-1: Short-term construction activities associated with the proposed project could result in significant air pollutant emissions.	Less Than Significant with Mitigation Incorporation	4.3-1a Prior to issuance of any Grading Permit, the Building Services Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that the following basic construction mitigation measures shall be implemented for all construction projects: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • 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 shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. 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 5 minutes (as 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. • Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD’s phone number shall also be visible to ensure compliance with applicable regulations. 4.3-1b Prior to any demolition activities, the Building Services Official shall confirm that the demolition plans and specifications stipulate that demolition activities comply with BAAQMD Regulation 11, Rule 2: Asbestos Demolition, Renovation, and Manufacturing. 4.3-1c Prior to issuance of any construction activities, the Building Services

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
		Official shall confirm that construction phases (e.g., grading, paving, building, etc.) do not overlap.
Impact 4.3-2: Long-term operation of the proposed project would not result in significant air pollutant emissions.	Less Than Significant Impact	Mitigation is not required.
Impact 4.3-3: Development associated with the proposed project would be consistent with regional plans.	Less Than Significant Impact	Mitigation is not required.
Impact 4.3-4: Implementation of the proposed project and related cumulative projects would not result in significant air quality impacts.	Less Than Significant Impact	Mitigation is not required.
Biological Resources		
Impact 4.4-1: Project implementation could result in the loss of habitat for special status plants.	No Impact	None required.
Impact 4.4-2: Project implementation could result in the loss of habitat for special status animals.	Less Than Significant Impact with Mitigation Incorporation	Mitigation measures for impacts on the California red-legged frog, western pond turtle, burrowing owl, and American badger are discussed in sections 4.4-3, 4.4-.4, 4.4-5, 4.4-.7, and 4.4-8, respectively. For the remaining species discussed above, mitigation measures are not required.
Impact 4.4-3: Project implementation could result in the loss of California red-legged frog habitat and could result in California red-legged frog mortality.	Less Than Significant Impact with Mitigation Incorporation	4.4-3a The following measures would minimize direct and indirect impacts on California red-legged frogs. 1. Prior to the start of construction, a qualified biologist shall train all project staff regarding habitat sensitivity, identification of special status species, and required practices. The training shall include the general measures that are being implemented to conserve these species as they relate to the project, the penalties for non-compliance, and the boundaries of the project area. A fact sheet or other supporting materials containing this information shall be prepared and distributed. Upon completion of training, employees shall sign a form stating that they attended the training and understand all the conservation and protection measures. 2. A qualified biologist shall survey the project site prior to, and be present to monitor, construction activities during any initial ground disturbance or vegetation clearing or other periods during construction, as necessary. The biologist shall capture and relocate any California red-legged frogs that are discovered during

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
		the surveys or construction monitoring. Any individuals that are captured shall be held for the minimum amount of time necessary to release them to suitable habitat outside of the work area. 3. A qualified biologist shall stake and flag exclusion zones around all known locations of CRLF breeding and upland refugia areas in the construction zone. These areas shall be avoided during construction activities to the maximum extent practicable. All construction areas shall be flagged, and all activity shall be confined to these areas. 4. If a CRLF is encountered during construction work, activities shall cease until the animal is removed and relocated by a qualified biologist. 5. Construction activities shall be limited to the period from May 1 through October 31. 6. Permanent and temporary construction disturbances and other types of project-related disturbances to CRLF habitat shall be minimized to the maximum extent practicable and confined to the project site. To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, designated cross-country routes, and other designated areas. These areas shall also be included in preconstruction surveys and, to the maximum extent possible, should be established in locations disturbed by previous activities to prevent further adverse effects. Sensitive habitat areas shall be delineated with high visibility flagging or fencing to prevent encroachment of construction personnel and equipment into any sensitive areas during project work activities. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site without authorization from the USFWS. 7. Because dusk and dawn are often the times when CRLF are most actively foraging and dispersing, all construction activities should cease one half hour before sunset and shall not begin prior to one half hour before sunrise.
		4.4-3b A Mitigation and Monitoring Plan shall be prepared for the explicit purpose of managing the open space area. This plan shall be submitted to the Town of Danville for review and approval. At a minimum this plan shall:

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure	
			• Identify the location of the restoration efforts for replacing jurisdictional waters. The replacement ratio for jurisdictional waters shall be at a minimum of a 1:1 ratio. • Identify the approaches to be used such as to what extent should the onsite ponds be expanded, define any reconfiguring of the ponds bottom and increase in depth, provide evidence that sufficient water budget exists for any proposed enhancement. • Identify a suitable planting regime for restoring or enhancing wetland and riparian habitats. • Identify success criteria for monitoring both the wetland and riparian habitats that are consistent with similar habitats regionally. • Monitor restored or enhanced wetland habitats for at least five years and restored or enhanced riparian habitats for five years. • Define and identify maintenance and management activities to manage the open space habitats to meet the stated goals of support habitat characteristics suitable for the CRLF. This would include suitable fencing so as to control access, limited cattle grazing or other procedures to manage grass height and forage production at levels that benefit the CRLF, removal of trash. • Define and provide for a financial mechanism such as a non-wasting endowment or an assessment district that funds the management of the open space into perpetuity.
		4.4-3c	Implement Mitigation Measure 4.4-10a through 4.4-10c (compensation measures for impacts on waters of the U.S.).
Impact 4.4-4: Project implementation would result in the loss of Western pond turtle habitat and could result in Western pond turtle mortality.	Less Than Significant Impact with Mitigation Incorporation	4.4-4a	Implementation of Mitigation Measures 4.4-3a through 4.4-3c.
		4.4-4b	The following measures specific to western pond turtles (WPT) shall be implemented: • Pre-construction surveys shall be conducted to ensure that WPT are absent from the construction area. If WPT are present, a qualified biologist possessing all necessary permits should relocate them. • Immediately following the pre-construction surveys, the construction zone shall be cleared, and silt fencing should be erected and maintained around construction zones to prevent WPT from moving into these areas.

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure	
			• A biological monitor shall be present onsite during particular times of construction to ensure no WPT are harmed, injured, or killed during project buildout.
Impact 4.4-5: Project implementation would result in the loss of Alameda whipsnake habitat and could result in Alameda whipsnake mortality.	Less Than Significant Impact with Mitigation Incorporation	4.4-5a 4.4-5b	Implementation of Mitigation Measures 4.4-3a through 4.4-3c. The following measures specific to Alameda whipsnake shall be implemented: • Pre-construction surveys shall be conducted to ensure that Alameda whipsnake are absent from the construction area. If Alameda whipsnake are present, a qualified biologist possessing all necessary permits should relocate them. • Immediately following the pre-construction surveys, the construction zone shall be cleared, and silt fencing should be erected and maintained around construction zones to prevent Alameda whipsnake from moving into these areas. • A biological monitor shall be present onsite during particular times of construction to ensure no Alameda whipsnake are harmed, injured, or killed during project buildout.
Impact 4.4-6: Construction activities could result in the abandonment of active nests or direct mortality of nesting raptors and/or migratory birds.	Less Than Significant Impact with Mitigation Incorporation	4.4-6	To the maximum extent practicable, trees planned for removal shall be removed during the non-breeding season (September 1 through January 31). If it is not possible to avoid tree removal or other disturbances during the breeding season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey for tree-nesting raptors and other tree- or ground-nesting migratory birds in all trees or other areas of potential nesting habitat within the construction footprint and within 250 ft. of the footprint, if such disturbance would occur during the breeding season. This survey shall be conducted no more than 14 days prior to the initiation of demolition/construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). If nesting raptors or migratory birds are detected on the site during the survey, a suitable construction-free buffer shall be established around all active nests. The precise dimension of the buffer (up to 250 ft.) shall be determined at that time and may vary depending on location and species. Buffers shall remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure	
			independent of their parents. Pre-construction surveys during the non-breeding season are not necessary, as the birds are expected to abandon their roosts during construction activities.
Impact 4.4-7: Project implementation could result in the abandonment of active nests or direct mortality of burrowing owls during construction activities and the permanent loss of burrowing owl habitat during buildout.	Less Than Significant Impact with Mitigation Incorporation	4.4-7	In order to avoid impacts on active burrowing owl nests, a qualified biologist shall conduct pre-construction surveys for burrowing owls within the construction footprint and within 250 feet of the footprint no more than 30 days prior to the onset of ground disturbance. These surveys shall be conducted in a manner consistent with accepted burrowing owl survey protocols. If pre-construction surveys determine that burrowing owls occupy the site during the non-breeding season (September 1 through January 31), then a passive relocation effort (e.g., blocking burrows with one-way doors and leaving them in place for a minimum of three days) may be necessary to ensure that the owls are not harmed or injured during construction. Once it has been determined that owls have vacated the site, the burrows can be collapsed, and ground disturbance can proceed. If burrowing owls are detected within the construction footprint or immediately adjacent lands (i.e., within 250 feet of the footprint) during the breeding season (February 1 through August 31), a construction-free buffer of 250 feet shall be established around all active owl nests. The buffer area shall be enclosed with temporary fencing, and construction equipment and workers shall not enter the enclosed setback areas. Buffers shall remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents. After the breeding season, passive relocation of any remaining owls may take place as described above.
Impact 4.4-8: Construction activities could result in the direct mortality of American badgers.	Less Than Significant Impact with Mitigation Incorporation	4.4-8	Pre-construction surveys conducted for burrowing owls shall also be used to determine the presence or absence of badgers in the development footprint. If an active badger den is identified during pre-construction surveys within or immediately adjacent to the construction envelope, a construction-free buffer of up to 300 ft. (or distance specified by the resource agencies, i.e., CDFW) shall be established around the den. Because badgers are known to use multiple burrows in a breeding burrow complex, a biological monitor shall be present onsite during construction activities to ensure the buffer is adequate to avoid direct impact on individuals or dem abandonment. The monitor would

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
		be necessary onsite until it is determined that young are of an independent age and construction activities would not harm individual badgers. Once it has been determined that badgers have vacated the site, the burrows can be collapsed or excavated, and ground disturbance can proceed.
Impact 4.4-9: Project implementation could result in the loss of golden eagle habitat.	Less Than Significant Impact	Mitigation is not required.
Impact 4.4-10: Project implementation would result in the fill of approximately 300 linear feet and 0.03 acres of jurisdictional waters.	Less Than Significant Impact with Mitigation Incorporation	4.4-10a The project applicant shall implement avoidance, minimization, and/or compensation measures to reduce impacts on jurisdictional waters and riparian habitats to a less than significant level. Avoidance. The preferred method of mitigation would be avoidance of all waters of the U.S. and State by designing the project so that it avoids the placement of fill within potential jurisdictional waters and impacts on riparian habitat. The proposed project has been designed to avoid all but approximately 288 linear feet, totaling 0.03 acres, of upland seasonal channels and associated riparian vegetation. Riparian woodland habitat associated with higher order drainages on the site have been avoided. Additionally, to avoid the site's steeper slopes, the proposed project is confined to the flatter area at the east end of the site, which requires some fill of ephemeral drainages in these areas. Minimization. Because full avoidance is not possible, actions shall be taken to minimize impacts on aquatic and riparian habitats. Measures taken during construction activities shall include placing construction fencing around the aquatic features or riparian areas to be preserved to ensure that construction activities do not inadvertently impact these areas. As part of project build-out, all proposed lighting shall be designed to avoid light and glare impacts on the riparian corridors to be avoided. Light sources shall not be visible from riparian areas and shall not illuminate riparian areas or cause glare on the opposite side of the channels (e.g., to neighboring properties). Additionally, proposed development activities shall be designed and situated to avoid the loss of trees within any riparian areas to the maximum extent practicable. Mitigation. Because impacts to the ephemeral drainages at the east end of the site cannot be avoided, an onsite habitat mitigation and monitoring plan shall be developed to mitigate for impacts on these

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
		features. It is expected that all mitigation measures can be accommodated within the approximately 100 acres of the site that are proposed for preservation as open space. If the preserved area cannot fully accommodate the mitigation measures, then offsite restoration shall be implemented. Mitigation measures shall either result in the creation of new habitat as replacement for habitat lost or enhance the quality of existing habitat for native plants and wildlife. Mitigation measures shall include replacement of riparian and aquatic habitat at a replacement-to-loss ratio of up to 3:1 for permanent acreage impacts (up to three acres created for each acre permanently impacted) as well as reseeding or replanting of vegetation in temporarily disturbed areas according to a site-specific mitigation plan. At a minimum, this plan shall identify mitigation areas, a planting plan, site maintenance activities, success criteria, and remedial measures to compensate for lack of success. The mitigation goal shall be to create and enhance riparian or aquatic habitats with habitat functions and values greater than or equal to those existing in the impact zone. This could include enhancing the wetland ponds and associated seasonal drainage and tributaries to increase their wetland and riparian value, which would benefit native wildlife in the region, such as CRLF (see Impact discussion 4.4-3). A detailed monitoring plan, including specific success criteria, shall be developed and submitted to permitting agencies during the permit process. The mitigation area shall be monitored in accordance with the plan approved by those permitting agencies. The basic components of the monitoring plan consist of final success criteria, performance criteria, monitoring methods, data analysis, as-built plans, monitoring schedule, contingency/remedial measures, and reporting requirements.
		4.4-10b A Habitat Mitigation and Monitoring Plan shall be prepared that at a minimum: • Defines the location of all restoration/creation activities; • Provides evidence of suitable water availability (e.g., from precipitation and surface runoff) to support any created wetland and riparian habitats; • Identifies the species, amount and location of plants to be installed;

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
		• Identifies time of year for planting and method for supplemental watering during the establishment period; • Identifies the monitoring period which should be not less than five years for wetland restoration and not less than five years for riparian restoration, defines success criteria that shall be required for the wetland restoration to be deemed a success; • Identifies adaptive management procedures that accommodate the uncertainty that comes with restoration projects. These include (but not limited to) measures to address colonization by invasive species, unexpected lack of water, excessive foraging of installed wetland plants by native wildlife; etc.; • Defines management and maintenance activities (weeding of invasive, providing for supplemental water, repair of water delivery systems, etc.); and, • Provides for surety in funding the monitoring and ensuring that the created wetland and riparian habitats fall within lands to be preserved and managed into perpetuity. 4.4-10c The project applicant shall comply with all state and federal regulations related to construction work that would impact aquatic habitats occurring on the site. The project applicant shall be required to obtain a Section 404 Clean Water Act permit from the USACE, Section 401 Water Quality Certification from the RWQCB, and Section 1600 Streambed Alteration Agreement from the CDFW prior to initiating any construction within these habitats.
Impact 4.4-11: Project implementation could result in interference with the movement of native wildlife.	Less Than Significant Impact	Mitigation is not required.
Impact 4.4-12: Project implementation could result in the degradation of water quality in seasonal drainages, stock ponds, and downstream waters.	Less Than Significant Impact	Mitigation is not required.
Impact 4.4-13: Grading and construction would result in the permanent loss of trees, including those protected under the Town's Tree Preservation Ordinance.	Less Than Significant Impact with Mitigation Incorporated	4.4-13a To compensate for the proposed removal of 24 trees, the project applicant would be required to implement the following measures: 1. The project applicant's Consulting Arborist shall calculate the total inches of diameter of protected trees to be removed, as of the date of the grading permit application (the "Total Inches"), and submit that calculation to the Town. The project applicant shall be required to replace the 14 Town-protected trees to be removed with a number and size of oak trees equal to the total

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
		inches of the diameter of the trees to be removed. The required tree mitigation planting shall be in addition to the street trees otherwise required to be planted as part of the project's landscape plan. 2. It is currently estimated that all mitigation oak trees can be accommodated onsite. These trees shall be 24-inch box size trees, which shall receive a credit of two-inches per tree toward the total mitigation planting requirement. 3. Tree Preservation Ordinance Section 32.79.9(h) sets forth requirements for preservation of Town "Protected" trees on the project site that would not be removed for the project, but might be affected by the construction process. The ordinance requires payment of security to the extent that the project sponsor proposes construction work that would occur within the dripline of a protected tree intended to be preserved. The current calculated value of these trees is $200,950. 4.4-13b To compensate for the proposed removal of the ten non-protected non-heritage trees the project applicant shall be required to replace the ten trees at 1:1 replacement ratio. 4.4-13c The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases. 1. Any changes to the plans affecting the trees shall be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, demolition plans, site plans, improvement plans, utility and drainage plans, grading plans, and landscape and irrigation plans. 2. Have the vertical and horizontal locations of the 24 trees, as identified in the *Arborist Report, Podva Property, Danville, CA*, prepared by HortScience on October 14, 2013, established and plotted on all plans. Once trunk locations are plotted on plans and reviewed by the Consulting Arborist, impacts on individual trees can be assessed and tree protection zones for those trees identified for preservation can be established. 3. A tree protection zone shall be established around each tree to be preserved. No grading, excavation, construction or storage of

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure

materials shall occur within that zone. However, up to 12 inches of fill may be placed around the trunks of trees. Trees not listed below shall have the tree protection zones established as one foot behind the edge of grading. The tree protection zones for all other trees are as follows:

Number	Species	Diameter	Zone
143	Valley Oak	21	Dripline in all directions
144	Valley Oak	47	Dripline in all directions
171	Valley Oak	36	Dripline in all directions
172	Valley Oak	7	Dripline in all directions
176	Valley Oak	15	Dripline in all directions
179	Valley Oak	18	Dripline in all directions
185	Valley Oak	44	Dripline in all directions
186	Coast Live Oak	14	Dripline in all directions
187	Valley Oak	20	Dripline in all directions
188	Valley Oak	21	Dripline in all directions
192	Valley Oak	56	35' SW, 20' W, dripline in all other directions

4. Underground services including utilities, sub-drains, water or sewer shall be routed around the tree protection zone. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury.
5. Tree Preservation Notes, prepared by the Consulting Arborist, shall be included on all plans.
6. Irrigation systems shall be designed so that no trenching would occur within the tree protection zone.
7. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.
8. Do not lime within 50' of any tree to be preserved. Lime is toxic to tree roots.

4.4-13d Pre-construction treatments and recommendations:

1. The demolition contractor and construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
		2. Install tree protection around the trunk of trees along the property line of Lots 1, 2, 3, 19, 20 and Parcel A. Tree protection shall consist of either hay bales stacked 6-foot high or rolls of erosion control material wrapped around the tree trunks. Hay bales and rolls will be more effective at protecting the trunk from impacts from equipment than fencing. For all other trees, install fencing enclose the tree protection zone prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by the Town. Fences are to remain until all grading and construction is completed. 3. Locate and stake the property line as well as the proposed location of both the V-ditch and retaining wall prior to the start of demolition. Following staking, the Consulting Arborist will review tree protection and construction procedures with the project superintendent. 4. Remove the existing wire fencing by hand. Remove attachments to tree trunks by hand. 5. Tree pruning may be required to clean the crown and to provide construction clearance. All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300). Brush shall be chipped and spread beneath the trees within the tree protection zone. 6. Structures and underground features to be removed within the tree protection zone shall use the smallest equipment, and operate from outside the tree protection zone. The Consulting Arborist shall be onsite during all operations within the tree protection zone to monitor demolition activity.
		4.4-13e Recommendations for tree protection during construction: 1. Prior to beginning work, all contractors working in the vicinity of trees to be preserved shall meet with the Consulting Arborist at the site to review all work procedures, access routes, storage areas

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
		and tree protection measures. 2. Where the retaining wall or V-ditch comes within 3' of the trunk, excavate by hand for a distance of 5' on either side of the trunk. 3. Any grading, construction, demolition or other work that is expected to encounter tree roots shall be monitored by the Consulting Arborist. 4. No grading, construction, demolition or other work shall occur within the tree protection zone. Up to 12 inches of fill may be placed around the trunks of the trees. Any modifications must be approved and monitored by the Consulting Arborist. 5. Fences shall be erected to protect trees to be preserved. Fences define a specific tree protection zone for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the Consulting Arborist. 6. Construction trailers, traffic and storage areas shall remain outside fenced areas at all times. 7. Prior to grading, pad preparation, excavation for foundations/footings/walls, trenching, trees may require root pruning outside the tree protection zone by cutting all roots cleanly to the depth of the excavation. Roots shall be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, or other approved root pruning equipment. The Consulting Arborist shall identify where root pruning is required and monitor all root pruning. 8. All underground utilities, drain lines, or irrigation lines shall be routed outside the tree protection zone. If lines must traverse through the protection area, they shall be tunneled or bored under the tree as directed by the Consulting Arborist. 9. Supplemental irrigation may be required and shall be specified by the Consulting Arborist. 10. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied. 11. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the tree protection zone. 12. Any additional tree pruning needed for clearance during

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
		construction shall be performed by a Certified Arborist and not by construction personnel. 4.4-13f Maintenance of impacted trees: Preserved trees will experience a physical environment different from that of predevelopment. As a result, tree health and structural stability shall be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, annual inspection for hazard potential is recommended.
Impact 4.4-14: Project implementation could result in the cumulative loss of biotic resources.	Less Than Significant Impact with Mitigation Incorporated	Implementation of Mitigation Measures 4.4-2 through 4.4-13.
Cultural Resources Impact 4.5-1: Project implementation would not cause a substantial adverse change in the significance of a known cultural resource as defined in Section 15064.5 of the State CEQA Guidelines.	Less Than Significant Impact	Mitigation is not required.
Impact 4.5-2: Project implementation may cause a substantial adverse change to an unknown historic or archaeological resource, or result in the damage or destruction of unknown paleontological resources or human remains.	Less than Significant Impact with Mitigation Incorporation	4.5-2 If subsurface deposits believed to be cultural or human in origin are discovered during the construction of the project, then all work shall halt within a 200-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained at the project applicant's expense to evaluate the significance of the find. Work shall not continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either: 1) not cultural in origin; or, 2) not potentially significant or eligible for listing on the National Register of Historic Places or the California Register of Historical Resources. If a potentially-eligible resource is encountered, then the archaeologist, lead agency and project applicant shall arrange for either: 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, data recovery as mitigation. The determination shall be formally documented in writing and submitted to the lead

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure	
			agency and filed with the Northwest Information Center as verification that the provisions in this mitigation measure have been met. If human remains of any kind are found during construction activities, all activities shall cease immediately and the Contra Costa County Coroner be notified as required by state law (Section 7050.5 of the Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she shall notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the most likely descendant(s) (MLD) to be consulted regarding treatment and/or reburial of the remains (Section 5097.98 of the Public Resources Code). If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to the remains, the Town shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. Work can continue once the MLD's recommendations have been implemented or the remains have been reburied if no agreement can be reached with the MLD (Section 5097.98 of the Public Resources Code).
Impact 4.5-3: Project implementation has the potential to destroy unique paleontological resources.	Less Than Significant Impact with Mitigation Incorporation	4.5-3	A paleontologist shall monitor initial project ground disturbing activities at or below five feet from the original ground surface or at any direct exposure of bedrock. A sample of alluvium below this soil layer depth shall be taken for presence-absence testing of microvertebrate fossils. Subsequent to the initial monitoring and sediment sampling, the paleontologist can then determine if further monitoring, periodic site reviews, or no further monitoring for paleontological resources is appropriate. Paleontological monitors shall be empowered to halt construction activities at the location of a discovery to review the possible paleontological material and to protect the resource while it is being evaluated. Monitoring shall continue until, in the paleontologist's judgment, paleontological resources are not likely to be discovered. If paleontological resources are discovered during project activities, all work within 25 feet of the discovery shall be redirected until the paleontological monitor has assessed the situation and made recommendations regarding their treatment. It is recommended that adverse effects on paleontological resources be avoided by project

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure	
			activities. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated. Upon project completion, a report shall be prepared documenting the methods and results of monitoring. The report shall be submitted to the Northwest Information Center, the Town of Danville, and the project applicant.
Impact 4.5-4: Project implementation could result in cumulatively considerable cultural resource impacts.	Less Than Significant Impact with Mitigation Incorporation	4.5-4	Implement Mitigation Measures 4.5-2 and 4.5-3.
Geology and Soils			
Impact 4.6-1: Implementation of the proposed project would not expose people or structures to potentially adverse effects associated with earthquake fault rupture.	Less Than Significant Impact	Mitigation is not required.	
Impact 4.6-2: Implementation of the proposed project could expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death as a result of seismically-induced ground shaking or landslides.	Less Than Significant Impact with Mitigation Incorporation	4.6-2a	A design-level geotechnical engineering investigation shall be performed prior to the issuance of grading permits for all future development within the project site. The design and construction of project-related development shall incorporate the recommendations of the design-level geotechnical engineering investigation.
		4.6-2b	The applicant shall grant the formation of a Geologic Hazard Abatement District (GHAD) on the proposed project in order to address long term remediation and repair of landslides, erosion and other geologic hazards.
Impact 4.6-3: Implementation of the proposed project could result in substantial soil erosion or the loss of topsoil.	Less Than Significant Impact with Mitigation Incorporation	4.6-3	Implement Mitigation Measures 4.6-2a and 4.6-2b.
Impact 4.6-4: Project implementation would result in soils that could become unstable and potentially result in slope failure.	Less Than Significant Impact with Mitigation Incorporation	4.6-4	Implement Mitigation Measure 4.-6-2a.
Impact 4.6-5: Expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) may be used as fill for the proposed project.	Less Than Significant Impact with Mitigation Incorporation	4.6-5	Implement Mitigation Measure 4.-6-2a.

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
Impact 4.6-6: Project site soils may be compressible and could result in potentially adverse effects on people or structure.	Less Than Significant Impact with Mitigation Incorporation	4.6-6 Implement Mitigation Measure 4.-6-2a and 4.6-2b.
Impact 4.6-7: Project implementation could result in cumulatively considerable seismic or soil hazards.	Less Than Significant Impact with Mitigation Incorporation	4.6-7 Implement Mitigation Measure 4.-6-2a and 4.6-2b.
Greenhouse Gases		
Impact 4.7-1: Greenhouse gas emissions generated by the project would not have a significant impact on the environment and would not conflict with an applicable greenhouse gas reduction plan, policy, or regulation.	Less Than Significant Impact	Mitigation is not required.
Impact 4.7-2: Implementation of the proposed project would not conflict with an applicable greenhouse gas reduction plan, policy, or regulation.	Less Than Significant Impact	Mitigation is not required.
Impact 4.7-3: Greenhouse gas emissions resulting from development associated with implementation of the proposed project would not impact greenhouse gas levels on a cumulatively considerable basis.	Less Than Significant Impact	Mitigation is not required.
Hazards and Hazardous Materials		
Impact 4.8-1: Project construction may result in an accidental release of hazardous materials that creates a significant hazard to the public or environment.	Less Than Significant with Mitigation Incorporation	4.8-1a A qualified Environmental Professional shall be present during the removal of onsite debris located in the southeastern portion of the project site near the steel outbuilding. If stained soil is present beneath any debris, soil samples shall be collected from the stained soil and analyzed. The debris shall be removed and, based on the results sample analyses, disposed of in accordance with regulatory requirements. 4.8-1b Prior to demolition activities, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and California Division of Occupational Safety and Health (Cal/OSHA) certified building inspector to determine the presence or absence of asbestos containing-materials (ACMs). If ACMs are located, abatement of asbestos shall be completed prior to any activities that would disturb ACMs or create an airborne asbestos hazard. Asbestos removal shall be performed by a State certified asbestos containment contractor in accordance with the Bay Area Air Quality Management District (BAAQMD) Regulation 11, Rule 2.

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure	
		4.8-1c	If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste shall be evaluated independently from the building material for lead by a qualified Environmental Professional. If lead-based paint is found, abatement shall be completed by a qualified Lead Specialist prior to any activities that would create lead dust or fume hazard. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the Town Engineer.
		4.8-1d	Prior to grading and other construction activities, construction personnel shall be trained to recognize indications of Underground Storage Tanks (USTs), buried debris, and other potential adverse environmental condition which may be discovered on the property. If unknown wastes or suspect materials are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following: • Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area. • Notify the Town Engineer. • Secure the areas as directed by the Town Engineer. • Notify the Contra Costa County Health Services – Hazardous Materials Programs (CCHS-HMP) Coordinator.
Impact 4.8-2: Implementation of the proposed project could expose people or structures to a significant risk of loss, injury, or death involving wildland fires.	Less Than Significant with Mitigation Incorporation	4.8-2	Prior to grading permit approval, the project applicant shall submit an Open Space Management Plan to the San Ramon Valley Fire Protection District and the Town of Danville for review and approval. The Open Space Management Plan shall incorporate all applicable San Ramon Fire Protection District conditions of approval related to access, roadway widths, turning radii, fire flow requirements, fire hydrant locations, and other requirements to assure access to open space for fire protection personnel and for fuel modification and maintenance in perpetuity.

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure	
Impact 4.8-3: Project implementation could result in cumulatively considerable impacts associated with hazards, including risks associated with wildand fires and accidental release of hazardous materials.	Less Than Significant with Mitigation Incorporation	4.8-3	Implement Mitigation Measures 4.8-1a through 4.8-1b and 4.8-2.
Hydrology and Water Quality			
Impact 4.9-1: Implementation of the proposed project could violate water quality standards or waste discharge requirements.	Less Than Significant with Mitigation Incorporation	4.9-1	Prior to recordation of the final map, the project applicant shall prepare and submit a detailed Operation and Maintenance Agreement to the Development and Services Department for review and approval. The Operation and Maintenance Agreement shall identify the maintenance and funding for proposed storm water management features at the project site (i.e. bio-retention facility, storm water detention basin). All features shall be maintained and funded by the local homeowners' association (HOA) or GHAD. The maintenance protocols shall address both routine and non-routine maintenance activities and shall explicitly identify monitoring and reporting requirements. These protocols shall include an estimate of annual monitoring and maintenance costs.
Impact 4.9-2: Implementation of the proposed project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation or flooding on- or off-site.	Less Than Significant Impact with Mitigation Incorporation	4.9-2	Implement Mitigation Measure 4.9-1.
Impact 4.9-3: The proposed project could create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.	Less Than Significant Impact with Mitigation Incorporation	4.9-3	Implement Mitigation Measure 4.9-1.
Impact 4.9-4: The proposed project would not otherwise substantially degrade water quality.	Less Than Significant with Mitigation Incorporation	4.9-4	Implement Mitigation Measure 4.9-1.
Impact 4.9-5: Future development of the project site could result in cumulatively considerable hydrology and water quality impacts.	Less Than Significant Impact with Mitigation Incorporation	4.9-5	Implement Mitigation Measure 4.9-1.
Land Use and Planning			
Impact 4.10-1: The proposed project would not conflict with any applicable land use plan, policy, or	Less Than Significant Impact	Mitigation is not required.	

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
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.		
Impact 4.10-2: The proposed project would not result in potential cumulative land use conflicts.	Less Than Significant Impact	Mitigation is not required.
Noise		
Impact 4.11-1: The proposed project could expose persons to or generate noise levels in excess of standards established in the general plan or noise ordinance, or applicable standards of other agencies.	Less Than Significant Impact with Mitigation Incorporation	4.11-1a Prior to the issuance of Grading Permits, the Construction Contractor shall demonstrate to the Planning and Building Safety Director, the following: • Construction operations shall be limited to the hours of 7:30 a.m. to 7:00 p.m. Monday through Friday and 9:00 a.m. to 7:00 p.m. Saturday, Sunday, and holidays to comply with the limits of the Town of Danville Noise Ordinance, Chapter 4-2.4(d). • Construction contracts must specify that all construction equipment, fixed or mobile, must be equipped with properly operating and maintained mufflers and other State required noise attenuation devices. • Construction noise reduction methods such as shutting off idling equipment, maximizing the distance between construction equipment staging areas and nearby occupied uses, housing generators and compressors in acoustical enclosures, and use of electric air compressors and similar power tools, rather than diesel equipment, must be used where feasible. • During construction, stationary construction equipment must be placed such that emitted noise is directed away from sensitive noise receptors. • All construction entrances must clearly post construction hours, allowable workdays, and the phone number of the job superintendent. This will allow surrounding owners to contact the job superintendent with concerns. If the contractor receives a noise-related complaint, appropriate corrective actions must be implemented and a report taken indicating the action with a copy of the report provided to the reporting party upon request.

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
Impact 4.11-2: The proposed project could expose persons to or generate excessive groundborne vibration or groundborne noise levels.	Less Than Significant Impact	Mitigation is not required.
Impact 4.11-3: The proposed project could substantially permanently increase ambient noise levels in the project vicinity above levels existing without the project.	Less Than Significant Impact	Mitigation is not required.
Impact 4.11-4: The proposed project could create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.	Less Than Significant Impact with Mitigation Incorporation	4.11-4 Refer to Mitigation Measure 4.11-1a.
Impact 4.11-5: Implementation of the proposed project could permanently increase ambient noise levels in the project vicinity.	Less Than Significant Impact with Mitigation Incorporation	4.11-5 Refer to Mitigation Measure 4.11-1a.
Population and Housing		
Impact 4.12-1: The proposed project would directly induce population growth in the Town through the construction of 20 single-family homes.	Less Than Significant Impact	Mitigation is not required.
Impact 4.12-2: Project implementation would not displace existing housing or substantial numbers of people, necessitating the construction of replacement housing elsewhere.	No Impact	Mitigation is not required.
Impact 4.12-3: The proposed project would directly induce population growth in the Town though the construction of new housing that would not be cumulatively considerable.	Less Than Significant Impact	Mitigation is not required.
Public Services and Utilities		
Impact 4.13-1: The proposed project could result in a substantial adverse effect on fire protection and emergency services.	Less Than Significant Impact	Mitigation is not required.
Impact 4.13-2: The proposed project could result in a substantial adverse effect on police protection services.	Less Than Significant Impact	Mitigation is not required.
Impact 4.13-3: The proposed project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.	Less Than Significant Impact	Mitigation is not required.

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
Impact 4.13-4: The proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less Than Significant Impact	Mitigation is not required.
Impact 4.13-5: The proposed project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less Than Significant Impact	Mitigation is not required.
Impact 4.14-6: The proposed project would result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the providers existing commitments.	Less Than Significant Impact	Mitigation is not required.
Impact 4.13-7: The proposed project would incrementally increase potable water demand within the service area. However, there are sufficient water supplies available to serve the project from existing entitlements and resources.	Less Than Significant Impact	Mitigation is not required.
Impact 4.13-8: Be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs.	Less Than Significant Impact	Mitigation is not required.
Impact 4.13-9: The proposed project would comply with federal, state, and local statutes and regulations regarding solid waste.	Less Than Significant Impact	Mitigation is not required.
Impact 4.13-10: The proposed project in conjunction with other cumulative projects would increase the demand for fire protection and emergency services and police protection services.	Less Than Significant Impact	Mitigation is not required.
Impact 4.13-11: The proposed project in conjunction with other cumulative projects would not have an impact on water, wastewater, or solid waste services.	Less Than Significant Impact	Mitigation is not required.

TABLE 1-1, CONTINUED

Potential Impact	Significance	Mitigation Measure
Traffic		
Impact 4.14-1: The proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system and 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.	Less Than Significant Impact	Mitigation is not required.
Impact 4.14-3: The proposed project would not conflict with the applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads and highways).	Less Than Significant Impact	Mitigation is not required.
Impact 4.14-4: The proposed project would not create substantial increases in hazards due to a design feature.	Less Than Significant Impact	Mitigation is not required.
Impact 4.14-5: The proposed project would not result in inadequate emergency access.	Less Than Significant Impact	Mitigation is not required.
Impact 4.14-6: The proposed would not cumulatively impact transportation/traffic.	Less Than Significant Impact	Mitigation is not required.

2 INTRODUCTION

This Draft Environmental Impact Report (EIR) analyzes the potential effects that may occur on the environment as a result of the adoption and implementation of the proposed Podva Property Residential Development (project). This document has been prepared in accordance with and in fulfillment of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and its implementing guidelines (State CEQA Guidelines) (California Code of Regulations [CCR] Title 14, Section 15000 et seq.).

CEQA identifies the public agency with the principal responsibility for carrying out or approving a project as the "lead agency." The Town of Danville (Town) is the lead agency for the proposed project. The information contained within this Draft EIR will be reviewed and considered by the Town prior to its action to approve, disapprove, or modify the proposed project.

2.1 PROJECT OVERVIEW

The Podva Property Residential Development project proposes the construction of 20 single-family homes on approximately ten acres and the dedication of approximately 99 acres as permanent open space in the Town of Danville. The existing barn and steel outbuilding would be demolished. In addition, a variety of tree removals would be required. The following entitlements would be required to facilitate the project:

- Preliminary Development Plan – Rezoning (to rezone the project site from A-2; General Agricultural District to P-1; Planned Unit Development District);
- Final Development Plan – Major Subdivision (to subdivide the approximately 109-acre site to create up to 20 single-family homes); and,
- A Tree Removal Permit.

2.2 EIR SCOPE, ISSUES, CONCERNS

To determine the scope of this Draft EIR, the Town prepared and distributed an Initial Study (IS) and Notice of Preparation (NOP) for the proposed project on October 10, 2012. The IS and NOP were sent to trustee and responsible agencies, members of the public, other interested parties, and the California Office of Planning and Research, State Clearinghouse, on October 10, 2012. This began the 30-day public review period, which ended on November 9, 2012.

In addition, the Town's Planning Commission held a public scoping meeting on October 23, 2012 (during the public review period), to discuss characteristics of the proposed project, its planning status, the nature of its potential environmental effects, and the scope (i.e., the specific issues) of the Draft EIR analysis. The scoping meeting provided further opportunity for public input regarding environmental concerns and issues that should be addressed in the Draft EIR.

The IS and NOP identified the following environmental issues to be addressed in the Draft EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources

- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services and Utilities
- Transportation/Traffic

Eight comment letters were received from individuals and agencies in response to the NOP. These NOP comment letters and a summary of the comments raised during the public scoping meeting are included in Appendix A.

The NOP comment letter from the Contra Costa Local Agency Formation Commission (LAFCO), dated November 8, 2012, identified the following additional areas for inclusion in this Draft EIR in order to address the project's necessary annexation into the East Bay Municipal Utilities District's service area for water service and other associated LAFCO approvals required for compliance with State of California Government Code Section 56000 et seq. (the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000):

- Agriculture
- Population and Housing

This Draft EIR has been prepared at the "project-level" under CEQA Guidelines Section 15161 to assess and document the environmental impacts of the proposed project. The "project" EIR process is appropriate for the proposed project because it analyzes the environmental effects of a specific project proposal, which is commensurate with the level of detail in the project applications. This Draft EIR serves as the primary environmental compliance document for entitlement decisions by the Town of Danville and the other regulatory jurisdictions regarding the proposed project. It is anticipated that upon certification of this Draft EIR no additional CEQA review would be required for project implementation.

2.3 ENVIRONMENTAL REVIEW PROCESS

Prior to the preparation of this Draft EIR, the Town of Danville contacted affected agencies, organizations, and persons who the Town has identified as having an interest in the proposed project in accordance with the State CEQA Guidelines.

This Draft EIR, with an accompanying Notice of Completion (NOC), is being circulated to the State Clearinghouse, trustee agencies, responsible agencies, other government agencies, and interested members of the public for a 45-day review period as required by CEQA. The review period for this Draft EIR will extend between November 1, 2013 and December 16, 2013. During this period, public agencies and members of the public may provide written comments on the analysis and content of the Draft EIR. In reviewing a Draft EIR, readers should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and on ways in which the significant effects of the proposed project might be avoided or mitigated.

Comments on the Draft EIR may be submitted in writing to:

David Crompton, Principal Planner
Planning Division
Town of Danville
510 La Gonda Way
Danville, CA 94526
Fax: (925) 838-0360
Email: DCrompton@danville.ca.gov

Following the close of the public comment period, a Final EIR will be prepared to respond to all substantive comments related to environmental issues surrounding the proposed project. The Final EIR will be available prior to Planning Commission and Town Council public hearings to consider this EIR and the proposed project.

Once the Town Council certifies the Final EIR, the Council will also consider the proposed project itself, which may be approved or denied. If the proposed project is approved, the Council may require mitigation measures specified in this Draft EIR as conditions of project approval. Alternatively, the Council could require other mitigation measures deemed to be effective mitigations for the identified impacts, or it could find that the mitigation measures cannot be feasibly implemented. For any identified significant impacts for which no mitigation measure is feasible, or where mitigation would not reduce the impact to a less than significant level, in order to approve the project, the Council would be required to adopt a finding that the impacts are considered acceptable because specific overriding considerations indicate that the proposed project's benefits outweigh the impacts in question.

2.4 REPORT ORGANIZATION

This Draft EIR is organized into the following chapters:

- Chapter 1: Executive Summary provides a brief summary of the proposed actions and their consequences, including the significant environmental impacts of the proposed project, describes recommended mitigation measures, indicates the level of significance of impacts before and after mitigation, and identifies alternatives that would reduce or avoid the significant impacts. The summary also identifies areas of controversy and issues to be resolved.
- Chapter 2: Introduction provides an introduction and overview of the document.
- Chapter 3: Project Description describes the proposed project in detail, including the location, surrounding uses, characteristics, and objectives.
- Chapter 4: Environmental Analysis provides an analysis of the potential environmental impacts of the proposed project and recommends mitigation measures to reduce their significance.
- Chapter 5: Other CEQA Required Topics evaluates and describes the following CEQA required topics: significant and unavoidable environmental effects, growth-inducing effects, and significant and irreversible changes.
- Chapter 6: Alternatives considers three alternatives to the proposed project, including the CEQA-required "No Project Alternative."
- Chapter 7: References lists sources of information used in the preparation of the Draft EIR.
- Chapter 8: Report Preparation Personnel identifies the preparers of the Draft EIR.

- Appendices include the IS and NOP for the Draft EIR, comments received in response to the IS and NOP and the City's scoping activities, and background technical studies.

3 PROJECT DESCRIPTION

3.1 PROJECT SUMMARY

The Podva Property Residential Development project (project) proposes the construction of 20 single-family homes on approximately ten acres and the dedication of approximately 99 acres as permanent open space in the Town of Danville (Town). An existing barn on the property and adjacent metal storage building would be demolished, a small number of trees would be removed and a 56-inch oak tree would be preserved and incorporated into the development. The following entitlements would be required to facilitate the project:

- Preliminary Development Plan – Rezoning (to rezone the project site from A-2; General Agricultural District to P-1; Planned Unit Development District;
- Final Development Plan – Major Subdivision (to subdivide the 109-acre site to create up to 20 single-family homes on approximately ten acres and dedicate approximately 99 acres to permanent open space), and for approval of the architectural and landscape design for the project;
- A Tree Removal Permit;
- Annexation into the CCCSD current service area for sanitary sewer service; and
- An annexation of the project site into the East Bay Municipal Utility District's (EBMUD) current service area for water service.

3.2 PROJECT LOCATION

The project site is located within the Town of Danville at the terminus of Midland Way (250 Midland Way), generally west of San Ramon Valley Boulevard and south of Sycamore Valley Road. The Town is located within Contra Costa County (County), which is one of the nine San Francisco Bay Area counties. The Town is located within the southwestern portion of the County at the center of the San Ramon Valley, which is formed by the Diablo Range to the east and Las Trampas Ridge to the west. The Town is approximately 30 miles east of San Francisco and approximately 40 miles north of San Jose. Refer to Figure 3-1 (Regional Location Map) and Figure 3-2 (Local Vicinity).

3.3 SURROUNDING LAND USES

The project region has been used for cattle ranching, agricultural lands, orchards and similar land uses and has gradually converted to residential uses over time. Surrounding land uses primarily consist of open space and residential development. More specifically, the project site is bounded by open space and residential development to the north, open space to the south, single-family residences to the east, and Las Trampas Regional Wilderness to the west. It should be noted that the open space to the south of the project site consists of the Elworthy property, which received approval in 2008 for a Planned Unit Development District and associated subdivision.

3.4 PROJECT SETTING

3.4.1 SITE CHARACTERISTICS

OVERVIEW

The approximately 109-acre project site slopes down steeply from west to east with elevations ranging from a high of approximately 1,100 feet (NGVD 29) at Las Trampas Ridge line in the southwest corner of the site to a low of approximately 452 feet (NGVD 29) at the east extent of the site at the terminus of Midland Way. The project site is generally characterized by a western portion of steeply rising slopes and a lower, level to slightly hilly eastern portion. The site consists of rangelands that are currently used for cattle grazing and are characterized by primarily vacant, rolling, grass covered hills that extend to a ridgeline in the west, with tree covered drainage channels and scattered trees in open areas. The site currently contains a wooden barn and a metal outbuilding. The Podva family has owned the property since the late 1800s and operated it primarily as a cattle ranch.

BIOTIC HABITATS

The following information on site habitats was obtained from Live Oak Associates, Inc. (LOA)[1]. The project site contains five biotic habitats classified as "annual grassland," "riparian woodland and seasonal drainage," "ponds and wetlands," "oak woodland," and "coyote brush scrub."

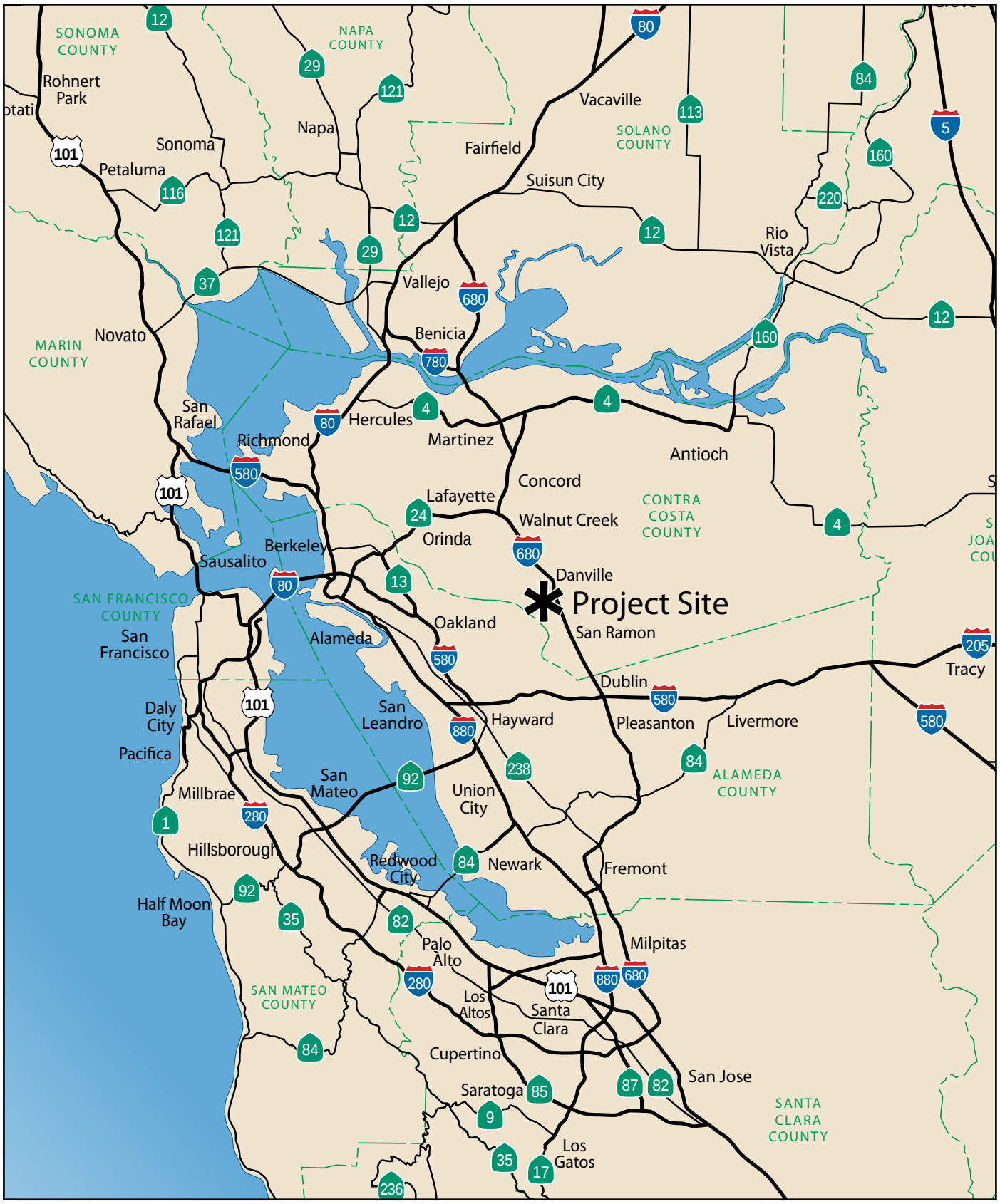
The majority of habitat consists of non-native grasslands dominated by annual grasses and forbs of European origin. Riparian woodland habitat with a relatively dense, closed canopy is associated with two seasonal tributary channels along the site's northern and southern boundaries and their lesser order seasonal tributary channels. The main channels conveyed water at the time of the May 2011 survey undertaken by LOA, while the lesser order channels were dry. With the exception of two isolated eroding gullies, an upland seasonal channel, and a wetland seasonal channel, all of the channels on the project site could be considered as waters of the U.S. that could be subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE).[2] Riparian woodland is also present in the northwest corner of the site. Two ponds are present onsite; the lower pond is located approximately in the center of the site, and the upper pond is in the southwest corner. Both ponds were visited during the May and August 2011 surveys by LOA, and both held water at those times. A wetland swale is associated with the lower pond. Small patches of riparian habitat were also present along the eastern boundary. Relatively small areas of oak woodland are associated with swales at the upstream end of dry seasonal drainage channels. These portions of the site failed to meet any of the regulatory definitions of waters of the U.S. Within the grasslands in the site's northwest corner are small patches of coyote brush (*Baccharis pilularis*).

TREES

HortScience, Inc. (HortScience) prepared a preliminary arborist report for the proposed project (*Preliminary Arborist Report, Podva Property, Danville, CA*) dated August 31, 2012. The report provides an assessment of the trees growing within and adjacent to the proposed project area, as well as additional information regarding potential project impacts on the trees, appraised value of trees classified as "Protected" or "Heritage" by the Town of Danville, and guidelines for tree preservation during construction, etc.

[1] Live Oak Associate Inc., Podva Property Biological Evaluation, Town of Danville, California, June 21, 2012.

[2] Only the USACE can ultimately determine if a given channel, pond, or other aquatic resource would be considered a water of the US. If the USACE does not claim jurisdiction over the delineated features on the project site, they may still be considered jurisdictional under California law by the Regional Water Quality Control Board or the California Department of Fish and Game.



Source: RBF Consulting (2012)

RBF A Baker Company

North

REGIONAL LOCATION MAP

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 3-1

Source: Google Earth, RBF Consulting (2012)

RBF A Baker Company

North

LOCAL VICINITY

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

012013 JN 40-100432

FIGURE 3-2

According to the report, 53 trees on the lower 10 acre portion of the project site meet the Town of Danville Tree Preservation ordinance (Municipal Code 32-79) requirements of being of a species that will reach at least 15 feet in height at maturity. There are hundreds of trees located on the upper 99 acre portion of the project that were not studied because they will be preserved and therefore would not be impacted by the project. HortScience assessed these 53 trees for health and suitability for preservation. Valley oak, with 34 trees or 64 percent of the population, was the most common species assessed. Valley oaks were in primarily in good to fair condition with two trees assessed as in poor condition, 15 in fair condition, and 17 in good condition. Coast live oak, with 12 trees (23 percent of the population) was the second most commonly encountered species. Seven were in fair condition and five were in good condition. The remaining four species were represented by three or fewer individuals: Arroyo willow (three trees in poor condition), California black walnut (one tree in fair condition and one tree in good condition), Italian buckthorn (one tree in fair condition), and Siberian elm (one tree in fair condition). Thus, based on the assessment, 23 trees are in good condition, 25 are in fair condition, and five are in poor condition. The Town of Danville defines native trees listed within the Ordinance, with a diameter of ten inches or greater, as "Protected," trees and all single trunked trees with a diameter of 36 inches or greater as "Heritage" Trees. Protected Trees and Heritage Trees may not be removed without the Town's approval of a Tree Removal permit. Based on this definition there was a total of 27 "Protected" trees and four "Heritage" trees.

DEVELOPED FEATURES

As noted above, the project site is developed with a wooden barn and a metal outbuilding nearby. In addition to these features, an unpaved or dirt ranch road crosses the property from north to south and then travels along the southern portion of the property to the western boundary. A former corral area that consists of a cattle holding/loading area with a livestock chute surrounded by fencing is in a deteriorated condition located in the southeastern portion of the site. The metal outbuilding consists of a prefabricated equipment shed that was built in 2005-2006.

Basin Research Associates prepared a Historic Property Survey Report/Finding of Effect (HPSR/FOE) report for the proposed project (*Historic Property Survey Report/Finding of Effect (No Historic Properties Affected) Podva Residential Project, Town of Danville, Contra Costa County, California*, August 2012) to meet applicable federal regulatory requirements that require the identification and evaluation of cultural resources that could be affected by the project. The identification effort included archival research, a review of pertinent literature, a systematic archaeological field inventory, and peer review field reconnaissance, and consultation with the Native American Heritage Commission (NAHC) and individuals and groups recommended by the NAHC.

According to the HPSR/FOE, the wooden barn was constructed on the site by rancher Roger Podva around 1915 to 1920. It is wood framed and rectangular (50 by 25 feet), with a steeply pitched gable roof covered with modern corrugated metal and a wooden truss roof frame. Some of the posts are on concrete footings. The north and south exterior walls are covered with vertical wooden boards. Some north wall boards retain their square nails (indicating they may pre-date 1890). It is likely these boards were recycled from an older barn originally on the north side of the property. Some boards on the south wall also may be older. The north wall has two hinged doors one above the other. The upper door opened to hoist hay bales for storage in the barn. The barn is in poor condition and appears to lack structural integrity. A later shed roof storage addition on the south covered with corrugated metal dates from ca. 1950. The corrugated metal addition measures 20 by 14 feet. Along the base of the east and west sides of the barn are hay troughs for feeding cattle.

The HPSR/FOE concluded that the Podva barn is not eligible for the National Register of Historic Places because it is not significant under Criteria a, b, or c and because it lacks historic integrity, as identified in greater detail below:

- the 1950s corrugated metal addition has compromised the barn's historic integrity;

- the barn's deteriorated condition has compromised the historic integrity of the barn's materials;
- it does not appear to have significant associations with local themes or cultural patterns of significance related to cattle ranching (National Register Criterion a);
- it is not the primary historic building associated with Roger Podva (National Register Criterion b); and,
- it is not an exceptional or distinguished example of the hay barn in the Danville area (National Register Criterion c).

The barn also is not a contributing resource to a National Register eligible historic district, as the original ranch complex around the barn no longer survives. The HPSR/FOE provides supporting materials for the Section 106 of National Historic Preservation Act (NHPA) identification and evaluation required for federal permitting (i.e., U.S. Bureau of Reclamation (USBR), and US Army Corps of Engineers (USACOE)). Specific findings are included in Appendix C of this Environmental Impact Report (EIR).

3.4.2 TOWN LAND USE REGULATIONS

TOWN OF DANVILLE 2030 GENERAL PLAN

Land Use Designation

The project site has a Town of Danville 2030 General Plan Land Use Designation of Residential – Single Family - Rural Residential, which allows a minimum residential density of one unit per five or more acres. The Rural Residential areas are located in outlying areas of the Town and are intended as transitional areas between lower density single family development and significant agricultural or open space resources. Areas designated Rural Residential are generally moderately to severely constrained by topographic and/or soil conditions, have accessibility issues, and/or are subject to special development standards such as the Scenic Hillside and Major Ridgeline Development Ordinance.

While this land use designation permits large lot, "ranchette" type development, clustering is encouraged to permit the development of suitable building sites and preservation of open space areas. Keeping of livestock may be appropriate in the Rural Residential areas if permitted by topographic or soil conditions. The character of these areas should relate more closely to open space lands than to lands developed for residential use.

Special Concern Area

The project site is one of 11 areas in the Town designated as a Special Concern Area by the 2030 General Plan (the Elworthy West/Podva area). Each Special Concern Area has unique planning concerns and opportunities and the 2030 General Plan includes special language to direct how these areas should develop. The Elworthy West/Podva area formerly included two of the largest undeveloped properties in Danville (the Elworthy West property is currently under development, as noted above). The area encompasses approximately 531 acres extending from San Ramon Valley Boulevard west to the Town boundary.

Future land use decisions on Elworthy West/Podva must reflect the area's environmental constraints and should acknowledge the importance of this area as a visual and open space resource for the entire Town. As the last major area of undeveloped land on Danville's west side, the properties provide an important link to the adjoining regional park (Las Trampas Regional Wilderness) and watershed lands beyond the ridge. The properties offer significant opportunities for trail connections between Danville and the regional park system. Much of the Elworthy West/Podva area is considered unsuitable for development and should be retained as permanent open space or permitted to develop at very low residential densities only. Opportunities for a limited amount of

residential development may be appropriate on the flatter portions of the site. Any future development applications considered for this area should include substantial provisions for active and passive recreation.

MUNICIPAL CODE, CHAPTER XXXII, PLANNING AND LAND USE

The project site has a zoning designation of A-2 (General Agricultural) District. The following uses are permitted in this district: all types of agriculture, including general farming, horticulture, floriculture, nurseries and greenhouses, mushroom rooms, dairying, livestock production, fur farms, poultry raising, animal breeding, aviaries, apiaries, forestry, and similar agricultural uses; other agricultural uses, including the erection and maintenance of sheds, warehouses, granaries, dehydration plants, hullers, fruit and vegetable packing plants, and buildings for the storage of agricultural products and equipment; a stand not exceeding two hundred (200) square feet for sale of agricultural products grown on the premises, a detached single family dwelling on each parcel and the accessory structures and uses normally auxiliary to it; and, a foster home or family care home.

TOWN OF DANVILLE TREE PRESERVATION ORDINANCE

The "Purpose and Intent" section of the Town's Tree Preservation Ordinance (Section 32.79.1) states that the preservation of native and non-native trees that are of great beauty and significance "enhances the natural beauty, sustains the long term potential increase in property values which encourages quality development, maintains the natural ecology, retains the tempering effect of extreme temperatures, helps to create and retain the identity and quality of the Town which is necessary for successful business to continue, improves the attractiveness of the Town to residents and visitors, prevents the erosion of top soil, provides protection against flood hazards and risk of landslide, and increases the oxygen output of the area which is needed to combat air pollution.

Sections 32.79.2 - 32.79.5 of the Ordinance define "protected trees" including "heritage trees," and generally prohibit the removal of such trees unless the Town issues a Tree Removal permit.

The Town considers the following five criteria when deciding whether to issue a Tree Removal permit (Tree Preservation Ordinance Section 32.79.6):

- The condition of the tree(s) with respect to its health, imminent danger of falling, proximity to existing structures and interference with utility infrastructure.
- The necessity to remove the tree(s) to allow for the reasonable use, enjoyment or development of the property.
- The effect of the removal of the tree upon soi1 erosion or whether is removal will result in a significant diversion or increase in the flow of surface water.
- The number, species, size and location of other protected trees in the area and the effect the removal of the tree(s) will have upon shade, privacy between properties, and scenic beauty of the area.
- Possible visual impacts within a Town-identified Major Ridgeline or Scenic Hillside Area created as a result of the tree removal.

SECOND DWELLING UNIT ORDINANCE

The purpose of the Town's "Second Dwelling Unit Ordinance" is to increase the supply of smaller dwelling units and rental housing units by allowing second dwelling units to be developed on certain lots which are zoned for single family residential use and to establish design and development standards for second dwelling units to ensure that they are compatible with existing neighborhoods (Second Dwelling Unit Ordinance Section 32-76.2).

According to Section 32-76.4 of the Ordinance, a second dwelling unit, which meets the requirements of this section, shall be allowed on a parcel, which is zoned for single-family residential use. A second dwelling unit which meets the requirements of this section shall be considered in compliance with the allowable density for the lot upon which the second dwelling unit is located and shall be considered a residential use that is consistent with the existing General Plan and zoning designation for the lot.

3.5 PROJECT OBJECTIVES

The project sponsor has the following objectives:

- Construct a high quality residential infill project of market rate single-family estate homes, as well as affordable accessory units
- Maximize the provision of housing on the project site per the General Plan designation, while remaining compatible with the surrounding residential neighborhood
- Restrict development to the lower, flatter, portion of the site to avoid development of the ridge top, steep slopes and rolling hillsides thereby maintaining the open space character of the western portion of the site
- Retain the majority of the property as open space to avoid and limit development of the most visually prominent parts of the site
- Cluster the proposed development on the flatter portions of the site closest to San Ramon Valley Boulevard and the Ocho Rios and Morris Ranch/Podva/Town & Country areas to the north to minimize potential impacts
- Provide passive recreational opportunities for Danville's west side by preserving open space and habitat areas and providing public use trails to the adjoining open space, including Las Trampas Regional Wilderness
- Preserve wildlife corridors and avoid sensitive plant and wildlife habitat with open space buffers to enhance its protection
- Construct debris benches and perform landslide repair to stabilize areas of geologic instability in connection with grading and the creation project lots to ensure future protection of adjacent homeowners and project homeowners
- Improve drainage conditions and limit future flood damage to downhill properties by constructing an onsite stormwater collection system that would divert stormwater runoff generated onsite to onsite detention and retention areas

3.6 PROJECT CHARACTERISTICS

The project would construct 20 one- and two-story single-family homes and associated access roads on approximately ten acres, while approximately 99 acres of the project site would be dedicated to open space. Ingress and egress would be provided by an extension of Midland Way. The project sponsor requests a Preliminary Development Plan - Rezoning, a Final Development Plan – Major Subdivision, and a Tree Removal permit. The East Bay Regional Parks District has expressed an active interest in acquiring a portion of the open space area through a dedication and adding the land to the adjacent Los Trampas Wilderness Area.

3.6.1 RESIDENTIAL DEVELOPMENT

The project proposes to develop the lower, relatively level, approximately 10 acre portion of the 109-acre site with 20 single-family residences, creating a single-family subdivision in character with surrounding uses. Other structures, including the wooden barn and metal outbuilding would be demolished. Refer to Figure 3-3 (Site Plan).

SITE LAYOUT, DENSITY, AND DESIGN

The portion of the site that is proposed for development would have a density of approximately two units per acre. The proposed single-family residences would be one- and two-story homes, ranging in size from approximately 3,200 to 3,800 square feet with three and four car garages. Architectural styles would range from traditional, northern European, Spanish, and Craftsman designs. All lots would be flat pads ranging in size from approximately 10,737 to 22,805 square feet, with an average lot size of approximately 16,000 square feet. A minimum of two homes would include a second, accessory living unit in order to comply with the Town's inclusionary zoning ordinance.

TABLE 3-1 PROJECT LOT SUMMARY

Lot No.	Area (Square Feet)
1	17,109
2	14,152
3	21,171
4	13,484
5	19,032
6	12,345
7	11,744
8	10,737
9	13,505
10	13,310
11	16,258
12	15,197
13	15,279
14	15,618
15	14,825
16	20,988
17	22,218
18	18,359
19	17,070
20	17,897
Parcel A	99.6 (acres)
Parcel B	17,769

3.6.2 INFRASTRUCTURE

The project proposes infrastructure improvements, including new access roads that would extend from the terminus of Midland Way, as well as storm drainage, water, and sewer improvements. Refer to Figure 3-4 for the Grading and Utility Plan.

ACCESS ROADS

The project proposes to extend Midland Way west with an improved Right-of-Way width of 38 feet from its terminus into the project site. The extended street would turn into two additional roadways that would end in cul-de-sacs. The street gradients and lengths are designed to the fire district's standards for accessibility and emergency response times. No offsite roadway improvements are proposed. The proposed street design is shown in Figure 3-3.

STORM DRAINAGE IMPROVEMENTS

The proposed storm drainage system would direct stormwater runoff from the hillside located to the southwest of the proposed 20 unit development into a detention basin that would be located at the northwestern boundary of the development area (refer to Figure 3-3). The detention basin would control the amount of stormwater runoff entering the Town's storm drain system to meet hydro-modification and peak runoff requirements outlined by the Town of Danville. Stormwater from the majority of the 99 acre undeveloped portion of the site would continue to drain into the two natural riparian drainage areas located on the northern and southern boundaries of the property, outside of the proposed development area. A portion of the stormwater runoff from the hillside adjacent to the development area would pass through the detention basin control prior to entering the Town's storm drain under Midland Way. The area proposed for the 20-unit development would utilize a conventional gravity-flow pipe system to convey stormwater runoff from all lots and roads into a bio-retention facility that would be located in the eastern portion of the development near its entrance along the north side of Midland Way. This would provide stormwater quality treatment as well as additional hydromodification control (stormwater storage) for smaller storm events. The proposed storm drainage system would maintain the existing drainage patterns and rates at the site, with all impervious runoff being conveyed into the bio-retention facility to meet Contra Costa Clean Water Program (CCCWP) water quality standards prior to leaving the site.

WATER AND SEWER IMPROVEMENTS

Proposed eight-inch water and sewer lines would be installed within Midland Way and would extend along the proposed cul-de-sacs. The sewer line would connect to the existing sewer line within Midland Way that terminates at the project site boundary. The project site is inside the Sphere of Influence area, but outside the service area of the Central Contra Costa Sanitary District (CCCSD). Prior to receiving services from the CCCSD, and an annexation in to the CCCSD service area must be approved by the Contra Costa County Local Agency Formation Commission (LAFCO).

The water line that terminates at the project boundary in Midland Way is part of the Danville F3A Zone which provides water service up to elevation 450 feet. The water line would connect to the existing water line in Westridge Avenue approximately 300 feet south of Midland Way which is part of the San Ramon F5BF Zone which provides water service from elevation 450 to 650 feet. The extended water line would follow the existing water line alignments in Midland Way and Westridge Avenue. The project site is inside the ultimate service area boundary, but outside the service area for the East Bay Municipal Utilities District (EBMUD). Prior to receiving water service from EBMUD, an annexation into the EBMUD service area must be approved by the Contra Costa LAFCO. EBMUD also requires approval from the U.S. Bureau of Reclamation for use of supplemental water from the State Water Project during dry years.

Source: vanderToolen Associates (2012)

RBF A Baker Company

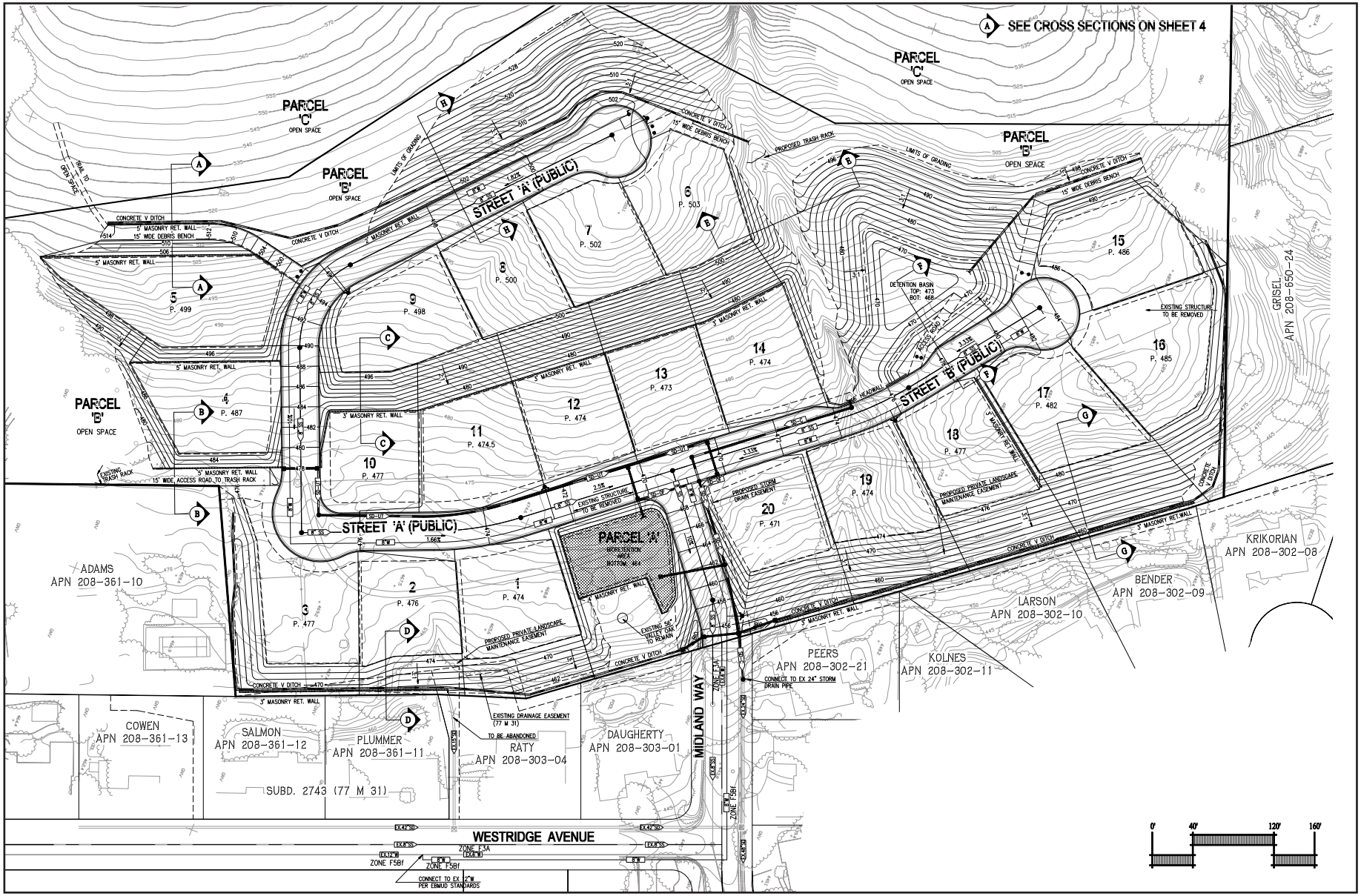
North

ILLUSTRATIVE SITE PLAN

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 3-3



Source: cbg, Inc., May 2013.

RBF A Baker Company

North

GRADING AND UTILITY PLAN

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

05/2013 JN 131000

FIGURE 3-4

3.6.3 CONSTRUCTION AND GRADING

To facilitate the proposed project, heavy equipment would be used to grade and construct building foundations, building pads, driveways and sidewalks. The proposed grading includes fill along the easterly boundary of the area proposed to be developed with the 20 single-family homes and cut along the transition areas to the hilly western portion of the project site. The proposed grading would occur over 15 percent of the site with an average cut / fill depth of approximately five feet. The grading would be balanced with an approximate grading volume of 40,000 cubic yards (CY) occurring over approximately 15 acres. The proposed grading has incorporated the recommendations from the geothechincal report prepared for the project (*Preliminary Geotechnical and Fault Evaluation Report, Podva Parcel, Danville, California*, ENGEO Incorporated, August 5, 2011) that affect the location, shape and configuration of the grading. The balance of the recommendations, many of which relate to how the grading would be performed, would be incorporated into the detailed Grading Plans ultimately prepared for the construction of the project, should the project be approved by the Town.

3.6.4 TREE REMOVALS

Based on HortScience's evaluation of the preliminary project plans, 32 of the 53 trees located on the lower 10 acre portion of the project site that meet the Town's Tree Preservation ordinance (Municipal Code 32-79) requirements were recommended for preservation, including 14 "Protected" trees and all four "Heritage" trees. Twenty-one of the trees recommended for preservation are located along the eastern property line. These trees would be located in close proximity to proposed retaining walls and v-ditches. A final determination regarding whether these trees should be preserved or removed is dependent on the preparation of final development plans.

HortScience recommended twenty-one trees for removal, including 12 that would be impacted by grading activities, five that would be within the proposed building locations, two that would be within the proposed road locations, and one that would be impacted by proposed utility work. Thirteen of the trees recommended for removal qualified as "Protected" under the Town's Tree Preservation ordinance.

3.6.5 REQUESTED ENTITLEMENTS

PRELIMINARY DEVELOPMENT PLAN – REZONING

The project proposes to rezone the project site from A-2 (General Agricultural) District to P-1 (Planned Unit Development) District to facilitate the construction of 20 single-family homes on approximately 10 acres of the project site and incorporate an approximately 99-acre remainder parcel that would be dedicated to permanent open space. Rezoning to the P-l; Planned Unit Development District allows for flexibility in project design.

FINAL DEVELOPMENT PLAN – MAJOR SUBDIVISION

The project requests approval of Final Development Plan – Major Subdivision to subdivide the approximately 109-acre site into 20 single-family residential lots with a minimum lot size of 10,737 square feet and an approximately 99-acre remainder parcel to facilitate the proposed development and dedication of land to permanent open space.

TREE REMOVAL PERMIT

The project includes a Tree Removal request to allow the removal of a total of 32 trees including 14 Town protected trees as specified within the Town's Tree Preservation Ordinance to allow for the proposed development.

3.7 REQUIRED PERMITS AND APPROVALS

In conformance with Sections 15050 and 15367 of the CEQA Guidelines, the Town of Danville has been designated as the "lead agency" for the proposed Project, defined as the "public agency, which has the principal responsibility for carrying out or approving a project." Following certification of the EIR by the Town Council, the Town must make findings for each significant effect identified in the EIR and determine whether it will adopt each mitigation measure (and if not, why). In considering approval of the proposed Project, the Town Council will be considering the following discretionary actions:

- Preliminary Development Plan – Rezoning (to rezone the project site from A-2; General Agricultural District to P-1; Planned Unit Development District;
- Final Development Plan – Major Subdivision (to subdivide the 109-acre site to create up to 20 single-family homes on approximately ten acres and dedicate approximately 99 acres to permanent open space);
- A Tree Removal Permit;

Responsible agencies are those agencies that have discretionary approval over one or more actions involved with the development of the proposed Project site. Trustee agencies are state agencies having discretionary approval or jurisdiction by law over natural resources affected by the Project. Table 3-2, Matrix of Project Approvals and Permits, lists the agencies from which approvals and permits are required to implement the Project. This EIR will be relied on by the Town and other responsible agencies when determining whether to issue discretionary approvals to implement the Project.

TABLE 3-2 MATRIX OF PROJECT APPROVALS AND PERMITS

Permit Required	Approving Agency	Lead/Trustee/ Responsible Agency Designation
Preliminary Development Plan - Rezone	Town of Danville	Lead Agency
Final Development Plan – Tentative Map	Town of Danville	Lead Agency
Tree Removal Permit	Town of Danville	Lead Agency
Demolition Permit	Town of Danville	Lead Agency
Grading Permit	Town of Danville	Lead Agency
Building Permits	Town of Danville	Lead Agency
Certificates of Occupancy	Town of Danville	Lead Agency
Annexation to EBMUD Service Area	LAFCO	Responsible Agency
Amendment to CCCSD Sphere of Influence	LAFCO	Responsible Agency
Annexation to CCCSD Sphere of Influence	LAFCO	Responsible Agency
Supplemental Water Approval	US Bureau of Reclamation	Responsible Agency
Section 404 Clean Water Act Permit	US Army Corps of Engineers	Responsible Agency
Section 401 Clean Water Act Permit	Regional Water Quality Control Board (San Francisco Bay Region)	Responsible Agency
Section 1600 Streambed Alteration Agreement	California Department of Fish and Wildlife	Trustee Agency
Stormwater Pollution Prevention Plan	Regional Water Quality Control Board (San Francisco Bay Region)	Responsible Agency
Demolition Permit	Bay Area Air Quality Management District	Responsible Agency

3.8 INTENDED USE OF THE EIR

This document is identified as a "Project" level EIR. It is the intent of this EIR to provide the Town of Danville, decision makers, and the general public with the relevant environmental information to use in considering the project. Under the provisions of the California Environmental Quality Act (CEQA), "the purpose of an environmental impact report is to identify the significant effect on the environment of a project, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigation and avoided." (Public Resource Code 21001.1(a)).

The Town of Danville will use the EIR for discretionary approvals of the various entitlements required to develop the project. The discretionary actions associated with the project include rezone, tentative map, and tree removal permit. This EIR will be used by other agencies requested to provide permits or other discretionary approvals for implementation of the project (i.e., resource agencies and other agencies listed above in Table 3-2). This includes use by LAFCO, CCCSD, EBMUD, and USBR, regarding actions associated with service boundary adjustments and annexations.

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4 ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

This section describes each of the environmental categories affected by the proposed project. Each category consists of three parts: Introduction, Environmental Setting, and Impacts and Mitigation Measures. Environmental impacts can be described as follows: less-than-significant, potentially significant, significant adverse, and significant unavoidable. The specific criteria for determining the significance of a particular impact are identified prior to the impact discussion in each issue section, and are consistent with significance criteria set forth in CEQA Guidelines and local, regional, state or federal standards.

A separate Mitigation Monitoring Program (as required by PRC §21081.6) will be developed in conjunction with the Final EIR, that outlines the mitigation measures and the monitoring and reporting methods that would be employed. The Mitigation Monitoring Program will be considered for adoption by the City Council at the time the Final EIR is certified.

Under CEQA, a significant impact is defined as a substantial, or potentially substantial, adverse change in the environment (Public Resources Code 21068). The guidelines implementing CEQA direct that this determination be based on scientific and factual data. The specific criteria for determining the significance of a particular impact are identified prior to the impact discussion in each section, and are consistent with significance criteria set forth in the guidelines implementing CEQA.

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4.1 AESTHETICS

This section evaluates the project's potential impacts on scenic vistas and the visual character or quality of the project site and its surroundings. The evaluation is based on the following documentation:

- Town of Danville 2030 General Plan (General Plan)
- Town of Danville 2012 Municipal Code
- HortScience, *Preliminary Arborist Report, Podva Property, Danville, CA*, August 21, 2012.
- HortScience, Letter to Jeff Schroeder, Ponderosa Homes, RE: *Valley Oak, Podva Property*, October 25, 2011.
- HortScience, *Memorandum RE: Tree Protection Podva Project*, October 30, 2012.

4.1.1 ENVIRONMENTAL SETTING

VISUAL CHARACTER

Town of Danville

The Town of Danville is located within the southeastern portion of Contra Costa County at the center of the San Ramon Valley, which is formed by the Diablo Range to the east and Las Trampas Ridge to the west. These two landforms provide a scenic backdrop for the Town, which has retained a substantial number of its historic buildings in its downtown. The project region has historically been used for cattle ranching, agricultural lands, orchards and similar land uses and has gradually converted to residential uses over time. The Town has divided itself into 24 planning subareas, each distinguished by their location, unique characteristics, age, and natural or constructed boundaries. These areas typically include one or more neighborhoods. The General Plan identifies the project site as the "Elworthy West/Podva" Special Concern Area, which it characterizes as consisting of gentle to steep grassy hillsides, with mature oaks and other trees along the ravines that cross the site. The General Plan further states that the open hillsides at the project site are an important resource for the Town of Danville, as they provide a scenic backdrop for many neighborhoods and habitat for a diverse array of wildlife.

Project Site

The project site is comprised of approximately 109 acres that are generally located west of the terminus of Midland Way in southwest Danville, west of Interstate 680 (I-680) and southwest of the intersection of Sycamore Valley Road and San Ramon Valley Boulevard; refer to Figure 3-2 (Local Vicinity) in Chapter 3 (Project Description). Surrounding land uses primarily consist of open space and undeveloped lands to the west and south, as well as single family residential development to the east and north (refer to Figure 3-2 (Local Vicinity)). It should be noted that the open space to the south of the project site consists of the Elworthy property, which received approval in 2008 for a Planned Unit Development District and associated subdivision.

The project site slopes down steeply from west to east with elevations ranging from a high of approximately 1,100 feet above mean sea level (msl) at Las Trampas Ridge line in the southwest corner of the site to a low of approximately 452 feet above msl at the east extent of the site at the terminus of Midland Way. The project site is generally characterized by a western portion of steeply rising slopes and a lower, level to slightly hilly eastern portion. The site consists of rangelands that are currently used for cattle grazing and are characterized by primarily vacant, rolling, grass covered hills that extend to a ridgeline in the west, with tree covered drainage channels and scattered trees in open areas. The site currently contains a wooden barn and a steel outbuilding. In addition to

these features, an unpaved ranch road crosses the property from north to south and then travels along the southern portion of the property to the western boundary. An old wood fenced corral area and livestock chute previously used for cattle, but now dilapidated is located in the southeastern portion of the site. The steel outbuilding consists of a prefabricated equipment shed that was built in 2005-2006.

The Podva family has owned the original property since the late 1800s and operated it primarily as a cattle ranch. Refer to Figure 3-3 (Aerial Photograph). According to the General Plan, it is one of the largest undeveloped properties in Danville.

Natural, rural qualities characterize the largely undeveloped site, which is comprised of five biotic habitats: annual grassland, riparian woodland and seasonal drainage, ponds and wetlands, oak woodland, and coyote brush scrub; refer to Figure 4.4-1 (Habitat Map) in Section 4.4 (Biological Resources). The majority of habitat consists of non-native grasslands dominated by annual grasses and forbs of European origin. Riparian woodland habitat with a relatively dense, closed canopy is associated with two seasonal tributary channels along the site's northern and southern boundaries and their lesser order seasonal tributary channels. Riparian woodland is also present in the northwest corner of the site. Two ponds are present onsite; the lower pond is located approximately in the center of the site, and the upper pond is in the southwest corner. A wetland swale is associated with the lower pond. Small patches of riparian habitat were also present along the eastern boundary. Relatively small areas of oak woodland are associated with swales at the upstream end of dry seasonal drainage channels. Within the grasslands in the site's northwest corner are small patches of coyote brush (*Baccharis pilularis*). Photographs of various locations within the project site are depicted in Figure 4.1-1(Project Site Photographs).

HortScience, Inc. conducted a tree survey of the project site in August 2012. Of the 53 trees on the project site surveyed, the most common species is Valley oak, with 34 trees or 64 percent of the population. Most of these trees are located along the perimeter of the project site, while the majority of the project site is open grasslands. Coast live oak, with 12 trees (23 percent of the population) was the second most commonly encountered species. The remaining four species were represented by three or fewer individuals: Arroyo willow, California black walnut, Italian buckthorn, and Siberian elm. The Town of Danville defines a number of native tree species listed with the Town's Tree Preservation Ordinance, with a diameter of ten inches or greater, as "Protected" trees, and all trees with a diameter of 36 inches or greater as "Heritage" trees. Based on this definition there are a total of 27 "Protected" trees and four "Heritage" trees identified on the project site.

SCENIC VISTAS

General Plan Figure 10 (Major Ridgeline and Scenic Hillside Area) illustrates the locations of the Town's key aesthetic features (i.e., Major Ridgeline Areas and Scenic Hillside Areas). These ridgelines/hillsides are scenic resources, since they involve open spaces (i.e., scenic hillsides, agricultural areas, and natural habitat areas) and offer distant scenic vistas of ridgelines and hillsides from locations within the Town. As indicated in General Plan Figure 10, the project site is within a Town-designated Scenic Hillside Area.

4.1.2 REGULATORY SETTING

STATE OF CALIFORNIA

Scenic Highway Program

I-680 is a designated scenic highway in Contra Costa County. The California Scenic Highway Program was created in 1963 to preserve and protect highway corridors located in areas of outstanding natural beauty from

Looking north across propoerty
Source: ENGEO (2012)

View southeast towards modern storage shed
Source: Basin Research Associates (2012)

RBF A Baker Company

North

PROJECT SITE PHOTOGRAPHS

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.1-1a

View east towards historic barn
Source: Basin Research Associates (2012)

View west-southwest from the west side of the property
Source: Basin Research Associates (2012)

RBF A Baker Company

North

PROJECT SITE PHOTOGRAPHS

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.1-1b

changes that would diminish the aesthetic value of the adjacent lands. The California Department of Transportation (Caltrans) designates highways based on how much of the landscape can be seen by travelers, the scenic quality of the landscape and the extent that views are compromised by development.

The California Scenic Highway Program is governed by the regulations found in the Streets and Highways Code, Section 260 et seq. Section 261 requires local government agencies to take the following actions to protect the appearance of the scenic corridor:

- Regulate land use and density of development
- Provide detailed land and site planning
- Prohibit off-site outdoor advertising and control on-site outdoor advertising
- Pay careful attention to and control earthmoving and landscaping
- Scrutinize the design and appearance of structures and equipment

TOWN OF DANVILLE

2030 General Plan

The 2030 General Plan contains goals and policies that regulate development, resource management, and public safety. The General Plan is organized into four major policy areas: Planning and Development; Mobility; Public Facilities; and Resources and Hazards. The Planning and Development Element addresses land use issues, including the type, distribution, and rate of urban development. The Mobility Element addresses multi-modal circulation, transportation options, and integrative land use and transportation policy. The Public Facilities Element addresses the provision of quality public facilities, and incorporates parks, recreation, open space and infrastructure. The Resources and Hazards Element addresses natural resources, hazards, and sustainability and greenhouse gas reduction. The following discusses the aspects of the Planning and Development Element that are relevant to the proposed project.

Planning and Development Element

As previously noted, Danville is divided into 24 planning subareas, each distinguished by their location, unique characteristics, age, and natural or constructed boundaries. In addition, the Planning and Development Element of the General Plan identifies 11 "Special Concern" Areas. These areas present unique planning challenges related to land use, transportation, urban design, public services and growth. As previously noted, the General Plan identifies the project site as the "Elworthy West/Podva" Special Concern Area.

Elworthy West/Podva Special Concern Area

The Planning and Development Element notes the following regarding the "Elworthy West/Podva" Special Concern Area:

> *"Any future decisions involving the Podva property should reflect the area's environmental constraints and should acknowledge the importance of this area as a visual and open space resource for the entire town. … Much of the Elworthy West/Podva area is considered unsuitable for development and should be retained as permanent open space or permitted to develop at very low residential densities only. The higher elevations, the steeper slopes and ravines, areas of potential geologic instability, and the most visually prominent parts of the site should remain undeveloped. Proposals for extensive cut and fill to accommodate development of the steeper areas of both the*

> *Elworthy West and Podva sites are considered inappropriate and should be avoided. The limited amount of development potential that exists on the site should be clustered to the extent feasible. Any lots that are not part of a clustered development project must include a buildable homesite that can be developed with minimal visual impact and made accessible without substantial grading or site disturbance. Trails from the Podva site to Elworthy West also should be provided, enabling a connection to Las Trampas Ridge Regional Park."*

Community Design

The Planning and Development Element notes the following with respect to Community Design in Danville:

> *"A major theme of planning activities in Danville since incorporation has been the protection and enhancement of the community's aesthetic features. These features include the scenic hillsides, the charming Old Town area, native vegetation along streams, stands of large trees, and pleasant established residential neighborhoods."*

General Plan Figure 10, Scenic Hillside and Major Ridgeline Development Areas (2010)

In addition, the Planning and Development Element contains General Plan Figure 10, which, as described above in the Environmental Setting, identifies the locations of key aesthetic features in Danville (i.e., Major Ridgeline Areas and Scenic Hillside Areas). As previously noted, General Plan Figure 10 identifies the project site as being located within a Town designated Scenic Hillside Area. The Town has adopted specific guidelines for the development of scenic hillside sites. These guidelines (the Scenic Hillside and Major Ridgeline Development Ordinance and Hillside/Ridgeline Design Guidelines) are described in greater detail following this discussion of the General Plan Planning and Development Element.

Scenic Routes

As noted in the Planning and Development Element, Scenic Routes provide visual and physical access to aesthetic features. A Scenic Route is a road, street, or freeway which transects an area characterized by its high visual character or cultural significance. A Scenic Corridor is comprised of the area adjacent to and more visible from the Scenic Route. There are two scenic routes near the project area: San Ramon Valley Boulevard and Sycamore Valley Road. However, the project site does not form part of these scenic routes/corridors.

Relevant Goals and Policies

The Planning and Development Element identifies the following relevant goals and policies that address scenic vistas and visual character:

Goal 1 Assure that future development complements Danville's existing small town character and established quality of life.

Policy 1.01 Recognize Danville's predominantly single family residential character and distinctive Downtown retail core in planning and development decisions.

> *Note: The development review process provides an opportunity for the Planning Commission and Town Council to evaluate the merits of each project and determine whether it is consistent with this policy. Other policies in the General Plan indicate where differences in scale may be acceptable in order to meet State-mandated housing requirements and other community development goals. The Town has developed design guidelines and zoning regulations to help make these determinations.*

Policy 1.02 Require that new development be generally consistent with the scale, appearance, and small town character of Danville.

Policy 1.08 Protect existing residential neighborhoods from intrusion of incompatible land uses and excessive traffic to the extent reasonably possible.

Policy 1.09 In areas where different land uses abut one another, mitigate potential negative impacts through buffering techniques such as landscaping, setbacks, and screening. Similar methods also may be used between higher-density residential uses and less dense residential uses nearby.

Goal 2 Integrate new development in a manner that is visually and functionally compatible with the physical character of the surrounding community.

Policy 2.01 Achieve a high standard of residential design through project review and approval for all new residential developments.

Policy 2.02 Preserve the Town's visual qualities and the identity of its neighborhoods by restricting development on visible ridges and hillsides, protecting trees and riparian areas, and maintaining open space in the community.

Policy 2.03 Where development is allowed on existing legal lots within Scenic Hillside or Major Ridgeline areas, require the preservation of the undeveloped remainder of the parcel in its natural state through the dedication of scenic easements to the Town of Danville.

Policy 2.04 Where hillside development occurs, require that project design be sensitive to visual impacts. Design guidelines for hillside sites should address mass, color, materials, and screening requirements, and should discourage excessive grading and flat pad construction.

Policy 2.05 On developable properties with steep hillsides, encourage clustering in flatter parts, conservation of open space on the steeper parts, and the protection of natural features such as trees, creeks, knolls, ridgelines and rock outcroppings.

Policy 2.06 Improve the appearance of the community by abating negative elements such as non-conforming signs and, where feasible and desirable, overhead utility lines.

Policy 2.07 Improve the appearance of the community by encouraging aesthetically designed buildings, screening, adequate setbacks, and landscaping.

Policy 2.08 Protect the visual qualities of designated scenic routes by reviewing proposed projects with respect to their visual impacts.

Land Use Map and Designations

General Plan Figure 5, Land Use Map, illustrates the Town's land use designations and indicates the project site is designated Rural Residential. The Rural Residential areas are located in outlying areas of the Town and are intended as transitional areas between lower density single family development and significant agricultural or open space resources. Areas designated Rural Residential are generally moderately to severely constrained by topographic and/or soil conditions, have accessibility issues, and/or are subject to special development standards such as the Scenic Hillside and Major Ridgeline Development Ordinance.

While this land use designation permits large lot, "ranchette" type development, clustering is encouraged to permit the development of suitable building sites and preservation of open space areas. Keeping of livestock may be appropriate in the Rural Residential areas if permitted by topographic or soil conditions. The character of these areas should relate more closely to open space lands than to lands developed for residential use.

Municipal Code

The following is an overview of relevant Town policy documents and mechanisms used to evaluate the potential visual impacts that could occur with project implementation.

P-1; Planned Unit District

Danville Municipal Code (Code) Section 32-63, P-1; Planned Unit District, outlines the regulations that pertain to development within the P-1 District. The P-1 District provides an opportunity for, and requires cohesive design when flexible regulations are applied to a large-scale integrated development, infill development, or a General Plan Special Area of Concern. The intention of the P-1 District is to allow for diversification in the relationship of various uses, buildings, structures, lot sizes, and open spaces. Additionally, the P-1 District is intended to ensure compatibility with surrounding land uses and substantial compliance with the General Plan and intent of the Town Municipal Code. The P-1 District includes the following design objectives:

- Building bulk, height, land coverage, visual appearance from adjacent land, and design compatibility with existing adjoining development and land which will remain, shall be considered and controlled.
- A development's design should successfully integrate individual buildings and the building groups with the surrounding development, other physical features in the area, and existing development which will remain.
- The design of structures should provide for harmonious composition of mass, scale, color and textures, with special emphasis on the transition from one building type to another, termination of groups of structures, relationships to streets, exploitation of views, and integration of spaces and building forms with the topography of the site and the urban or suburban character of the area.
- Provisions are to be made for an efficient, direct and convenient system of pedestrian circulation, together with landscaping and appropriate treatment of any public areas or lobbies.
- Off-street parking and loading areas should be integrated into the overall vehicular circulation system.

It is noted that the Planning Commission may recommend and the Town Council may adopt limitations and restrictions, which are either more or less restrictive than those specified by the underlying zoning district, which would be applicable if the P-1 District was not proposed. In addition to development review by the Planning Commission, the Design Review Board reviews projects utilizing the P-1 District development process.

Scenic Hillside and Major Ridgeline Development Ordinance

The purpose of the Scenic Hillside and Major Ridgeline Development Ordinance is to recognize the importance of the scenic qualities and geologic hazards of the hills and ridges within the Town. Several objectives describe the purpose of the ordinance, including the following:

- Preserve significant features of scenic hillsides and major ridgeline areas in essentially their natural state as part of a comprehensive open space system.

- Keep the semi-rural qualities of the Town by preserving its open and uncluttered natural topographical features.
- Encourage in these areas an alternative approach to conventional flat land practices of development.
- Keep grading and cut and fill operations consistent with the retention of the natural character of the scenic hillsides and major ridgelines.
- Preserve the predominant views of the scenic hillsides and major ridgelines and to retain the sense of identity and image that these areas now impart to the Town and its environs.

As noted previously, the project site is within a scenic hillside area, as depicted on Figure 10 of the General Plan.

Hillside/Ridgeline Design Guidelines

In addition to the Scenic Hillside and Major Ridgeline requirements, the Hillside/Ridgeline Design Guidelines serve as a guide for site planning, site development and architecture. Relevant recommended concepts include:

- A portion of the hillside developments should be set aside for usable open space.
- Buildings should be clustered in areas which are accessible to emergency vehicles and which are the least visually prominent from outlying valleys.
- Building siting should be responsive to existing features of the terrain, such as drainage patterns, geologic stability, rock outcroppings, and views from outlying areas.
- On-site natural systems (hydrologic systems, existing vegetative cover, wildlife, and existing topography) should be minimally disturbed.

Tree Preservation Ordinance

The Town's Tree Preservation Ordinance is codified in Code Section 32-79, Tree Preservation. The Ordinance recognizes the preservation of the Town's native and non-native trees enhances the natural beauty, helps to create and retain the Town's identity and quality, and improves the Town's attractiveness. Accordingly, the Town has enacted regulations controlling the removal and preservation of the Town's trees. Except as provided in this section, no person may destroy or remove a protected tree on any property within the Town without obtaining a Tree Removal Permit. Protected trees are:

- Native trees of a specific species and size (refer to Code Section 32-79.3.a).
- Heritage trees: Any single trunked tree in Town, regardless of species, which has a trunk diameter of thirty-six (36) inches or greater measured 4.5 feet above the ground.
- Memorial trees: A tree planted on public property in memory of or commemoration of an individual or individuals.
- A tree shown to be preserved on an approved Development Plan or specifically required by the Planning Commission to be retained.
- A tree required to be planted as mitigation for the removal of a protected tree.

Grading Ordinance

The Grading Ordinance is codified in Code Chapter XIX, Grading. The purpose of this Chapter is to establish controls on the earthwork permitted by the Town in the course of, or in conjunction with, construction. The Grading Ordinance controls earthwork activities with the intent of regulating aesthetics, sound soil engineering practice, erosion control, water quality protection and environmental sensitivity. The ordinance includes provisions to ensure that adequate attention is given to potential problems, such as slope stability and erosion control on hillside sites through the issuance of a Hillside Grading Permit. In addition, the ordinance states that development in the Town should be concentrated on relatively flat areas and visually prominent hillsides must be developed in accordance with the Scenic Hillside and Major Ridgeline Development Ordinance. As the steepness of a hillside increase, the ordinance requires that architectural innovation be utilized rather than extensive grading to ensure that the natural form is disturbed to the least extent possible.

Development Plan Review

The Town utilizes the development plan review process to promote quality architectural design, good site relationships, attractive landscaping, and other aesthetic considerations of development. This review is utilized for commercial and residential projects within the P-1 District, among others.

Design Review Board

In addition to development review by the Planning Commission, the Design Review Board (DRB) reviews projects utilizing the P-1 District development process and/or requiring Scenic Hillside or Major Ridgeline Development permits for site design, architecture, signs, and landscaping. The DRB may also review proposed development projects in scenic hillside areas at the discretion of Town staff. Project review and evaluation occur during a public hearing, which allows public input on the project's aesthetic impacts on the surrounding neighborhoods. The proposed project was reviewed by the DRB on May 23, 2013 and July 11, 2013 and voted for a recommendation of approval. The DRB forwards its recommendation to Planning Commission or Town Council prior to final project approval.

4.1.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to Appendix G of the State CEQA Guidelines, the Podva Property Residential Development would have a significant impact on aesthetics if it would:

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

POTENTIAL IMPACTS AND MITIGATION MEASURES

Potential Adverse Effects on a Scenic Vista

Impact 4.1-1: **The proposed project would not have an adverse effect on a scenic vista.**

Determination: **Less Than Significant Impact.**

Project development would be restricted to approximately nine acres located on the lower, flatter, eastern portion of the site (adjacent to existing residential development). The remaining approximately 99 acres of the project site would be dedicated to permanent open space. A small trail connection could be established between the proposed residential streets and existing open space in Las Trampas Regional Wilderness to the west of the proposed residential development. Limited, intermittent views of the proposed residential development would be visible from various locations on Midland Way, Westridge Avenue, and Ocho Rios Road. However, because the development is proposed on the lowest portion of the hillside, the scenic and natural character of the hillside would remain intact, resulting in minimal impacts on a scenic vista. Moreover, publicly available views of the proposed homes would be mostly obscured by existing residential development along Midland Way. Therefore, the proposed project would have a less than significant impact on a scenic vista.

MITIGATION MEASURES

Mitigation is not required.

Potential Adverse Effects on Scenic Resources within a State Scenic Highway

Impact 4.1-2: **The proposed project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.**

Determination: **Less Than Significant Impact.**

I-680 is a state-designated scenic highway located near the project site. However, the project site is not within the I-680 corridor, nor it is visible from I-680 due to an existing sound wall, trees, and residential development that is located between the project site and I-680. Moreover, proposed site improvements and site-disturbing activities would be within areas of the project site that contain few mature trees and a minimal number of trees would require removal. Furthermore, no rock outcroppings, historically significant buildings (refer to Section 4.5 [Cultural Resources]), or other scenic resource are located within the development footprint. Therefore, impacts would be less than significant.

MITIGATION MEASURES

Mitigation is not required.

Potential Degradation of the Project Site's Visual Character or Quality

Impact 4.1-3: **The proposed project could degrade the existing visual character or quality of the project site.**

Determination: Less Than Significant Impact with Mitigation Incorporation.

The proposed project is described in detail in Chapter 3 (Project Description). The project proposes to rezone the site from A-2 (General Agricultural) District to P-1 Planned Unit Development District, and subdivide approximately 10 acres in the lower, flatter, eastern portion of the site into 20 single-family residential lots and create an approximately 99-acre remainder parcel in the hilly, western portion of the site that would be dedicated to permanent open space. The minimum and maximum lot sizes would be 10,737 square feet and 22,805 square feet, respectively. The proposed buildings would be one and two stories.

Project implementation would significantly alter the rural visual character of the lower, flatter, eastern portion project site located adjacent to existing residential development on Midland Way. The existing annual grass covered rangeland that occurs in this portion of the site would be removed and the existing wooden barn, steel outbuilding, and old corral area would be demolished. In addition, of the 53 trees on the project site that meet the Town of Danville Tree Preservation ordinance (Municipal Code 32-79) requirements of being five feet and greater in diameter or 15 feet or greater in height, the proposed project would preserve 32 trees and remove 21 trees, including 13 Town-protected trees. The existing grass-covered rangeland (grassland) would be replaced by the proposed 20-lot subdivision, including residential buildings, hardscapes, landscapes, and roadways (i.e., extension of Midland Way into the site and access roads).

Due to the location of the development on the lowest portion of the project site, the intactness or unity of the hillside would essentially remain unchanged, given it would remain as permanent open space. Because of this, the vividness or memorability of the hillside would endure since the natural vegetation and features would remain untouched by the proposed subdivision. Las Trampas Ridge would be unaffected by the proposed project because the residential development would occur at elevations substantially lower than the ridge and would not encroach on it. As discussed, the project would produce a relatively minor change in the overall site character.

Regardless of this visual alteration, project implementation nonetheless would not substantially degrade the visual character or quality of the project site with implementation of the recommended mitigation. More specifically, in order to compensate for removal of 21 trees, the project would be required to plant a combination of onsite mitigation trees, as well as street trees, pursuant to Mitigation Measure 4.4-13a in Section 4.3 (Biological Resources) of this Draft EIR. The planting of these trees would increase the number of trees on the site, and substantially increase the number of healthy trees, as compared to existing conditions. Ultimately, the planting of these trees would create tree cover similar to that in the surrounding residential developments.

The project would construct residential development adjacent to other existing residential development and would be consistent with the General Plan's intended use for the property. Furthermore, the project would be consistent with the historic development that has occurred in the surrounding area and represents a reasonable or natural progression of development, not sprawl. This is demonstrated through the adjoining residential developments, which replaced grassland with residences, similar to the proposed project. Although development of those neighborhoods represented change, the Town similarly concluded that the adjoining developments altered, but did not substantially degrade, the visual character of the respective development sites and their surroundings.

Site grading would be needed to construct building foundations, building pads, streets, driveways, and sidewalks. The proposed grading would occur over 15 percent of the site with an average cut / fill depth of approximately five feet. The grading would be balanced with an approximate grading volume of 40,000 cubic yards (CY) occurring over approximately 15 acres. As the project site is located in Slope Zone 1, mass grading with conventional fully padded lots and terracing would be permitted by the Town's Grading Ordinance. Therefore, the modifications in topography resulting from the project's proposed grading would not substantially degrade the visual character or quality of the project site.

Based on the analysis presented above, project implementation would not substantially degrade the existing visual character or quality of the project site, and a less than significant impact would occur in this regard.

MITIGATION MEASURES

Implement Mitigation Measure 4.4-13a.

Potential Degradation of the Surrounding Visual Character or Quality

Impact 4.1-4: The proposed project would not substantially degrade the existing visual character or quality of the project site's surroundings.

Determination: Less Than Significant Impact.

Project Compatibility with the Surrounding Area

Residential development is located to the north and east of the project site. The residential development to the east of the project site is zoned R-15, Single Family Residential and the residential development to the north of the project site is zoned R-40, Single Family Residential. According to section 32-22.5 of the Danville Municipal Code (Minimum Lot Area, Width and Depth), the R-15 District requires a minimum lot size of 15,000 square feet and the R-40 District requires a minimum lot size of 40,000 square feet.

As proposed, the project would cluster 20 single-family residences on the eastern portion of the site on approximately 10 acres adjacent to existing residential development located along Midland Way. Architectural plans for the proposed project have been reviewed and recommended for approval with conditions by the Town's DRB on May 23, 2013 and July 11, 2013. The proposed lots would range in size from approximately 10,737 to 22,805 square feet. Based on the proposed uses, site layout, and lot sizes, the proposed residential development would be consistent with the existing residential development near the project site. The majority of the project site would remain permanent open space with minimal development (a potential trail connection to Las Trampas Regional Wilderness) proposed within the open space. This open space would be located in the western portion of the site and would not conflict with adjacent open space.

Project Regulatory Compliance

Special Concern Areas

The Project Applicant has considered the planning issues that identify the project site in the Town General Plan Planning and Development Element as a special area of concern. As a result, the proposed residential development would be clustered on the lower, flatter portion of the site, while approximately 99 acres in the western portion of the project site are proposed for permanent open space, leaving the higher elevations, the steeper slopes and ravines, areas of potential geologic instability, and the most visually prominent parts of the site undeveloped, resulting in very little change to the natural features that define the project site. Moreover, extensive cut and fill would be avoided by clustering the proposed development on the lower, flatter, eastern portion of the project site. Clustering development in the eastern portion of the project site would also respect the elevation of existing development to the north and create a link between existing development to the north and the approved subdivision on the Elworthy Property to the south. Lot size and corresponding density would also be consistent with adjacent existing development to the north and east. The project also proposes a trail connection with the adjacent Las Trampas Regional Wilderness to the west, which would provide an important link to the adjoining regional park (Las Trampas Ridge) and watershed lands beyond the ridge.

Planning and Development Element Goals and Policies

It is the Town's goal to assure that future development compliments Danville's existing small town character and established quality of life (Goal 1). In furtherance of this goal, the proposed residential development would be a continuation of the project area's predominantly single-family residential character (Policy 1.01). As demonstrated above, the project would be consistent with the surrounding area's scale and appearance (Policy 1.02). The project's approximately 100-acre permanent open space area would buffer the proposed single-family residential subdivision from Las Trampas Regional Wilderness to the west (Policy 1.09).

Additionally, it is the Town's goal to integrate new development visually and functionally in a manner compatible with the physical character of the surrounding community (Goal). To that end, the project would be consistent with Policy 2.02 by restricting development on Las Trampas Ridge and the hillside, retaining riparian areas and dense oak woodlands, and maintaining the majority of the project site as permanent open space. The project would comply with Policy 2.05, as it proposes to cluster the majority of the development on the lower, flatter portion of the site, conserving open space on the steeper parts, as well as protecting natural features such as trees, creeks, knolls, ridgelines and rock outcroppings by restricting development in these areas. Regarding Policy 2.07, the architectural style, massing and color scheme of the proposed project been reviewed and recommended for approval with conditions by the DRB on May 23, 2013 and July 11, 2013.

P-1; Planned Unit District Design Objectives

As noted above, architectural plans for the proposed project have been submitted and will be reviewed by the Town's DRB. Thus, prior to project approval, the DRB would review the site design, architecture, signs and landscaping during a public hearing before forwarding its recommendations to the Planning Commission or Town Council. Nonetheless, the lot sizes and layout of the subdivision would be compatible with existing adjoining development and the proposed dwellings would be integrated with the existing residential dwellings.

Scenic Hillside and Major Ridgeline Development Ordinance

The Scenic Hillside and Major Ridgeline Development Ordinance is supported by several objectives, including the preservation of significant landforms in essentially their natural state, preserving uncluttered natural topographic features, encouraging alternatives to flatland development approaches, and keeping grading consistent with the natural character of the hillside. The proposed project would comply with these objectives, as it would retain the majority of the project site as open space in perpetuity and cluster the development on the lower, flatter portion of the site.

As noted previously, the proposed residential development would be within the scenic hillside area, but outside of the major ridgeline area, as defined by Figure 10 in the General Plan. According to the ordinance, the permitted uses in the scenic hillside area and the major ridgeline area are the same as the uses allowed in the underlying zoning district. The project proposes to change the zoning of the site from A-2 District to P-1 District, which allows single-family residences as well as "any land use permitted by an approved final development plan which are in harmony with each other, serve to fulfill the function of the planned unit development, and are consistent with the General Plan." Therefore, the 20-lot subdivision and associated access roads may be permitted with the proposed Final Development Plan and would be consistent with the scenic hillside area designation. Plans for the project have been reviewed by the DRB to ensure consistency with the requirements of the Scenic Hillside and Major Ridgeline Development Ordinance. Finally, the proposed project would not develop within 100 feet of the centerline of a major ridgeline.

Hillside/Ridgeline Design Guidelines

The Hillside/Ridgeline Design Guidelines serve as a guide for site planning, site development, and architecture. The proposed project would support the relevant recommendations of the guidelines for the following reasons: (1) the proposed residential development would be clustered along the eastern portion of the project site, which would retain the majority of the hillside as permanent open space that would provide easy site access for emergency vehicles; (2) the proposed location of the residential development on the project site would be the least visually prominent from outlying areas; (3) proposed building siting would maintain existing features of the terrain, such as drainage patterns, geologic stability, rock outcroppings, and views from outlying areas; and, (4) onsite natural systems (hydrologic systems, existing vegetative cover, wildlife, and existing topography) would be minimally disturbed.

Tree Preservation Ordinance

As concluded in Section 4.4 (Biological Resources) of this Draft EIR, the Town could issue a Tree Removal Permit for the proposed removal of 21 Town-protected trees without creating a conflict with the Tree Preservation Ordinance. Therefore, upon approval of the project's requested Tree Removal Permit, and Preliminary and Final Development Plan, the proposed project would satisfy the requirements of the Town's Tree Preservation Ordinance.

Grading Ordinance

The purpose of the Town's Grading Ordinance is to establish controls for earthwork, including controls for reasons of aesthetics. Although the ordinance allows grading in hillside areas, it includes development guidelines for natural slopes and requires that existing landforms retain their natural character and architectural design conform to the natural landform. Mass grading is discouraged particularly where development is proposed within high risk landslide areas. As previously discussed, the proposed development would occur on the lower, flatter portion of the site adjacent to existing residential development located along Midland Way, which would not require extensive earthwork. Through project design and transfer of development density from the upper portions of the site to the lower portion, the project directly responds to the restrictions and limitations to hillside grading set forth in the ordinance. Therefore, the project would be consistent with the Town's Grading Ordinance.

MITIGATION MEASURES

Mitigation is not required.

Potential Increase in Light and Glare

Impact 4.1-5: The proposed project would not create a new source of light and glare that would adversely affect day or nighttime views in the project area.

Determination: Less Than Significant Impact.

Implementation of the proposed project would increase light and glare emanating from the project site as a result of residential lighting, streetlights, and headlights of vehicles traveling to, from and through the project site. However, the project's addition of light and glare to the area would not be substantial when compared to the existing conditions. This is because development of a similar nature is located both north and east of the project site and the headlights of vehicles traveling along I-680 and San Ramon Valley Boulevard are a significant source

of light within the project area. Considering the similar nature of the surrounding developments, impacts to light and glare are considered less than significant.

MITIGATION MEASURES

Mitigation is not required.

4.1.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.1-6: Implementation of the proposed project, in combination with other related cumulative projects, would not significantly impact a scenic vista and/or degrade the visual character or quality of the development sites and their surroundings.

Determination: Less Than Significant Impact.

An EIR must discuss the cumulative impacts of a project when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. When identifying cumulative projects, factors to consider include the nature of the environmental resource being examined, the location of the project, and the type of project. Given that visual and aesthetic impacts are localized, cumulative projects analyzed include residential projects that are within a geographic radius of one mile of the project site. This includes the Elworthy Ranch project, which received approval for a Planned Unit Development District and associated subdivision in 2008 for the open space area located to the south of the project site.

The Elworthy Ranch project proposed the development of approximately 12 acres of the 459-acre site with 84, two-story single-family residences and two, two-story buildings containing a total of 13 multi-family apartment units. An existing single-family residence would be retained on a separate five-acre parcel. Of the remaining 442 acres, 232 acres would be offered for dedication to the East Bay Regional Park District (EBRPD), 186 acres would have a scenic easement established to preserve the area for open space and limited recreational use, and 24 acres would be set aside as a mitigation site. A trailhead parking area as well as a private equestrian facility, proposed on approximately five acres, would be located within the scenic easement area. General Plan Figure 10 illustrates the locations of the Town's key scenic resources. The Elworthy Ranch residential development would be outside both the scenic hillside area and the major ridgeline area. The access road and equestrian facility would be within the scenic hillside area, but outside the major ridgeline area.

The proposed project would not impact a scenic vista (as concluded above) and thus, would not contribute to a cumulative impact. Moreover, as discussed in the *Elworthy Ranch Draft Environmental Impact Report* (State Clearinghouse No. 1999022064), certified July 1, 2008, the Elworthy Ranch project would not result in impacts on scenic vistas. Therefore, project implementation would not result in a cumulatively considerable impact on a scenic vista.

Each project's impacts on the visual character and quality of their respective development site are site-specific and do not accumulate with the impacts on other sites. Regarding impacts on the visual character and quality of a site's surroundings, a significant cumulative impact could occur if two projects in the same viewshed combined to cause a substantial degradation. As discussed in the *Elworthy Ranch Draft Environmental Impact Report*, the Elworthy Ranch project would not substantially degrade the visual character or quality of its site or surroundings. Additionally, as discussed above, the proposed project would also not degrade the visual character or quality of its

surroundings. Therefore, the combined impact of the two projects would not substantially degrade the visual character or quality of their surroundings. Cumulative impacts on character/quality would be less than significant, and the proposed project would not cumulatively contribute to visual character impacts.

MITIGATION MEASURES

Mitigation is not required.

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4.2 AGRICULTURAL RESOURCES

This section discusses potential project impacts on agricultural resources, including the loss of grazing land. Information for this section was obtained from:

- California Department of Conservation, Division of Land Resource Protection, *California Farmland Conversion Report 2004-2006*, December 2008.
- California Department of Conservation, Division of Land Resource Protection, *Williamson Act Farmland Security Zones Fact Sheet*, 2008.
- California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, *Contra Costa County Important Farmland 2010*, July 2011.
- Contra Costa County Department of Agriculture, 2011 Annual Crop and Livestock Report for Contra Costa County, 2012.
- U.S. Department of Agriculture, National Agricultural Statistics Service, California Field Office, *California Agricultural Statistics 2011 Crop Year*, October 31, 2012.
- U.S. Department of Agriculture, National Agricultural Statistics Service, California Field Office, *California County Agricultural Commissioners' Reports, 2011*, December 17, 2012.

4.2.1 ENVIRONMENTAL SETTING

STATE OF CALIFORNIA

Agriculture is a major industry in California. According to the U.S. Department of Agriculture, National Agricultural Statistics Service (USDA, NASS), California Field Office (California Agricultural Statistics 2011 Crop Year, October 31, 2012), there were 81,500 farms and ranches in the state during 2011 (3.7 percent of the nation's total) that received $43.5 billion for their output that year. California remained the number one state in cash farm receipts in 2011, with its $43.5 billion in revenue representing 11.6 percent of the U.S. total. Land devoted to farming and ranching accounted for 25.4 million acres in the state during 2011 with an average farm size of 312 acres.

California produces over 400 different agricultural commodities. Among these, the state produces about half of the U.S. grown fruits, nuts, and vegetables. California is the nation's sole producer (99 percent or more) of a large number of specialty crops, such as almonds, artichokes, dates, figs, grapes, kiwifruit, olives, clingstone peaches, pistachios, dried plums, pomegranates, raisins, sweet rice, seed (ladino clover) and walnuts.

CONTRA COSTA COUNTY

According to the California County Agricultural Commissioners' Reports, 2011, Contra Costa County ranked number 39 in the state in 2010 and 38 in 2011 with a reported gross production value of $79,624,000 in 2010 and $92,920,000 in 2012. According to the California County Agricultural Commissioners' Reports, 2011, Contra Costa County's top commodities for gross production value for 2011 were cattle and calves, sweet corn, unspecified vegetables, grain corn, processing tomatoes, unspecified grapes, sweet cherries, range pasture, alfalfa hay, and unspecified fruits and nuts. According to the 2011 Annual Crop and Livestock Report for Contra Costa County, the County had 146,993 acres of land in farms and 23,876 total acres of cropland, as of the 2007 Agricultural Census.

TOWN OF DANVILLE

Historically, a significant natural resource of the San Ramon Valley was its rich soil, valuable for its ability to produce food. Cultivation of crops, including fruit and nut orchards on the bottomlands and lower slopes and cattle grazing on the hillside areas, continued from the time of first settlement until the recent past. Urbanization over the past 40 years has displaced most cultivated agriculture. Grazing operations and some dry farming continue in the Sycamore Valley Area and surrounding hills, and further east in the Tassajara Valley. High land values and encroachment by urban uses threaten the long-term existence of cultivated agriculture in Danville and the surrounding area.

PROJECT SITE

The site consists of rangelands that were previously used for cattle grazing and are characterized by primarily vacant, rolling, grass covered hills that extend to a ridgeline in the west, with tree covered drainage channels and scattered trees in open areas. The site currently contains a wooden barn and a steel outbuilding. The Podva family has owned the original property since the late 1800s and operated it primarily as a cattle ranch.

4.2.2 REGULATORY SETTING

FEDERAL FRAMEWORK

Farm and Ranch Land Protection Program

The Natural Resource Conservation Service (NRCS) of the USDA administers the Farm and Ranch Land Protection Program (FRPP). The FRPP provides matching funds to help purchase development rights to keep productive farm and ranchland in agricultural uses. Working through existing programs, the NRCS partners with state, tribal or local governments and non-governmental organizations to acquire conservation easements or other interests in land from landowners. The NRCS provides up to 50 percent of the fair market easement value of the conservation easement.

To qualify, farmland must: be part of a pending offer from a state, tribe or local farmland protection program; be privately owned; have a conservation plan for highly erodible land; be large enough to sustain agricultural production; be accessible to markets for what the land produces; have adequate infrastructure and agricultural support services; and have surrounding parcels of land that can support long-term agricultural production. Neither of the two parcels that make up the project site has a conservation easement administered through the FRPP.

STATE FRAMEWORK

California Land Conservation Act

The State of California adopted the California Land Conservation Act (LCA), also known as the Williamson Act, in 1965 with the basic intent of encouraging the preservation of the state's agricultural lands in view of the increasing trend toward their urbanization. The LCA established a land contract procedure whereby a county could stabilize (i.e., not increase) taxes on certain qualifying lands in return for an owner's guarantee to keep the lands in agricultural preserve status for a ten-year period. A Williamson Act contract is automatically renewed each year for an additional year, unless a notice of non-renewal is initiated by the land owner or the county. Once a notice of non-renewal is given, the contract remains in place on the land for the remaining nine-year term. Once the nine-year term expires, the land is no longer restricted to agricultural or open space uses. Neither of the two

parcels that make up the project site is currently under a Williamson Act contract according to the 2007 Agricultural Preserves Map, Contra Costa County, California, prepared by the Contra Costa County Community Development Department, which identifies land within the County that is under a Williamson Act contract.

Farmland Security Zones

In 1998, the State legislature amended the Williamson Act to allow the creation of Farmland Security Zones. A Farmland Security Zone is an area created within an agricultural preserve by a county board of supervisors upon request by a landowner or group of landowners. An agricultural preserve defines the boundary of an area within which a city or county will enter into contracts with landowners. The boundary is designated by resolution of the county board of supervisors or city council having jurisdiction. Agricultural preserves must generally be at least 100 acres in size. A Farmland Security Zone contract is similar to a Williamson Act contract in that it is a voluntary contract between a private landowner and a county that enforceably restricts land to agricultural or open space use and the contract automatically renews annually unless either party files a notice of nonrenewal. However, the minimum initial term is 20 years and the subject land must be designated as important farmland by the state (refer to discussion below under Farmland Mapping and Monitoring Program for definitions of important farmland). In addition, a Farmland Security Zone contract offers a landowner a greater property tax reduction than a Williamson Act contract. Neither one of the two parcels that make up the project site are currently within a Farmland Security Zone.

Public Resources Code Section 21060.1

Public Resources Code Section 21060.1 defines agricultural land for the purposes of assessing environmental impacts using the Farmland Mapping and Monitoring Program (FMMP).

Farmland Mapping and Monitoring Program

The FMMP was established in 1982 to assess the location, quality and quantity of agricultural lands and the conversion of these lands over time. The FMMP is a non-regulatory program that analyzes agricultural land use and land use changes throughout California. The FMMP maps important farmlands throughout California and produces Important Farmland Maps. The FMMP also produces a biannual report (California Farmland Conversion Report) on the amount of land converted from agricultural to non-agricultural use.

Project Site Designation

According to the most current map prepared pursuant to the FMMP that covers the project area, (Contra Costa County Important Farmland 2010), the entire project site is classified as Grazing land.

Important Farmland Categories

The FMMP divides important farmlands into the following five categories based on their suitability for agriculture: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. Any conversion of land within the Prime Farmland, Farmland of Statewide Importance, or Unique Farmland categories to non-agricultural use is typically considered an adverse impact.

Prime Farmland/Farmland of Statewide Importance

Prime Farmland is land with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Farmland of Statewide Importance is similar to Prime Farmland but with minor

shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date to be considered Prime Farmland or Farmland of Statewide Importance.

Unique Farmland

Unique Farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date to be considered Unique Farmland.

Farmland of Local Importance

Farmland of Local Importance consists of land that is important to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. In some counties, including San Joaquin, Confined Animal Agriculture facilities are part of Farmland of Local Importance, but they are shown separately. San Joaquin County identifies Farmland of Local Importance as all farmable land within San Joaquin County not meeting the definitions of "Prime Farmland," "Farmland of Statewide Importance," and "Unique Farmland." This includes land that is or has been used for irrigated pasture, dryland farming, confined livestock or dairy facilities, aquaculture, poultry facilities and dry grazing. It also includes soils previously designated by soil characteristics as "Prime Farmland," "Farmland of Statewide Importance" and "Unique Farmland" that has since become idle.

Grazing Land

Grazing Land is land with existing vegetation that is suited for the grazing of livestock.

Cortese-Knox Hertzberg Local Government Reorganization Act of 2000

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH Act) establishes procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations.

Local agency formation commissions (LAFCOs) have numerous powers under the CKH Act, but those of primary concern are the power to act on local agency boundary changes and to adopt spheres of influence for local agencies. Among the purposes of LAFCOs are the discouragement of urban sprawl and the encouragement of the orderly formation and development of local agencies.

As described in the Project Description (Chapter 3), the project requires an amendment of the Contra Costa County Sanitary District (CCCSD) to include the project site; annexation into the CCCDS for sanitary sewer service; and, annexation of the project site into the East Bay Municipal Utility District's (EBMUD) current service area for water service. These actions require the approval of the Contra Costa County LAFCO. As part of the approval process, the Contra Costa County LAFCO is required to consider a variety of factors relating to boundary changes, which are specified in the CKH Act.

Germaine to the evaluation of the project's impacts on agriculture are CKH Act sections 56016, 56064, and 56668(e). CKH Act section 56016 defines "Agricultural Lands" "as land currently used for the purpose of producing an agricultural commodity for commercial purposes, land left fallow under a crop rotational program, or land enrolled in an agricultural subsidy or set-aside program." The project site has historically been used as grazing land for cattle since the late 1880s until that use was discontinued approximately five years ago. Thus, it is

currently used for the for the purpose of producing an agricultural commodity for commercial purposes. However, it has never been used to produce crops and has never been enrolled in an agricultural subsidy or set-aside program. Thus, it meets only one of the criteria defined by CKH Act section 56016 for "Agricultural Land."

CKH Act section 56016 defines "Prime Agricultural Land" as:

> *"an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:*
>
> *(a) Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.*
>
> *(b) Land that qualifies for rating 80 through 100 Storie Index Rating.*
>
> *(c) Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.*
>
> *(d) Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual bases from the production of unprocessed agricultural plant production not less than four hundred dollars ($400) per acre.*
>
> *(e) Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars ($400) per acre for three of the previous five calendar years."*

The project site has not been developed for a use other than an agricultural use. However, the project site has been classified as Grazing Land by the FMMP and as such, it is not considered "Prime Agricultural Land," as defined by CKH Act section 56016.

CKH Act section 56668(e) requires LAFCOs (in their review of annexations) to consider the extent to which a project would affect the physical and economic integrity of agricultural lands, as defined by Section 56016. As noted above, the project site is not considered "Prime Agricultural Land," as defined by CKH Act section 56016. Nonetheless, it would permanently convert approximately 109-acres of classified Grazing Land to non-agricultural use. However, it is anticipated that the approximately 99 acres of the project site to be dedicated as open space would continue to support grazing activities.

TOWN OF DANVILLE

2030 General Plan

The Town of Danville 2030 General Plan (General Plan) anticipates that the project site will ultimately develop with residential uses. The General Plan land use designation for the project site is Residential – Single Family - Rural Residential. The Rural Residential areas are located in outlying areas of the Town and are intended as transitional areas between lower density single family development and significant agricultural or open space resources. Areas designated Rural Residential are generally moderately to severely constrained by topographic and/or soil conditions, have accessibility issues, and/or are subject to special development standards such as the

Scenic Hillside and Major Ridgeline Development Ordinance. While this land use designation permits large lot, "ranchette" type development, clustering is encouraged to permit the development of suitable building sites and preservation of open space areas. Keeping of livestock may be appropriate in the Rural Residential areas if permitted by topographic or soil conditions. The character of these areas should relate more closely to open space lands than to lands developed for residential use.

The General Plan includes the following policies that strive to create appropriate transitions between urban development and non-urban (agricultural) areas, including creating buffer zones to separate urban from rural uses.

Policy 21.02 Maintain open space in appropriate areas, including areas of scenic beauty, areas of economically viable agriculture, and areas where natural hazards such as flooding and land instability preclude safe development.

Policy 21.04 Require adequate buffering and effective fencing between agricultural and urban land uses.

Note: The urban land use shall be responsible for the creation and maintenance of such buffers and the urban property owners shall assume the responsibility for potential impacts upon adjacent uses. Where appropriate, disclosure notices shall be used to advise homebuyers of nearby agricultural activities as a means of ensuring that such activities may continue when they are properly conducted.

Municipal Code, Chapter XXXII, Planning and Land Use

The project site has a zoning designation of A-2 (General Agricultural) District. The following uses are permitted in this district: all types of agriculture, including general farming, horticulture, floriculture, nurseries and greenhouses, mushroom rooms, dairying, livestock production, fur farms, poultry raising, animal breeding, aviaries, apiaries, forestry, and similar agricultural uses; other agricultural uses, including the erection and maintenance of sheds, warehouses, granaries, dehydration plants, hullers, fruit and vegetable packing plants, and buildings for the storage of agricultural products and equipment; a stand not exceeding two hundred (200) square feet for sale of agricultural products grown on the premises; a detached single family dwelling on each parcel and the accessory structures and uses normally auxiliary to it; and, a foster home or family care home.

4.2.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact on agricultural resources if it would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Conversion of Farmland

Impact 4.2-1: The proposed project would convert grazing land to non-agricultural use.

Determination: Less Than Significant Impact

The project would permanently convert approximately 109 acres of classified Grazing Land, as classified by the FMMP, to non-agricultural use; however, the approximately 99 acre open space are would continue to support grazing activities. However, conversion of Grazing Land to non-agricultural use is not considered a significant impact under CEQA. Because the project would not convert Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agricultural use, less than significant impacts would result.

Moreover, as discussed above, grading activities on the project site have been discontinued. The project site is not producing an agricultural commodity for commercial purposes, nor has it ever been used to produce crops and has never been enrolled in an agricultural subsidy or set-aside program. Thus, it does not meet the three criteria necessary to be classified as "Agricultural Land" by CKH Act section 56016. Finally, the project site has been classified as Grazing Land by the FMMP and as such, it is not considered "Prime Agricultural Land," as defined by CKH Act section 56016.

MITIGATION MEASURES

Mitigation is not required.

Conflicts with Agricultural Zoning/Williamson Act Contract

Impact 4.2-2: Project implementation would not conflict with agricultural zoning or a Williamson Act Contract.

Determination: Less than Significant Impact.

The 2007 Agricultural Preserves Map, Contra Costa County, California, prepared by the Contra Costa County Community Development Department, identifies land within the County that is under a Williamson Act contract. According to the map, the project site is not a under a Williamson Act contract. In addition, the site's General Plan Land Use Designation is Residential – Rural Residential and not Public and Open Space – Agricultural, which is the General Plan Land Use Designation typically associated with lands under Williamson Act Contract. Although the project site is zoned for agricultural use by the Town of Danville (A-2; General Agricultural District), the project includes a request to rezone the site from A-2 (General Agricultural) District to P-1 (Planned Unit Development) District. The request to rezone would facilitate the construction of 20 single-family homes on approximately ten acres of the project site and incorporate an approximately 99-acre remainder parcel that would be dedicated to permanent open space. After the site is rezoned, the project would not conflict with agricultural zoning, resulting in a less than significant impact.

MITIGATION MEASURES

Mitigation is not required.

Indirect Impacts on Farmland

Impact 4.2-3: **Project implementation would not involve other changes to the environment, which due to their location or nature, could result in the conversion of farmland to non-agricultural use.**

Determination: **Less than Significant Impact.**

No farmland is located within the surrounding area or project site. The proposed project would not involve the disruption or damage of the existing environment that would result in the loss of Farmland to non-agricultural use. Less than significant impacts would occur.

MITIGATION MEASURES

Mitigation is not required.

4.2.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.2-4: **Project implementation would not result in a cumulatively considerable impact on agricultural resources.**

Determination: **Less than Significant Impact.**

The analysis of cumulative agricultural resource impacts considers the larger context of future development within the County and the State of California. Cumulative agricultural resource impacts would result from incremental changes that reduce agricultural land in Contra Costa County and the State of California. According to the FMMP, between 1992 and 2010, approximately 19,650 acres of Important Farmland in Contra Costa County were converted to non-agricultural use, which equates to an average yearly loss of approximately 1,092 acres of Important Farmland. Approximately, 8,537 acres of grazing land were converted to non-agricultural use between 1992 and 2010 in Contra Costa County, which equates to a 474 yearly loss.

As discussed above, the proposed project would not result in the conversion of Prime Farmland, Farmland of Statewide Importance, or Unique Farmland to non-agricultural use, nor would it conflict with Williamson Act contracts or zoning for agricultural use. However, the project would permanently convert approximately 110 acres of Grazing Land to non-agricultural use, which is 0.07 percent of the total amount of farmland in the County. As such, the proposed project's conversion of Grazing Land to non-agricultural use would not be cumulatively considerable.

MITIGATION MEASURES

Mitigation is not required.

4.3 AIR QUALITY

This section evaluates air quality conditions associated with short- and long-term impacts resulting from construction and operations of the proposed project. Information in this section is based primarily on the Bay Area Air Quality Management District (BAAQMD) *CEQA Air Quality Guidelines* (May 2011), the *Bay Area 2010 Clean Air Plan* (September 2010), and Air Quality Data (California Air Resources Board 2009 through 2011).

4.2.1 ENVIRONMENTAL SETTING

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The project site is located within the San Francisco Bay Area Air Basin (Basin). This Basin comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below.

The Town of Danville is located within the Diablo Valley and San Ramon Valley climatological sub-region of the Basin. This subregion has a northwest to southeast orientation, with the northern portion known as Diablo Valley and the southern portion as San Ramon Valley. Diablo Valley is bordered to the north by the Carquinez Strait and to the south by San Ramon Valley. San Ramon Valley is long and narrow and extends south from Walnut Creek to Dublin.

The mountains on the west side of these valleys block much of the marine air from reaching the valleys. During the daytime, there are two predominant flow patterns: an upland valley flow from the north and a westerly flow (wind from the west) across the lower elevations of the Coast Range. On clear nights, surface inversions separate the flow of air into two layers: the surface flow and the upper layer flow. When this happens, there are often drainage surface winds which flow downvalley toward the Carquinez Strait.

Wind speeds in these valleys generally are low. Monitoring stations in Concord and Danville report annual average wind speeds of 5 miles per hour (mph). Winds can increase in the afternoon near San Ramon because it is located at the eastern edge of the Crow Canyon gap. Through this gap, polluted air from cities near the Bay travels to the valley in the summer months.

Air temperatures in these valleys are cooler in the winter and warmer in the summer than are temperatures further west, as these valleys are far from the moderating effect of the Bay and ocean. Mean summer maximum temperatures are in the low- to mid-80's. Mean winter minimum temperatures are in the high-30's to low-40's.

Pollution potential is relatively high in these valleys. On winter evenings, light winds combined with surface-based inversions and terrain that restricts air flow can cause pollutant levels to build up. San Ramon Valley can experience high pollution concentrations due to motor vehicle emissions and emissions from fireplaces and wood stoves. In the summer months, ozone and ozone precursors are often transported into the valleys from both the central Basin and the Central Valley.

LOCAL AMBIENT AIR QUALITY

CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet aboveground level; therefore, air quality is often referred to in terms of ground-level concentrations. The closest air monitoring station to the project site is at the Concord Monitoring Station located at 2975 Treat Boulevard, which was used to gather pollutant

information from 2009 to 2011. The Concord Monitoring Station is located approximately nine miles away from the project site and collects data for all criteria pollutants. Local air quality data from 2009 to 2011 is provided in Table 4.3-1 (Local Air Quality Levels). This table lists the monitored maximum concentrations and number of exceedances of federal/state air quality standards each year as available.

TABLE 4.3-1 LOCAL AIR QUALITY LEVELS

Pollutant	Primary Standard		Year	Maximum[1] Concentration	Number of Days State/Federal Std. Exceeded
	California	Federal			
Carbon Monoxide (CO) [2] (1-Hour)	20 ppm for 1 hour	35 ppm for 1 hour	2009 2010 2011	1.80 ppm 1.19 1.60	0/0 0/0 0/0
Carbon Monoxide (CO) [2] (8-Hour)	9 ppm for 8 hours	9 ppm for 8 hours	2009 2010 2011	1.09 ppm 0.95 1.24	0/0 0/0 0/0
Ozone (O_3) (1-Hour) [2]	0.09 ppm for 1 hour	NA[3]	2009 2010 2011	0.106 ppm 0.103 0.099	2/0 2/0 2/0
Ozone (O_3) (8-Hour) [2]	0.070 ppm for 8 hours	0.075 ppm for 8 hours	2009 2010 2011	0.088 ppm 0.087 0.079	5/2 4/1 5/2
Nitrogen Dioxide (NO_2) [2]	0.18 ppm for 1 hour	0.100 ppm for 1 hour	2009 2010 2011	0.040 ppm 0.042 0.042	0/NA 0/NA 0/NA
Particulate Matter (PM_{10}) [2,4,5]	50 μg/m³ for 24 hours	150 μg/m³ for 24 hours	2009 2010 2011	32.5 μg/m³ 41.3 58.8	0/0 0/0 1/0
Fine Particulate Matter ($PM_{2.5}$) [2,5]	No Separate State Standard	35 μg/m³ for 24 hours	2009 2010 2011	39.0 μg/m³ 36.4 47.5	NM/1 NM/1 NM/2

ppm = parts per million
μg/m³ = micrograms per cubic meter
NM = Not Measured
PM_{10} = particulate matter 10 microns in diameter or less
$PM_{2.5}$ = particulate matter 2.5 microns in diameter or less
NA = Not Applicable

Notes:
1 – Maximum concentration is measured over the same period as the California Standard.
2 – Measurements taken at the Concord Monitoring Station located at 2975 Treat Boulevard, Concord, California 94518.
3 – The United States Environmental Protection Agency revoked the Federal 1-hour Standard in June of 2005.
4 – PM_{10} exceedances are based on State thresholds established prior to amendments adopted on June 20, 2002.
5 – PM_{10} and $PM_{2.5}$ exceedances are derived from the number of samples exceeded, not days.

Source: California Air Resources Board, *Aerometric Data Analysis and Measurement System (ADAM) Air Quality Data Statistics*, http://www.arb.ca.gov/adam/welcome.html, accessed on December 11, 2012.

Carbon Monoxide. Carbon monoxide (CO) is an odorless, colorless toxic gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. In cities, automobile exhaust can cause as much as 95 percent of all CO emissions.

CO replaces oxygen in the body's red blood cells. Individuals with a deficient blood supply to the heart, patients with diseases involving heart and blood vessels, fetuses, and patients with chronic hypoxemia (oxygen deficiency, as seen in high altitudes) are most susceptible to the adverse effects of CO exposure. People with heart disease are also more susceptible to developing chest pains when exposed to low levels of CO. Exposure to high levels of CO can slow reflexes and cause drowsiness, as well as result in death in confined spaces at very high concentrations.

Nitrogen Dioxide. Nitrogen oxides (NO_X) are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone (O_3), and react in the atmosphere to form acid rain. NO_2 (often used

interchangeably with NO_X) is a reddish-brown gas that can cause breathing difficulties at high levels. Peak readings of NO_2 occur in areas that have a high concentration of combustion sources (i.e., motor vehicle engines, power plants, refineries, and other industrial operations).

NO_2 can irritate and damage the lungs, and lower resistance to respiratory infections such as influenza. The health effects of short-term exposure are still unclear. However, continued or frequent exposure to NO_2 concentrations that are typically much higher than those normally found in the ambient air, may increase acute respiratory illnesses in children and increase the incidence of chronic bronchitis and lung irritation. Chronic exposure to NO_2 may aggravate eyes and mucus membranes as well as cause pulmonary dysfunction.

Ozone. O_3 occurs in two layers of the atmosphere. The layer surrounding the earth's surface is the troposphere. The troposphere extends approximately ten miles above ground level, where it meets the second layer, the stratosphere. The stratospheric (the "good" O_3 layer) extends upward from about ten to 30 miles and protects life on earth from the sun's harmful ultraviolet rays.

The "bad" O_3 is a photochemical pollutant, and needs reactive organic gases (ROGs), NO_X and sunlight to form; therefore, ROGs and NO_X are O_3 precursors. To reduce O_3 concentrations, it is necessary to control the emissions of these O_3 precursors. Significant O_3 formation generally requires an adequate amount of precursors in the atmosphere and a period of several hours in a stable atmosphere with strong sunlight. High O_3 concentrations can form over large regions when emissions from motor vehicles and stationary sources are carried hundreds of miles from their origins.

While O_3 in the upper atmosphere (stratosphere) protects the earth from harmful ultraviolet radiation, high concentrations of ground-level O_3 (in the troposphere) can adversely affect the human respiratory system and other tissues. O_3 is a strong irritant that can constrict the airways, forcing the respiratory system to work hard to deliver oxygen. Individuals exercising outdoors, children and people with pre-existing lung disease such as asthma and chronic pulmonary lung disease are considered to be the most susceptible to the health effects of O_3. Short-term exposure (lasting for a few hours) to O_3 can result in aggravated respiratory diseases such as emphysema, bronchitis and asthma, shortness of breath, increased susceptibility to infections, inflammation of the lung tissue, increased fatigue, as well as chest pain, dry throat, headache and nausea.

Coarse Particulate Matter (PM_{10}). PM_{10} refers to suspended particulate matter, which is smaller than ten microns or ten one-millionths of a meter. PM_{10} arises from sources such as road dust, diesel soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate into lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (Senate Bill 25).

Fine Particulate Matter ($PM_{2.5}$). Due to recent increased concerns over health impacts related to fine particulate matter (particulate matter 2.5 microns in diameter or less), both state and federal $PM_{2.5}$ standards have been created. Particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease. In 1997, the U.S. Environmental Protection Agency (EPA) announced new $PM_{2.5}$ standards. Industry groups challenged the new standard in court and the implementation of the standard was blocked. However, upon appeal by the EPA, the U.S. Supreme Court reversed this decision and upheld the EPA's new standards.

On June 20, 2002, CARB adopted amendments for statewide annual ambient particulate matter air quality standards. These standards were revised/established due to increasing concerns by CARB that previous standards were inadequate, as almost everyone in California is exposed to levels at or above the current state standards during some parts of the year, and the statewide potential for significant health impacts associated with particulate matter exposure was determined to be large and wide-ranging.

Sulfur Dioxide. Sulfur dioxide (SO_2) is a colorless, irritating gas with a rotten egg smell; it is formed primarily by the combustion of sulfur-containing fossil fuels. Sulfur dioxide is often used interchangeably with sulfur oxides (SO_X) and lead (Pb). Exposure of a few minutes to low levels of SO_2 can result in airway constriction and reduction in breathing capacity in some asthmatics.

Reactive Organic Gases and Volatile Organic Compounds. Hydrocarbons are organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including reactive organic gases (ROGs) and volatile organic compounds (VOCs). Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Toxic Air Contaminants. Toxic Air Contaminants (TACs) (also referred to as Hazardous Air Pollutants [HAPs]), are pollutants that result in an increase in mortality, a serious illness, or pose a present or potential hazard to human health. Health effects of TACs may include cancer, birth defects, and immune system and neurological damage.

TACs can be separated into carcinogens and noncarcinogens based on the nature of the physiological degradation associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which heath impacts would not occur. Noncarcinogenic TACs differ in that there is a safe level in which it is generally assumed that no negative health impacts would occur. These levels are determined on a pollutant-by-pollutant basis.

TACs are not considered criteria air pollutants and, thus, are not specifically addressed through the setting of ambient air quality standards. Instead, the EPA and CARB regulate HAPs and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology (MACT and BACT) to limit emissions. These in conjunction with additional rules set forth by the BAAQMD establish the regulatory framework for TACs.

SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than is the general population. The following types of people are most likely to be adversely affected by air pollution, as identified by CARB: children under 14, elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. Locations that may contain a high concentration of these sensitive population groups are called sensitive receptors and include residential areas, hospitals, day-care facilities, elder-care facilities, elementary schools and parks. Existing sensitive receptors located in the project vicinity include single and multi-family residential homes, schools, parks, places of worship, and a hospital. Sensitive receptors are depicted in Table 4.3-2 (Sensitive Receptors).

TABLE 4.3-2 SENSITIVE RECEPTORS

Type	Name	Distance from Project Site (feet)	Direction from Project Site
Residential	Residential Uses	160	North
		200	South
		120	East
Schools	John F. Baldwin Elementary School	2,900	Northeast
	Charlotte Wood Middle School	4,100	East
	Valley Parent Preschool	1,500	East
	KinderCare	1,500	East
	Rainbow Montessori School	4,400	North
Parks	Osage Park	4,100	East

Source: Google Earth 2012.

4.3.2 REGULATORY SETTING

ENVIRONMENTAL PROTECTION AGENCY

The EPA is responsible for implementing the Federal Clean Air Act (FCAA), which was first enacted in 1955 and amended numerous times after. The FCAA established federal air quality standards known as the National Ambient Air Quality Standards (NAAQS). These standards identify levels of air quality for "criteria" pollutants that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect the public health and welfare. The criteria pollutants are O_3, CO, NO_2 (which is a form of NO_X), SO_2 (which is a form of SO_X), particulate matter less than ten and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$, respectively), and Pb. Refer to Table 4.3-3 (National and California Ambient Air Quality Standards).

CALIFORNIA AIR RESOURCES BOARD

CARB administers the air quality policy in California. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 4.3-3, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide and sulfates. The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for preparation of the State Implementation Plan (SIP) for the State of California.

Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data show that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment.

TABLE 4.3-3 NATIONAL AND CALIFORNIA AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California[1]		Federal[2]	
		Standard[3]	Attainment Status	Standards[4]	Attainment Status
Ozone (O_3)	1 Hour	0.09 ppm (180 μg/m³)	**Nonattainment**	N/A[5]	N/A[5]
	8 Hours	0.07 ppm (137 μg/m³)	N/A	0.075 ppm (147 μg/m³)	**Nonattainment**
Particulate Matter (PM_{10})	24 Hours	50 μg/m³	**Nonattainment**	150 μg/m³	Unclassified
	Annual Arithmetic Mean	20 μg/m³	**Nonattainment**	N/A[6]	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	No Separate State Standard		35 μg/m³	**Nonattainment**
	Annual Arithmetic Mean	12 μg/m³	**Nonattainment**	15.0 μg/m³	**Nonattainment**
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m³)	Attainment	9 ppm (10 mg/m³)	Unclassified/ Attainment
	1 Hour	20 ppm (23 mg/m³)	Attainment	35 ppm (40 mg/m³)	Unclassified/ Attainment
Nitrogen Dioxide (NO_2)[7]	Annual Arithmetic Mean	0.030 ppm (57 μg/m³)	N/A	53 ppb (100 μg/m³)	Unclassified/ Attainment
	1 Hour	0.18 ppm (339 μg/m³)	Attainment	100 ppb (188 μg/m³)	N/A
Lead (Pb)	30 days average	1.5 μg/m³	Attainment	N/A	N/A
	Calendar Quarter	N/A	N/A	1.5 μg/m³	N/A
Sulfur Dioxide (SO_2)	24 Hours	0.04 ppm (105 μg/m³)	Attainment	0.14 ppm	Attainment
	3 Hours	N/A	N/A	N/A	Attainment
	1 Hour	0.25 ppm (655 μg/m³)	Attainment	75 ppb (196 μg/m³)	N/A
	Annual Arithmetic Mean	N/A	N/A	0.030 ppm	Attainment
Visibility-Reducing Particles	8 Hours (10 a.m. to 6 p.m., PST)	Extinction coefficient = 0.23 km@<70% RH	Unclassified	**No Federal Standards**	
Sulfates	24 Hour	25 μg/m³	Attainment		
Hydrogen Sulfide	1 Hour	0.03 ppm (42 μg/m³)	Unclassified		
Vinyl Chloride	24 Hour	0.01 ppm (26 μg/m³)	N/A		

μg/m³ = micrograms per cubic meter; ppm = parts per million; ppb = parts per billion; km = kilometer(s); RH = relative humidity; PST = Pacific Standard Time; N/A = Not Applicable

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, suspended particulate matter-PM_{10} and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations. In 1990, the California Air Resources Board (CARB) identified vinyl chloride as a toxic air contaminant, but determined that there was not sufficient available scientific evidence to support the identification of a threshold exposure level. This action allows the implementation of health-protective control measures at levels below the 0.010 parts per million ambient concentration specified in the 1978 standard.
2. National standards (other than ozone, particulate matter and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. EPA also may designate an area as *attainment/unclassifiable*, if: (1) it has monitored air quality data that show that the area has not violated the ozone standard over a three-year period; or (2) there is not enough information to determine the air quality in the area. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 μg/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

TABLE 4.3-3, CONTINUED

3. Concentration is expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 mm of mercury. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas. 4. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health. 5. The Federal 1-hour ozone standard was revoked on June 15, 2005 in all areas except the 14 8-hour ozone nonattainment Early Action Compact (EAC) areas. 6. The Environmental Protection Agency revoked the annual PM_{10} standard in 2006 (effective December 16, 2006). 7. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010). Note that EPA standards are in units of ppb and California standards are in units of ppm.
Source: California Air Resources Board and U.S. Environmental Protection Agency, June 7, 2012.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

BAAQMD is the regional agency with jurisdiction over the nine-county region located in the Basin. The Association of Bay Area Governments (ABAG), the Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various nongovernmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

BAAQMD is responsible for attaining and/or maintaining air quality in the Basin within federal and State air quality standards. Specifically, BAAQMD has the responsibility to monitor ambient air pollutant levels throughout the Basin and to develop and implement strategies to attain the applicable federal and State standards.

In March 2010, BAAQMD, in cooperation with the MTC and ABAG, published the draft *2010 Bay Area Clean Air Plan*, which, supersedes the *Bay Area 2005 Ozone Strategy*. The *2010 Bay Area Clean Air Plan* updates the *2005 Ozone Strategy* in accordance with the requirements of the CCAA to achieve the following:

- Implement all feasible measures to reduce ozone; provide a control strategy to reduce ozone, particulate matter, toxic air contaminants and greenhouse gases in a single, integrated plan;
- Review progress in improving air quality in recent years; and
- Establish emission control measures to be adopted or implemented in the 2010 to 2012 time frame.

The control strategy includes stationary-source control measures to be implemented through BAAQMD regulations; mobile-source control measures to me implemented through incentive program and other activities; and transportation control measures to be implemented through transportation programs in cooperation with MTC, local governments, transit agencies and others. The *2010 Bay Area Clean Air plan* also represents the Bay Area's most recent triennial assessment of the region's strategy to attain the one-hour ozone standard.

In May 2011, BAAQMD adopted its updated *CEQA Air Quality Guidelines*. The May 2011 Guidelines include thresholds identified within the BAAQMD *Options and Justification Report* (dated October 2009). The BAAQMD *Options and Justification Report* establishes thresholds based on substantial evidence. On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the Thresholds. The court issued a writ of mandate ordering the BAAQMD to set aside the Thresholds and cease dissemination of them until the BAAQMD had complied with CEQA. The court did not determine whether the Thresholds were valid on the merits, but found that the adoption of the Thresholds was a project under CEQA. The BAAQMD has appealed the Alameda County Superior Court's decision. The appeal is currently pending in the Court of Appeal of the State of California, First Appellate District.

4.3.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

California Environmental Quality Act Guidelines

According to the Appendix G of the CEQA Guidelines, the Podva Property Residential Development would have a significant impact on air quality if it would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is in non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or,
- Create objectionable odors affecting a substantial number of people.

BAAQMD Thresholds

Under CEQA, the BAAQMD is a commenting responsible agency on air quality within its jurisdiction or impacting its jurisdiction. The BAAQMD reviews projects to ensure that they would: (1) support the primary goals of the latest Air Quality Plan; (2) include applicable control measures from the Air Quality Plan; and (3) not disrupt or hinder implementation of any Air Quality Plan control measures.

The BAAQMD adopted their *CEQA Air Quality Guidelines* to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the Basin. The *CEQA Air Quality Guidelines* provide BAAQMD-recommended procedures for evaluating potential air quality and greenhouse gas (GHG) impacts during the environmental review process consistent with CEQA requirements.[1] In addition to providing new thresholds for GHG emissions, the 2011 *CEQA Air Quality Guidelines* provide updated significance thresholds for criteria pollutants and supersede the BAAQMD's previous CEQA guidance titled *BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans* (1999).

If the project results in emissions or development in excess of the established thresholds, as illustrated in Table 4.3-4 (BAAQMD Emission Thresholds) a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

[1] On March 5, 2012, the Alameda County Superior Court issued a decision in *California Building Industry Association v. Bay Area Air Quality Management District* (Superior Court Case No. RG10548693). The Court determined that the adoption of BAAQMD's CEQA Guidelines was a "project" requiring CEQA review. Because no CEQA review was conducted, the Court set aside the Guidelines. The Court ordered BAAQMD not to disseminate the Guidelines and the threshold standards set forth therein until CEQA review was conducted. Although adoption of the Guidelines has been set aside, the significance criteria contained in the Guidelines is supported by extensive studies and analysis (see www.baaqmd.gov/Divisions/Planning-and-Research/CEQAGUIDELINES/Tools-and-Methodology.aspx). Pursuant to the Town's discretion under CEQA Guidelines Section 15064 (b) and the recent holding in *Citizen for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal.App.4th 327, 335-336, ("[t]he determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data."), the Town has decided to utilize the air quality threshold standards in the Guidelines to analyze such potential impacts from the project.

TABLE 4.3-4 BAAQMD EMISSIONS THRESHOLDS

Pollutant/Precursor	Maximum Annual Emissions (tpy)	Average Daily Emissions (lbs/day) (Construction and Operational)
ROG	10	54
NO_X	10	54
PM_{10}	15	82
$PM_{2.5}$	10	54

tpy = tons per year; $PM_{2.5}$ = fine particulate matter with a diameter of 2.5 micrometers or less;
lb/day = pounds per day; PM_{10} = respirable particulate matter with a diameter of 10 micrometers or less;
NO_X = oxides of nitrogen; ROG = reactive organic gases.

Source: Bay Area Air Quality Management District, *Options and Justification Report*, October 2009 and Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2011.

Criteria Pollutant Screening Thresholds

The BAAQMD has developed screening criteria for criteria pollutant emissions based on conservative default emissions modeling. If the project meets the screening criteria, the project would not result in the generation of criteria air pollutants and/or precursors that exceed the thresholds of significance depicted in Table 4.3-4, and operation of the proposed project would result in a less-than-significant cumulative impact to air quality from criteria air pollutant and precursor emissions. The operational screening criteria for residential uses is 325 dwelling units. The screening criteria for construction-related activities is 114 dwelling units and requires the project to include basic construction mitigation measures, comply with BAAQMD rules, not include simultaneous construction phases, not include extensive site preparation, and not include extensive material transport.

Localized CO Thresholds

The BAAQMD screening criteria provides that the proposed project would result in a less-than-significant impact to localized CO concentrations if the following are met:

- Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, regional transportation plan, and local congestion management agency plans.
- The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

If none of the above criteria are met, then the project would require a quantitative analysis that would compare emissions to the CAAQS.

Health Risk Screening Thresholds

The BAAQMD has developed methods whereby local community risk and hazard impacts from projects for both new sources and new receptors can be determined based on comparison with applicable thresholds of significance and screening criteria and (2) to recommend mitigation measures for these impacts. The screening methods are provided in the BAAQMD guidance document entitled *Recommended Methods for Screening and Modeling Local Risks and Hazards* (May 2010). The BAAQMD guidance provides screening tables to determine whether emissions would create a significant health hazard impact based on project size and receptor distance.

Additionally, the BAAQMD recommends that all toxic sources are identified within a 1,000 foot radius of the project site to determine any risk and health hazards.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Short-Term (Construction) Emissions

Impact 4.3-1: Short-term construction activities associated with the proposed project could result in significant air pollutant emissions.

Determination: Less than Significant Impact with Mitigation Incorporation.

The BAAQMD developed preliminary screening criteria to provide the lead agency with a conservative indication of whether the proposed project would result in the generation of construction-related criteria air pollutants and/or precursors that exceed the thresholds of significance depicted in Table 4.3-4. The BAAQMD determined that if all of the screening criteria are met, the construction of the proposed project would result in a less-than-significant impact from criteria air pollutant and precursor emissions. If the project meets the screening criteria, the project would not result in the generation of criteria air pollutants and/or precursors that exceed the thresholds of significance shown in Table 4.3-4, and operation of the proposed project would result in a less-than-significant cumulative impact to air quality from criteria air pollutant and precursor emissions.

Table 4.3-5 (Construction Screening Criteria) analyzes the project's consistency with the BAAQMD construction screening criteria. As indicated in Table 4.3-5, the proposed project would be consistent with the BAAQMD construction screening criteria with implementation of Mitigation Measures 4.3-1a through 4.3-1c. Therefore, impacts would be less than significant.

TABLE 4.3-5 CONSTRUCTION SCREENING CRITERIA

BAAQMD Construction Screening Criteria	Project Compliance
The project is below the applicable screening level size.	**Compliant**. The proposed project would develop 20 single-family homes on approximately 10 acres, and dedicate approximately 99 acres as permanent open space. The project is below the applicable construction screening level size of 114 dwelling units for single family uses.
All Basic Construction Mitigation Measures would be included in the project design and implemented during construction.	**Compliant**. The proposed project would be required to comply with all Basic Construction Mitigation Measures; refer to Mitigation Measure 4.3-1a.
Construction-related activities would not include any of the following:	
• Demolition activities inconsistent with BAAQMD Regulation 11, Rule 2: Asbestos Demolition, Renovation, and Manufacturing;	**Compliant**. The proposed project would be required to comply with BAAQMD Regulation 11, Rule 2: Asbestos Demolition, Renovation, and Manufacturing; refer to Mitigation Measure 4.3-1b.
• Simultaneous occurrence of more than two construction phases (e.g., paving and building construction would occur simultaneously);	**Compliant**. Construction of the proposed project would not have overlapping phases; refer to Mitigation Measure 4.3-1c.
• Simultaneous construction of more than one land use type (e.g., project would develop residential and commercial uses on the same site) (not applicable to high density infill development);	**Compliant**. The project proposes only single family land uses. No other land uses are proposed.
• Extensive site preparation (i.e., greater than default modeling assumptions for grading, cut/fill, or earth movement); or	**Compliant**. Construction of the proposed project would include a total of 40,000 cubic yards of earthwork over 15 acres. This is not considered an extensive amount.

TABLE 4.3-5, CONTINUED

BAAQMD Construction Screening Criteria	Project Compliance
• Extensive material transport (e.g., greater than 10,000 cubic yards of soil import/export) requiring a considerable amount of haul truck activity.	**Compliant**. Earthwork would be balanced on-site and would not require import or export of materials.

MITIGATION MEASURES

4.3-1a Prior to issuance of any Grading Permit, the Building Services Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that the following basic construction mitigation measures shall be implemented for all construction projects:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- 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 shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. 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 5 minutes (as 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.
- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD’s phone number shall also be visible to ensure compliance with applicable regulations.

4.3-1b Prior to any demolition activities, the Building Services Official shall confirm that the demolition plans and specifications stipulate that demolition activities comply with BAAQMD Regulation 11, Rule 2: Asbestos Demolition, Renovation, and Manufacturing.

4.3-1c Prior to issuance of any construction activities, the Building Services Official shall confirm that construction phases (e.g., grading, paving, building, etc.) do not overlap.

Long-Term (Operational) Emissions

Impact 4.3-2: Long-term operation of the proposed project would not result in significant air pollutant emissions.

Determination: Less than Significant Impact.

The BAAQMD developed preliminary screening criteria to provide the lead agency with a conservative indication of whether the proposed project would result in the generation of construction-related criteria air pollutants and/or precursors that exceed the thresholds of significance described above. The proposed project would develop 20 single-family homes on approximately 10 acres, and dedicate approximately 99 acres as permanent open space. The BAAQMD criteria pollutant screening threshold for single-family residential uses is 325 dwelling units.[2] Projects below the applicable screening criteria would not exceed the BAAQMD operational thresholds of significance for criteria pollutants. Therefore, impacts would be less than significant.

Localized Carbon Monoxide Impacts

The Basin is designated as an attainment area for CO. In other words, as indicated in the BAAQMD *CEQA Air Quality Guidelines*, ambient concentrations of CO have decreased dramatically in the Basin with the introduction of the catalytic converter in 1975. Therefore, no exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991.[3] As a result, the screening criteria in the BAAQMD *CEQA Air Quality Guidelines* notes that CO impacts may be determined to be less than significant if a project is consistent with the applicable congestion management plan, or would not increase traffic volumes at intersections to more than 44,000 vehicles per hour for regular intersections, or would not increase traffic volumes at intersections to more than 24,000 vehicles per hour for intersections with limited mixing zones (e.g., tunnels, garages, overpasses, etc.).

Based on the traffic data presented in Section 4.14 (Traffic), the project would generate 21 peak hour trips (204 daily trips). The intersection of Sycamore Valley Road and I-680 northbound ramps would have the greatest traffic volumes with 4,925 vehicles in the AM peak hour during Cumulative Plus Project conditions. The proposed project would not increase traffic volumes to 44,000 vehicles per hour for regular intersections, nor would the project increase traffic volumes to more than 24,000 vehicles per hour for intersections with limited mixing zones. Therefore, effects related to CO concentrations would be less than significant.

Risk and Health Hazards

BAAQMD recommends that all toxic air contaminant (TAC) and particulate matter less than 2.5 microns ($PM_{2.5}$) sources are identified located within a 1,000 foot radius of the proposed project site to determine any risk and health hazards. As described above, the project site is surrounded primarily by residential uses. There are no TAC and $PM_{2.5}$ sources located within 1,000 feet of the project site.[4] Interstate 680 (I-680) would be considered the closest TAC and $PM_{2.5}$ source to the project site. However, I-680 is located approximately 1,200 feet away from the project site. Additionally, the proposed residential uses would not include any sources of TACs. Therefore, any risk and health hazards would be less than significant.

Odors

According to the BAAQMD *CEQA Air Quality Guidelines*, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. Odor impacts generally occur from either siting a new odor source (e.g., the project includes a proposed odor source near existing sensitive receptors), or siting a new receptor (e.g., the project includes proposed sensitive receptors near an existing odor source).

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[2] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2011. (Table 3-1) Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes.

[3] Bay Area Air Quality Management District, *BAAQMD CEQA Air Quality Guidelines* (page 6-1), June 2010.

[4] Bay Area Air Quality Management District, *Stationary Source Risk & Hazard Analysis Tool, Contra Costa Permitted Sources*, May 30, 2012. http://www.baaqmd.gov/Divisions/Planning-and-Research/CEQA-GUIDELINES/Tools-and-Methodology.aspx

The proposed project would not be located in proximity to any facilities that are typically associated with odor complaints, as identified by the BAAQMD. The proposed project would generally be adjacent to existing residential uses to the north and east, and commercial and light industrial uses would be located to the east. The commercial industrial uses generally include business park complexes and do not consist of wastewater treatment plants, landfills, animal facilities, or any other uses associated with odors. Therefore, potential odor impacts would be less than significant.

MITIGATION MEASURES

Mitigation is not required.

Consistency with Regional Plans

Impact 4.3-3: Development associated with the proposed project would be consistent with regional plans.

Determination: Less than Significant Impact.

A potentially significant impact to air quality would occur if the project would conflict with or obstruct the implementation of the applicable air quality management or attainment plan. The primary concern is that the project related impacts have been properly anticipated in the regional air quality planning process, and reduced whenever feasible. Therefore, it is necessary to assess the project's consistency with the local air quality plan.

The most recently adopted air quality plan in the Basin is the *2010 Bay Area Clean Air Plan* (*Clean Air Plan*). This *Clean Air Plan* outlines how the San Francisco Bay Area will attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions. The project proposes the development of 20 single family dwelling units on 10 acres, and the designation of 99 acres as permanent open space. As described above, the proposed project would result in construction and operational-related emissions that would be below BAAQMD thresholds. As a result, the proposed project would not have the potential to disrupt the implementation of the *Clean Air Plan* and the project would not contribute substantially to an existing or project air quality violation. Therefore, impacts would be less than significant.

MITIGATION MEASURES

Mitigation is not required.

4.3.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.3-4: Implementation of the proposed project and related cumulative projects would not result in significant air quality impacts.

Determination: Less than Significant Impact.

The BAAQMD *CEQA Air Quality Guidelines* do not include separate significance thresholds for cumulative operational emissions. As described in Impact Statement 4.3-3, above, the project would be consistent with the appropriate *Clean Air Plan*, which is provided to reduce air quality emissions for the entire Bay Area region. The BAAQMD *CEQA Air Quality Guidelines* note that the nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size by itself to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

Consistency with the *Clean Air Plan* control measures would ensure that the proposed project would not cumulatively contribute to air quality impacts in the Basin. Therefore, impacts would be less than significant.

MITIGATION MEASURES

Mitigation is not required.

4.4 BIOLOGICAL RESOURCES

This section describes the existing biological resources at the project site; the potential impacts on those resources that could result from project implementation; and, avoidance and mitigation measures that would reduce identified impacts to less than significant levels. This section summarizes the following reports prepared by Live Oak Associates, Inc. (LOA), which are included in Appendix B:

- *Podva Property Biological Evaluation, Town of Danville, California,* June 21, 2012.
- *Special Status Plant Surveys, Podva Project Site, Town of Danville, California,* May 8, 2012.
- *Investigation of Potential Waters of the United States, Podva Property, Town of Danville, California,* October 14, 2011.

In addition, this section also summarizes the following reports and memorandums prepared by HortScience, Inc., which are also included in Appendix B:

- *Arborist Report, Podva Property*, Danville, CA, October 14, 2013.
- Letter to Jeff Schroeder, Ponderosa Homes, RE: *Valley Oak, Podva Property*, October 25, 2011.
- *Memorandum RE: Tree Protection Podva Project*, October 30, 2012.

4.4.1 ENVIRONMENTAL SETTING

LOA ecologists conducted a reconnaissance-level field survey of the project site on May 20, 2011, at which time the principal biotic habitats of the site were identified, and the constituent plants and animals of each were noted (a detailed description is provided below). In addition, LOA conducted several focused surveys of the site. On August 1, 2011, an LOA herpetologist completed a habitat assessment for California tiger salamander (*Ambystoma californiense*; CTS), California red-legged frog (R*ana draytonii*; CRLF), western pond turtle (*Actinemys marmorata*), and Alameda whipsnake (*Masticophis lateralis euryxanthus*), and LOA ecologists conducted formal wetland delineation of the site. On June 20 and September 12, 2011, and on March 12 and April 30, 2012, LOA ecologists performed focused rare plant surveys of the site.

BIOTIC HABITATS

Five biotic habitats were identified on the project site (Figure 4.4-1). For the purposes of this Draft EIR, the habitats are classified as "annual grassland," "riparian woodland and seasonal drainage," "ponds and wetlands," "oak woodland," and "coyote brush scrub." A list of the vascular plant species observed on the project site and the terrestrial vertebrates using, or potentially using the site are provided in Appendix B.

Annual Grassland

Vegetation

The site primarily consists of non-native grasslands dominated by annual grasses and forbs of European origin. Non-native annual grasses common to this habitat include soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), wild oats (*Avena fatua*), Italian ryegrass (*Lolium multiflorum*), foxtail barley (*Hordeum murinum*), canary grass (*Phalaris californica*), and rattail fescue (*Vulpia myuros*). Common non-native forbs observed include common groundsel (*Senecio vulgaris*), Italian thistle (*Carduus pycnocephalus*), purple salsify (*Tragopogon porrifolius*), black mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), cheeseweed mallow (*Malva parviflora*), burclover (*Medicago polymorpha*), rose clover (*Trifolium hirtum*), yellow devil's-claw (Proboscidea lutea), and

buffalo berry (*Solanum rostratum*). Native species observed include cocklebur (*Xanthium strumarium*), California goosefoot (*Chenopodium californicum*), Carolina geranium (*Feranium carolinianum*), blue-eyed grass (*Sisyrinchium bellum*), and vinegarweed (*Trichostema lanceolatum*). Coyote brush (*Baccharis pilularius*) is sparsely scattered throughout the grassland habitat. At the eastern end of the site, several cherry plums (*Pronus cerasifera*) occur near ephemeral channel remnants (riparian wetland) and seasonal drainage; described below.

Wildlife

Grasslands provide important habitat to many terrestrial vertebrates. A number of these species are expected to utilize grasslands occurring on the site throughout all or part of the year as breeding and foraging habitat.

Debris, thatch, leaf litter, and small mammal burrows provide cover for several reptile species that forage in grasslands for small mammals and birds. These include the Coast Range fence lizard (*Sceloporus occidentalis bocourtii*), which was observed during field surveys, California alligator lizard (*Elgaria multicarinata*), gopher snake (*Pituophis catenifer*), and northern Pacific rattlesnake (*Crotalus oreganus oreganus*). They may also provide suitable cover and aestivation habitat for amphibians utilizing nearby aquatic habitats (described in greater detail below).

Numerous resident and migratory birds breed and forage in grassland habitats. Red-tailed hawks (*Buteo jamaicensis*) were observed flying over the site. Raptors such as the turkey vulture (*Cathartes aura*) and white-tailed kite (*Elanus leucurus*) would also utilize this habitat. Other birds observed in this habitat include the wild turkey (*Meleagris gallopavo*), mourning dove (*Zenaida macroura*), acorn woodpecker (*Melanerpes formicivorus*), western scrub-jay (*Aphelocoma californica*), tree swallow (*Tachycineta bicolor*), American robin (*Turdus migratorius*), red-winged blackbird (*Gelaius phoeniceus*), and house finch (*Carpodacus mexicanus*).

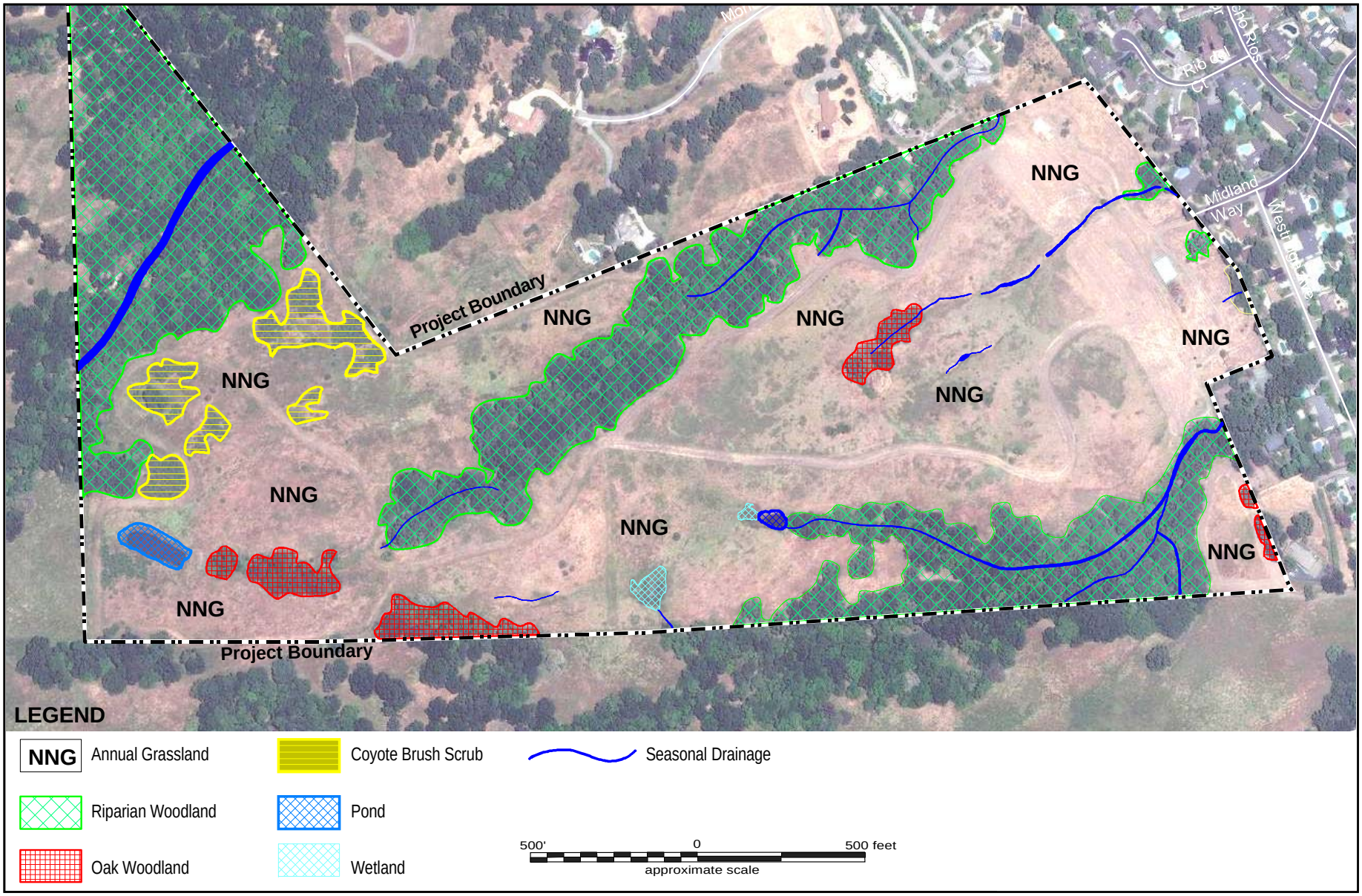
Mammals are common to this habitat. A dead striped skunk (*Mephitis mephitis*) was observed near the wood barn, and evidence of skunk prey digs was also present. California ground squirrels (*Spermophilus beecheyi*) and their burrows were observed throughout the site, and Botta's pocket gopher (*Thomonys bottae*) burrows were also present on the site. Other small mammals likely to occur in this habitat include the western harvest mouse (*Reithrodontomys megalotis*) and California meadow vole (*Microtus californicus*). Small mammals often attract predators, including reptiles and birds previously discussed. The abundance of small mammals also attracts larger mammalian predators known to occur in the region, including coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), and bobcats (*Lynx rufus*). Black-tailed deer (*Odocoileus hemionus columbianus*) were also present on the site.

Bat species such as the Mexican free-tailed bat (*Tadarida brasiliensis*) may forage over this habitat for insects. However, structures on the site would not provide suitable habitat for bats. The metal barn has no openings, and the wood barn is likely too open for bats to roost. No evidence of bats (e.g., guano) in or around these structures was present.

Riparian Woodland and Seasonal Drainage

Vegetation

Riparian woodland habitat with a relatively dense, closed canopy is associated with two seasonal tributary channels along the site's northern and southern boundaries and their lesser order seasonal tributary channels (Figure 4.4-1). The main channels conveyed water at the time of the May 2011 survey, while the lesser order channels were dry. Riparian woodland is also present in the northwest corner of the site. The overstory vegetation was dominated by valley oaks (*Quercus lobata*) and coast live oaks (*Quercus agrifolia*), while California bay (*Umbellularia californica*) and blue oaks (*Quercus douglasii*) were also present. This habitat had a modest to dense shrub layer of California blackberry (*Rubus ursinus*), poison oak (*Toxicodendron diversilobum*), and common snowberry



Source: Live Oak Associates, Inc. (2012)

RBF A Baker Company

North

HABITAT MAP

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.4-1

(Symphoricarpos albus var.laevigatus). The herbaceous understory consisted of such species as Baltic rush (*Juncus balticus*), common yarrow (*Achillea millefolium*), Italian thistle, soap plant (*Chlorogalum pomeridianum* var. *pomeridianum*), bugle hedgenettle (*Stachys ajugoides*), miner's lettuce (*Claytonia perfoliata*), foxtail barley, beardless wildrye (*Leymus triticoides*), California brome (*Bromus carinatus*), and ripgut brome. The channel beds themselves were largely devoid of vegetation.

The ephemeral channel remnants along the eastern boundary of the site supported a few rinparian trees, including valley oak, coast live oak, California bay, and arroyo willow (*Salix lasiolepis*).

The seasonal drainage channels lacking associated riparian habitat supported upland herbaceous species similar to that of the surrounding upland habitat (annual grassland; described above).

Wildlife

According to LOA, riparian systems serve as dispersal corridors and islands of habitat for an estimated 83 percent of amphibians and 40 percent of reptiles in California. The onsite drainages that convey water provide a seasonal source of drinking water for species occurring in the surrounding habitats and, when wet, also provide breeding habitat for Pacific treefrogs (*Hyla regilla*). Leaf litter and decaying logs provide a moist microclimate suitable for amphibians such as the Pacific treefrog. Reptiles that may utilize riparian systems include the skilton skink (*Eumeces skiltonianus skiltonianus*), California alligator lizard, gopher snake, and common kingsnake (*Lampropeltis getulus*).

Many resident and migratory bird species occur in riparian habitats. Birds observed in the riparian woodland include the Steller's jay (*Cyanocitta stelleri*) and dark-eyed junco (*Junco hyemalis*). Resident species that may be found in this habitat include the Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), Anna's hummingbird (*Calypte anna*), downy woodpecker (*Picoides pubescens*), Nuttall'swoodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), warbling vireo (*Vireo gilvus*), western scrub-jay, bushtit (*Psaltriparus minimus*), and song sparrow (*Melospiza melodia*). Winter migrants may include the sharp-shinned hawk (*Accipiter striatus*) and rubycrowned kinglet (*Regulus calendula*). Summer migrants may include the ash-throated flycatcher (*Myiarchus cinerascens*), Pacific-slope flycatcher (*Empidonax difficilis*), orange-crowned warbler (*Oreothlypis celata*), and Bullock's oriole (*Icterus bullockii*).

The structural and faunal diversity of riparian zones provide an abundant food source for and attract a variety of mammalian species. For example, the deer mouse (*Peromyscus maniculatus*) feeds on soil-dwelling larvae as well as a variety of seeds and leaves. Other constituent mammals of riparian woodlands in this region include the brush rabbit (*Sylvilagus bachmani*), eastern fox squirrel (*Sciurus niger*), and raccoon (*Procyon lotor*).

Ponds and Wetlands

Vegetation

Two ponds are present onsite; the lower pond is located approximately in the center of the site, and the upper pond is in the southwest corner. Both ponds were visited during the May and August 2011 surveys, and both held water at those times. Vegetation occurring in the ponds includes common spikerush (*Eleocharis macrostachya*), tall flatsedge (*Cyperus eragrostis*), Mexican rush (*Juncus mexicanus*), and curly dock (*Rumex crispus*).

A wetland swale is associated with the lower pond. Vegetation occurring in the swale includes poison hemlock (*Conium maculatum*), curly dock, rabbitsfoot grass (*Polypogon monspieliensis*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), and Italian ryegrass. A second wetland swale is located in the grasslands along the site's southern boundary and supported such species as Mediterranean barley, Italian ryegrass, rabbitsfoot grass, and curly dock.

Wildlife

Coast Range newts (Taricha torosa torosa), Pacific treefrogs, California red-legged frogs (*Rana draytonii*), and Diablo Range garter snakes (*Thamnophis atratus zaxanthus*) were observed in the upper pond. No amphibians or reptiles were observed at the lower pond, although raccoon prints were seen. Wildlife from the surrounding habitats could use these features as seasonal drinking sources.

Oak Woodland

Vegetation

Relatively small areas of oak woodland are associated with swales at the upstream end of dry seasonal drainage channels. This habitat was dominated by the same oak species comprising the riparian woodlands but generally lacked understory vegetation.

Wildlife

Wildlife inhabiting the surrounding grasslands and riparian woodlands would also be expected to occur within this habitat.

Coyote Brush Scrub

Within the grasslands in the site's northwest corner are small patches of coyote brush (*Baccharis pilularis*). Wildlife species expected to occur in the surrounding habitats could occasionally pass through these patches as well.

MOVEMENT CORRIDORS

Many terrestrial animals need more than one biotic habitat in order to perform all of their biological activities. With increasing encroachment of humans on wildlife habitats, it has become important to establish and maintain linkages, or movement corridors, for animals to be able to access locations containing different biotic resources that are essential to maintaining their life cycles. Terrestrial animals use ridges, canyons, riparian areas, and open spaces to travel between their habitats. The importance of an area as a movement corridor depends on the species in question and its consistent use patterns. Animal movements generally can be divided into three major behavioral categories:

- Movements within a home range or territory;
- Movements during migration; and,
- Movements during dispersal.

While no detailed study of animal movements has been conducted for the project area, knowledge of the site, its habitats, and the ecology of the species potentially occurring onsite permits sufficient predictions about the types of movements occurring in the region and whether or not proposed development would constitute a significant impact to animal movements.

A number of reptiles, birds, and mammals may use the upland portions of the site as part of their home range and dispersal movements between the site and open lands to the north, west, and south. The various seasonal drainages on the site likely facilitate the movement of amphibians, reptiles, birds, and mammals within and through the site to these more open lands. However, these drainages would not be expected to facilitate regional movements of wildlife in a disproportionate way, as lands immediately east of the site consist of dense urban

development, including residential subdivisions and Highway 680, which serve as barriers to wildlife movement in an east-west direction. Open lands are far more prevalent to the north, west, and south. Therefore, wildlife in the region would be expected to move in a generally north-south direction west of the site, and animals moving through the site would be expected to disperse back in these general directions.

SPECIAL STATUS PLANTS AND ANIMALS

Several species of plants and animals within the state of California have low populations and/or limited distributions. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural, urban, and other uses. As described more fully in Section 4.4.2, state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as "threatened" or "endangered" under state and federal endangered species legislation. Others have been designated as candidates for such listing. Still others have been designated as "species of special concern" by the CDFW. The CDFW and California Native Plant Society (CNPS) have developed their own set of lists (i.e., California Rare Plant Ranks, or CRPR) of native plants considered rare, threatened, or endangered. Collectively, these plants and animals are referred to as "special status species."

A number of special status plants and animals occur in the vicinity of the project site. These species and their potential to occur in the project site compiled by LOA, are listed in Table 4.4-1 on the following pages. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988), *California Natural Diversity Data Bas*e (CDFW 2012), *Listed Plants and Listed Animals* (USFWS 2012), *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2011), and *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2012). This information was used to evaluate the potential for special status plant and animal species to occur on the project site. It is important to note that the California Natural Diversity Data Base (CNDDB) is a volunteer database; therefore, it may not contain all known or "gray" literature records.

A search of published accounts for all relevant special status plant and animal species was conducted by LOA ecologists for the Las Trampas Ridge and Diablo USGS 7.5" quadrangles in which the project site occurs and for the ten surrounding quadrangles (Briones Valley, Walnut Creek, Clayton, Antioch South, Tassajara, Livermore, Dublin, Hayward, San Leandro, and Oakland East) using the California Natural Diversity Data Base Rarefind (CDFW 2012). All species listed as occurring in these quadrangles on CRPR Lists 1A, 1B, 2, 3, or 4 were also reviewed.

TABLE 4.4-1 SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

Common and Scientific Names	Status	General Habitat Description	*Occurrence in the Study Area
Plants (adapted from CDFW 2011 and CNPS 2012) **Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts**			
Large-flowered fiddleneck *Amsinckia grandiflora*	FE, CE, CRPR 1B	Habitat: Cismontane woodland and valley and foothill grasslands. Elevation: 275-550 meters. Blooms: April–May.	**Absent.** While suitable habitat is present on the site, the nearest documented occurrences of this species are more than ten miles from the site and it was not found during focused surveys within the development footprint.
Palmate-bracted bird's-beak *Chloropyron palmatum*	FE, CE, CRPR 1B	Habitat: Alkaline soils of chenopod scrub and valley and foothill grasslands. Elevation: 5-155 meters. Blooms: May–October.	**Absent.** Alkaline soils are absent from the site.
Robust spineflower *Chorizanthe robusta* var. *robusta*	FE, CRPR 1B	Habitat: Maritime chaparral, openings of cismontane woodlands, coastal dunes, and coastal scrub in sandy or gravelly soils. Elevation: 3-300 meters. Blooms: April–September.	**Absent.** Sandy or gravelly soils are not present on the site. The nearest documented occurrences of this species are more than ten miles from the site. Focused surveys did not detect this species within the development footprint.
Santa Cruz tarplant *Holocarpha macradenia*	FT, CE, CRPR 1B	Habitat: Coastal prairie, coastal scrub, and valley and foothill grasslands, often on clay or sandy soils. Elevation: 10-220 meters. Blooms: June–October.	**Absent.** The site occurs too far inland (i.e., more than ten miles) of the known range of this species. Focused surveys did not detect this species within the development footprint.
Contra Costa goldfields *Lasthenia conjugens*	FE, CRPR 1B	Habitat: Alkaline soils in mesic valley and foothill grasslands and vernal pools. Elevation: 0-470 meters. Blooms: March–June.	**Absent.** Alkaline soils are absent from the site.
San Francisco popcorn-flower *Plagiobothrys diffusus*	CE, CRPR 1B	Habitat: Coastal prairie, valley and foothill grasslands. Elevation: 60-360 meters. Blooms: March–June.	**Absent.** This species historically occurs near the coast or in areas with marine influence. The nearest documented occurrence of this species is approximately ten miles west of the site. Focused surveys did not detect this species within the development footprint.
Rock sanicle *Sanicula saxatilis*	CR, CRPR 1B	Habitat: Rocky soils of broadleafed upland forest, chaparral, and valley and foothill grasslands. Elevation: 620-1175 meters. Blooms: April–May.	**Absent.** The site occurs at an elevation well below the known range for this species, and the site lacks rocky soils. The nearest documented occurrences of this species are on Mt. Diablo, more than six miles from the site.

TABLE 4.4-1, CONTINUED

Common and Scientific Names	Status	General Habitat Description	*Occurrence in the Study Area
Bent-flowered fiddleneck *Amsinckia lunaris*	CRPR 1B	Habitat: Coastal bluff scrub, cismontane woodland, and valley and foothill grasslands. Elevation: 3-500 meters. Blooms: March–June	**Absent.** Suitable habitat is present on the site, however, focused surveys did not detect this species within the development footprint.
Big-scale balsamroot *Balsamorhiza macrolepis* var. *macrolepis*	CRPR 1B	Habitat: Chaparral, cismontane woodland, and valley and foothill grassland sometimes on serpentine. Elevation: 90-1555 meters. Blooms: April–October.	**Absent.** While potentially suitable habitat is present on the site, the nearest documented occurrences of this species are more than ten miles from the site, and focused surveys did not detect this species within the development footprint.
Big tarplant *Blepharizonia plumose*	CRPR 1B	Habitat: Valley and foothill grassland. Elevation: 30-505 meters. Blooms: July–October.	**Absent.** While potentially suitable habitat is present on the site, focused surveys did not detect this species within the development footprint.
Round-leaved filaree *California macrophylla*	CRPR 1B	Habitat: Cismontane woodlands and valley and foothill grasslands on clay soils. Elevation: 15-1200 meters. Blooms: March–May.	**Absent.** While potentially suitable habitat is present on the site, focused surveys did not detect this species within the development footprint.
Mt. Diablo fairy lantern *Calochortus pulchellus*	CRPR 1B	Habitat: Chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland. Elevation: 30-840 meters. Blooms: April–June.	**Absent.** While potentially suitable habitat is present on the site, focused surveys did not detect this species within the development footprint.
Santa Clara red ribbons *Clarkia concinna* ssp. *automixa*	CRPR 4	Habitat: Chaparral and cismontane woodland. Elevation: 90-1500 meters. Blooms: April–July.	**Absent.** Habitat for this species is not present within the development area. The nearest documented occurrence of this species is from 1936 approximately ten miles west of the site.
Hoover's cryptantha *Cryptantha hooveri*	CRPR 1A	Habitat: Inland dunes and valley and foothill grasslands on sandy soils. Elevation: 9-150 meters. Blooms: April–May.	**Absent.** While potentially suitable habitat is present on the site, focused surveys did not detect this species within the development footprint.
Western leatherwood *Dirca occidentalis*	CRPR 1B	Habitat: Broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and mesic riparian woodlands. Elevation: 50-395 meters. Blooms: January–March.	**Absent.** Focused surveys did not detect this species within the development footprint. The nearest documented occurrences of this species are more than eight miles west of the site.

TABLE 4.4-1, CONTINUED

Common and Scientific Names	Status	General Habitat Description	*Occurrence in the Study Area
Mt. Diablo buckwheat *Eriogonum truncatum*	CRPR 1A	Habitat: Sandy soils of chaparral, coastal scrub, valley and foothill grassland. Elevation: 3-350 meters. Blooms: April–September.	**Absent.** While potentially suitable habitat is present on the site, focused surveys did not detect this species within the development footprint.
Fragrant fritillary *Fritillaria liliacea*	CRPR 1B	Habitat: Cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grasslands. Often occurs on serpentinite. Elevation: 3-410 meters. Blooms: February–April.	**Absent.** Focused surveys did not detect this species within the development footprint. Serpentine soils are absent from the site. The nearest documented occurrence of this species is more than five miles from the site.
Diablo helianthella *Helianthella castanea*	CRPR 1B	Habitat: Broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Elevation: 60-1300 meters. Blooms: March–June.	**Absent.** While potentially suitable habitat is present on the site, focused surveys did not detect this species within the development footprint.
Brewer's western flax *Hesperolinon breweri*	CRPR 1B	Habitat: Usually occurs on serpentine soils of chaparral, cismontane woodland, and valley and foothill grassland. Elevation: 30-900 meters. Blooms: May–July.	**Absent.** Serpentine soils are absent from the site. The nearest documented occurrences of this species are more than six miles from the site.
Loma Prieta hoita *Hoita strobilina*	CRPR 1B	Habitat: Chaparral, cismontane woodland, and riparian woodland. Usually occurs on serpentinitic or mesic soils. Elevation: 30-860 meters. Blooms: May–October.	**Absent.** The site does not support serpentine soils. The only documented occurrence in the region is from 1865.
Showy golden madia (*Madia radiata*)	CNPS 1B	Habitat: Cismontane woodland and valley and foothill grassland. Elevation: 25-900 meters. Blooms: March–May.	**Absent.** While potentially suitable habitat is present on the site, focused surveys did not detect this species within the development footprint.
Mt. Diablo cottonweed *Micropus amphiboles*	CRPR 3	Habitat: Broadleafed upland forest, chaparral, cismontane woodland, and valley and foothill grassland. Occurs on rocky soils. Elevation: 45-825 meters. Blooms: March–May.	**Absent.** Rocky soils do not occur on the site.

TABLE 4.4-1, CONTINUED

Common and Scientific Names	Status	General Habitat Description	*Occurrence in the Study Area
Robust monardella *Monardella villosa* ssp. *globosa*	CRPR 1B	Habitat: Broadleafed upland forest openings, chaparral openings, cismontane woodland, coastal scrub, and valley and foothill grasslands. Elevation: 100-915 meters. Blooms: June–July.	**Absent.** Focused surveys did not detect this species within the development footprint.
Mt. Diablo jewel-flower *Streptanthus hispidus*	CRPR 1B	Habitat: Chaparral and valley and foothill grassland on rocky soils. Elevation: 365-1200 meters. Blooms: March–June.	**Absent.** Rocky soils are absent from the site. Additionally, the site is situated at an elevation below those at which this species is known to occur.
Saline clover *Trifolium depauperatum* var. *hydrophilum*	CRPR 1B	Habitat: Marshes and swamps, valley and foothill grasslands on mesic or alkaline soils, and vernal pools. Elevation: 0-300 meters. Blooms: April–June.	**Absent.** Mesic, alkaline soils are absent from the site.
Oval-leaved viburnum *Viburnum ellipticum*	CRPR 2	Habitat: Chaparral, cismontane woodland, and lower montane coniferous forest. Elevation: 215-1400 meters. Blooms: May–June.	**Absent.** While potentially suitable habitat is present on the site, focused surveys did not detect this species within the development footprint.
Animals (adapted from CDFW 2011 and USFWS 2012) Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts			
Vernal pool fairy shrimp *Branchinecta lynchi*	FT	Vernal pools of California's Central Valley.	**Absent**. Vernal pools are absent from the site. The stock ponds are inundated for a duration longer than what is suitable for this species. The nearest documented occurrences of this species are more than 14 miles northeast of the site.
Vernal pool tadpole shrimp *Lepidurus packardi*	FE	Deep vernal pools containing clear to highly turbid water in unplowed grasslands of the Central Valley.	**Absent**. Vernal pools are absent from the site. The onsite stock ponds are inundated for a duration longer than what is suitable for this species. The nearest documented occurrence of this species is more than 14 miles northeast of the site.

TABLE 4.4-1, CONTINUED

Common and Scientific Names	Status	General Habitat Description	*Occurrence in the Study Area
California tiger salamander (*Ambystoma californiense*)	FT, CT	Breeds in vernal pools and stock ponds of central California. Adults aestivate in grassland habitats adjacent to the breeding sites.	**Unlikely.** The stock ponds are inundated for a duration suitable for this species, and aestivation habitat in the form of small mammal burrows is present on the site. However, no CTS larvae were observed in either pond. The nearest documented occurrence of this species was from 1952, approximately one mile north of the site, and is considered extirpated. There are no records of CTS from the hills to the west of Danville despite larval surveys by a number of environmental consulting firms (Jennings 2011). The site is not located within critical habitat designated by the USFWS for CTS.
California red-legged frog *Rana draytonii*	FT, CSC	Rivers, creeks and stock ponds of the Sierra foothills and coast range, preferring pools with overhanging vegetation.	**Present.** The two onsite ponds provide suitable breeding habitat for CRLF, and the surrounding uplands provide dispersal habitat during the wet winter and spring months. A breeding population of CRLF was observed in the upper pond by Dr. Jennings during the August 2011 survey. No CRLF were observed in the lower pond. The site does not occur within critical habitat designated by the USFWS for this species.
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	FT, CT	Ranges from the inner coast range in western and central Contra Costa and Alameda counties. Typically occurs in chaparral and scrub habitats with rock outcrops and talus pilings. Also occurs in scrub communities, grasslands, oak, and oak/bay woodlands.	**Possible.** The riparian woodlands and coyote brush scrub occurring onsite provide suitable habitat for this species. The proposed development footprint provides poor habitat for this species. The site is located within critical habitat designated by the USFWS for this species.
Bald eagle (*Haliaeetus leucocephalus*)	CE	Nests in the upper canopy of large trees, especially conifers, near lakes, reservoirs, and rivers.	**Absent.** The site provides neither breeding nor foraging habitat for this species.
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, CT	Frequents annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loosetextured sandy soils for burrowing and suitable prey base. Utilizes enlarged (4 to 10 inches in diameter) ground squirrel burrows as denning habitat. May forage in adjacent agricultural habitats.	**Absent.** Marginal denning and foraging habitat for the San Joaquin kit fox is present on the site. There have been two documented occurrences of this species within ten miles of the site since 1975. The nearest observation of this species was documented approximately four miles east of the project site in 1990. No occurrences have been documented west of Highway 680. While open space is abundant, particularly to the west and south, lands immediately east of the site have been modestly developed. Therefore, kit foxes are presumed absent from the project site, as it is a few miles west of the nearest sighting and is considered outside its historic and existing range.
Foothill yellow-legged frog (*Rana boylii*)	CSC	Frequents partly shaded, shallow, swiftly-flowing streams and riffles with rocky substrate in a variety of habitats.	**Unlikely.** The drainages on the site provide marginal to poor habitat for this species. The nearest documented occurrences of this species are more than nine miles from the site.

TABLE 4.4-1, CONTINUED

Common and Scientific Names	Status	General Habitat Description	*Occurrence in the Study Area
Western pond turtle (*Actinemys marmorata*)	CSC	An aquatic turtle of ponds, marshes, slow-moving rivers, streams and irrigation ditches with aquatic vegetation. Needs basking sites and sandy banks or grassy open fields for egg laying.	**Possible.** The stock ponds and nearby woodland habitat provide suitable habitat for this species. This species would not be expected to utilize grasslands onsite for nesting due to the lack of nearby south-facing slopes with clay soils on the property. The nearest documented occurrence of this species is approximately three miles southeast of the site.
Silvery legless lizard (*Anniella pulchra pulchra*)	CSC	Sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	**Unlikely.** Sandy washes preferred by this species are absent from onsite drainages. The nearest documented occurrence of this species is more than thirteen miles northeast of the site.
Coast horned lizard (*Phrynosoma blainvillii*)	CSC	Grasslands, scrublands, oak woodlands, etc. of central California. Common in sandy washes with scattered shrubs.	**Unlikely.** The site provides marginal to poor habitat for this species. The nearest documented occurrence of this species is more than seven miles northeast of the site.
White-tailed kite (*Elanus leucurus*)	CP	Open grasslands and agricultural areas throughout central California.	**Possible.** Potentially suitable breeding and foraging habitat for this species is present on the site.
Northern harrier (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; uncommon in wooded habitats.	**Possible.** Potentially suitable breeding and foraging habitat for this species is present on the site.
Golden eagle (*Aquila chrysaetos*)	CP	Typically frequents rolling foothills, mountain areas, woodland areas, sagejuniper flats, and desert habitats.	**Possible.** While large trees on the site provide breeding habitat for this species, field surveys conducted in 2011 and 2012 did not detect golden eagle nests on the site. Foraging habitat is also present on the site. Golden eagles are known to occupy a nest site in Dublin approximately nine miles east of the site.
Burrowing owl (*Athene cunicularia*)	CSC	Open, dry grasslands, deserts and ruderal areas. Requires suitable burrows. Often associated with California ground squirrels.	**Possible.** No burrowing owls have been documented within three miles of the site. However, ground squirrel burrows that serve as potential nests for burrowing owls are distributed throughout the grasslands occurring onsite, including within the development footprint. Therefore, the site provides suitable foraging and breeding habitat for this species.
Yellow warbler (*Dendroica petechia brewsteri*)	CSC	Nests in riparian thickets, especially in willows. Also frequents shrubby areas and old fields.	**Possible.** Potentially suitable breeding and foraging habitat for this species is present on the site.
Tricolored blackbird (*Agelaius tricolor*)	CSC	Breeds near fresh water, primarily emergent wetlands, with tall thickets. Forages in grassland and cropland habitats.	**Unlikely.** Breeding habitat is absent from the site. Marginal foraging habitat is present on the site. The nearest documented occurrences of this species are more than five miles southeast of the site.
Townsend's big-eared bat (*Plecotus townsendii townsendii*)	CSC	Primarily a cave-dwelling bat that may also roost in buildings. Occurs in a variety of habitats of the state.	**Possible.** Foraging habitat is present on the site. Structures on the site do not provide suitable roosting habitat for this species.

TABLE 4.4-1, CONTINUED

Common and Scientific Names	Status	General Habitat Description	*Occurrence in the Study Area
Pallid bat (*Antrozous pallidus*)	CSC	Grasslands, chaparral, woodlands, and forests of California; most common in dry rocky open areas that provide roosting opportunities.	**Possible.** Foraging habitat is present on the site. Suitable roosting habitat is absent.
Western red bat (*Lasiurus blossevillii*)	CSC	Roosts primarily in trees. Prefers habitat edges and mosaics with trees.	**Possible.** Foraging habitat is present in the site. Trees on the site do notcomprise a mosaic that would be usedby this species for roosting.
Western mastiff bat (*Eumops perotis californicus*)	CSC	Forages over many habitats. Requires tall cliffs or buildings for roosting.	**Possible.** Foraging habitat is present on the site. Structures on the site do not provide suitable roosting habitat for this species
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)	CSC	Hardwood forests, oak riparian and shrub habitats.	**Unlikely.** The riparian woodlands provide potentially suitable habitat for this species. However, no woodrat nests were observed, and the nearest documented occurrence of this species is more than seven miles from the site.
American badger (*Taxidea taxus*)	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils.	**Possible.** This species may occupy existing burrows or establish new burrows on the site.
Ringtail (*Bassariscus astutus*)	CP	Rocky or talus slopes in semi-arid or riparian habitats.	**Unlikely.** Suitable habitat is restricted to the riparian woodlands onsite, which are of marginal quality for this species.

***Explanation of Occurrence Designations and Status Codes**

Present: Species observed on the sites at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the sites, but it could occur there from time to time.
Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.
Absent: Species not observed on the sites, and precluded from occurring there because habitat requirements not met.

Status Codes

FE - Federally Endangered	CE - California Endangered
FT - Federally Threatened	CT - California Threatened
FPE - Federally Endangered (Proposed)	CR - California Rare
FC - Federal Candidate	CSC - California Species of Special Concern

TABLE 4.4-1, CONTINUED

CRPR – California Rare Plant Rank	
1A – Plants Presumed Extinct in California 1B – Plants Rare, Threatened, or Endangered in California and elsewhere 2 - Plants Rare, Threatened, or Endangered in California, but more common elsewhere	3 – Plants about which we need more information – a review list 4 – Plants of limited distribution – a watch list
Source: Live Oak Associates, *Podva Property Biological Evaluation, Town of Danville, California*, June 21, 2012.	

Endangered, Threatened, or Special Status Plant and Animal Species Meriting Further Discussion

California Tiger Salamander (*Ambystoma californiense*). Federal Listing Status: Threatened; State Listing Status: Threatened

The USFWS listed the California tiger salamander (CTS) as threatened on August 4, 2004 (69 Fed. Reg. 47212-47248). The California Department of Fish and Wildlife has designated this species as threatened and as a species of special concern.

Potential to Occur on the Project Site

Potentially suitable breeding habitat is present in the form of the two onsite ponds, and suitable aestivation habitat in the form of small burrows is present near both of these features. However, Dr. Mark Jennings of LOA visited the site on August 1, 2011, in order to evaluate the potential for CTS habitat onsite; he concluded that the site does not support suitable habitat for CTS. The local population for the western portion of Danville is extinct due to development of the Town of Danville. Although the site itself was not surveyed for CTS, the hills to the west of Danville have been previously surveyed numerous times for CTS larvae by many consulting firms, and no CTS have been observed during these surveys. CTS larvae were not observed in either onsite pond, although California newt larvae was observed.

The closest known CNDDB record for CTS is in Danville, approximately one mile north of the project site. The records are two museum specimens (CAS 84944-84945) that were collected on July 8, 1952. There is no more specific locality information, and it would appear that this population is now extinct due to extensive urban development of the San Ramon Valley within the Town of Danville during the past sixty years. The next closest records are more than six miles to the southwest. There are extensive roads and urbanization between these sites and the project site. Thus, there is no chance that CTS could colonize the project site from the other side of the valley. The site is not located within critical habitat designated by the USFWS for CTS.

In summary, while potentially suitable breeding and aestivation habitat is present on the site, it is unlikely that CTS are present and breeding in the area. The development envelope does not support suitable habitat for CTS.

California Red-Legged Frog (*Rana draytonii*). Federal Listing Status: Threatened; State Listing Status: Species of Special Concern

The California red-legged frog (*Rana draytonii*) was listed as threatened by the U.S. Fish and Wildlife Service under the authority of the Federal Endangered Species Act on May 23, 1996. The species had been extirpated from 70 percent of its historic range, and remaining populations are currently threatened by a wide variety of human impacts (66 FR 14626).

Potential to Occur on the Project Site

Although protocol-level California red-legged frog (CRLF) surveys were not conducted, Dr. Mark Jennings of LOA visited the site on August 1, 2011, in order to evaluate the potential for CRLF habitat onsite; he concluded that the site supports breeding and upland habitat for CRLF. During his site visit, Dr. Jennings observed a breeding population in the upper pond including eight juvenile and four adult CRLF during afternoon daylight hours; suitable emergent vegetation around the large pond may have supported many more individuals at the time of the site visit. In addition, the upland habitat surrounding the two ponds and the nearby drainages to the west and south of the ponds may be suitable for CRLF.

CRLF movement to the east within the two incised drainages on the property moving off of the site is unlikely due to the existing residential development and predators they would encounter. CRLF are also unlikely to occur on the flat portion of the site within the development envelope due to the presence of mammalian predators and wild turkeys, which are known to kill CRLF.

Western Pond Turtle (*Actinemys marmorata*). Federal Listing Status: None; State Listing Status: Species of Special Concern

Potential to Occur on the Project Site

Western pond turtles (WPT) were not observed on the site during any of the field surveys. The closest known CNDDB record is approximately three miles southwest of the site in a tributary of Crow Creek. However, western pond turtles are common in riparian habitats in the overall Danville area. Dr. Mark Jennings of LOA visited the site on August 1, 2011, in order to evaluate the potential for WPT habitat onsite. However, he concluded that the site supports WPT habitat for feeding, growing, and basking in the form of the two onsite ponds and that nesting may occur onsite; however, potential egg laying habitat is poor onsite due to a lack of south-facing slopes with clay soils near the two onsite ponds. He also concluded that although WPT may use duff and leaf litter of the riparian areas of the site for aestivation and hibernation, they would be likely to move overland to more suitable ponds and steams to the west, south, and north of the site for aestivation and hibernation.

The two ponds and adjacent uplands onsite provide suitable feeding, growing, and basking habitat and marginal nesting and aestivation/hibernation habitat for this species. The flat area of the grasslands within the development envelope is not suitable for any life stage of the WPT.

Alameda Whipsnake (*Masticophis lateralis euryxanthus*). Federal Listing Status: Threatened; State Listing Status: Threatened

The Alameda whipsnake [("Alameda striped racer") (*Masticophis lateralis euryxanthus*)] was listed as Threatened by the State of California in 1971. On December 5, 1997 the USFWS listed the Alameda whipsnake as Threatened under the authority of the Federal Endangered Species Act. The critical habitat designation for the subspecies was completed by USFWS on October 3, 2000 (50 CFR 17 58933-58962).

Potential to Occur on the Project Site

Alameda whipsnakes (AWS) were not observed on the site during any of the field surveys. However, the site is within USFWS-designated critical habitat for the Alameda whipsnake. The nearest CNDDB record is approximately 3.5 miles to the northwest of the site in the adjacent hills. Dr. Mark Jennings of LOA visited the site on August 1, 2011, in order to evaluate the potential for AWS habitat onsite. He concluded that the site supports AWS habitat in the form of the riparian woodlands and scrub areas of coyote brush onsite, and would also be able to forage in the adjacent grassland. However, he did not observe any suitable rock piles that may be used as a hibernaculum, although they may occur on adjacent properties.

Although the AWS may cross grassland areas adjacent to the riparian woodland and scrub habitats, the flat area of the development envelope is not suitable habitat due to the presence of domestic cats and wild turkeys, which are known to kill snakes.

JURISDICTIONAL WATERS

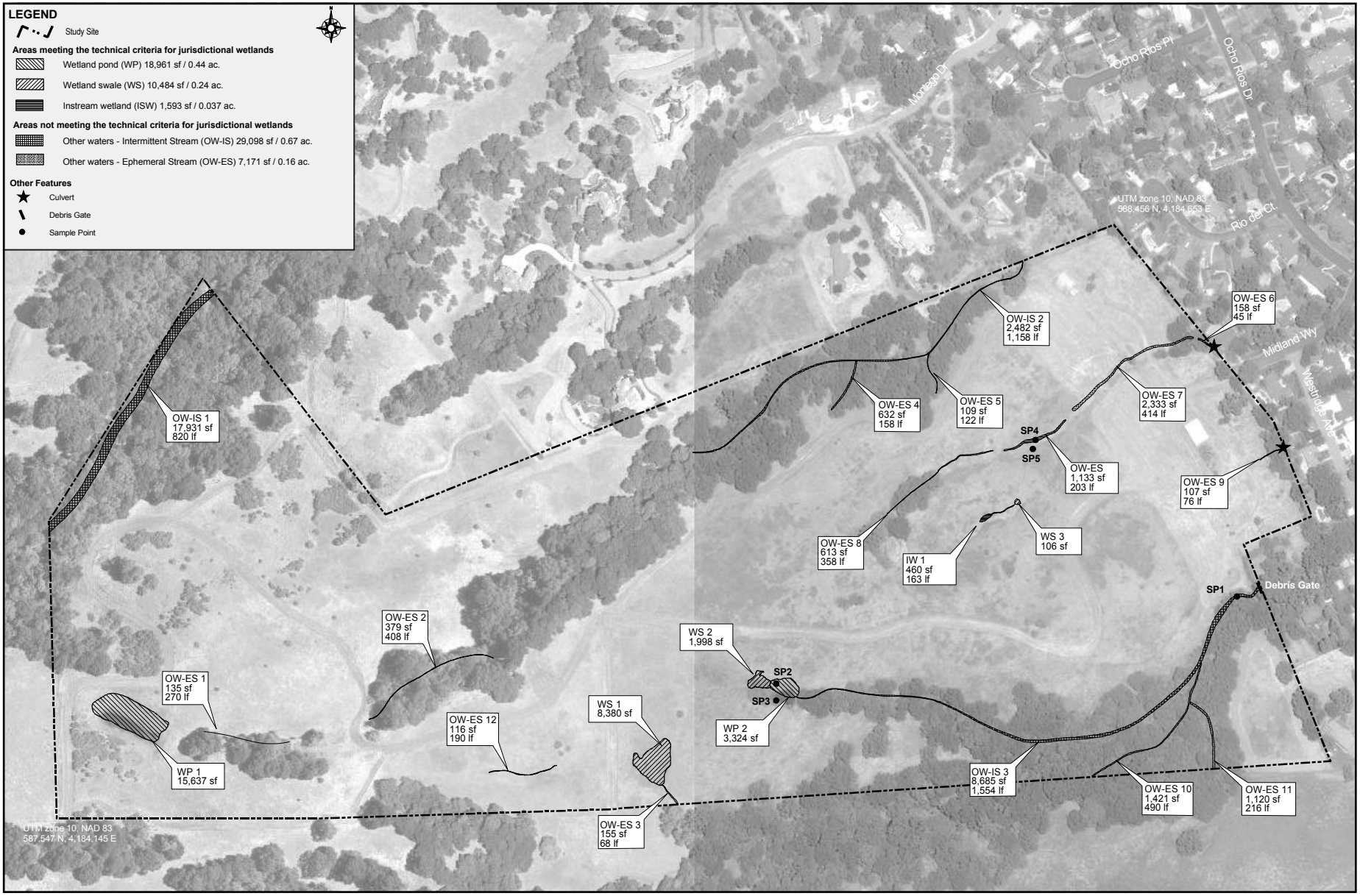
Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Wildlife (CDFW), and the California Regional Water Quality Control Board (RWQCB). Refer to Section 4.4.2 for additional information. The limit of USACE jurisdiction, as well as that of the RWQCB, over the seasonal drainages determined to be jurisdictional tributary waters is the ordinary high water mark. These features would also likely be subject to the jurisdiction of the CDFW up to the top of bank or the edge of associated riparian vegetation, whichever is greater. The reach and extent of Clean Water Act jurisdiction over aquatic features has been the subject of several recent US Supreme Court decisions *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC Decision) and *Rapanos v. United States and Carabell v. U.S. Army Corps of Engineers* (referred together as the Rapanos decision), which are described in greater detail in Section 4.4.2.

LOA completed a formal wetland delineation and waters of the U.S. analysis for the Project site on August 1, 2011 (Appendix B). The jurisdictional determination for the site was issued by the USACE on February 22, 2013. The USACE determined that jurisdictional waters are present on the site in the form of intermittent and ephemeral drainages, two wetland ponds, and seasonal wetland swales; refer to Figure 4.4-2 (Podva Property Potential Waters of the US) and Table 4.4-2 (Potential Waters of the US on the Podva Property).

TABLE 4.4-2 POTENTIAL WATERS OF THE US ON THE PODVA PROPERTY

Feature	Area (square feet)	Area (acres)
Areas meeting the technical criteria of wetlands		
Instream wetland	1,593	0.037
Wetland pond	18,961	0.44
Wetland swale	10,484	0.24
Subtotal	*31,038*	*0.71*
Areas not meeting the technical criteria of wetlands		
Intermittent stream	29,098	0.67
Ephemeral stream	7,171	0.16
Subtotal	*36,269*	*0.83*
Total	**67,307**	**1.55**

Based on the *Rapanos* guidance, all of the channels on the project site (as depicted in Figure 4.4-2) are non-relatively permanent tributaries and are jurisdictional in that they are either tributaries of San Ramon Creek, a known water of the U.S., or satisfy the "significant nexus" test set forth by the *Rapanos* decision (described in greater detail below under Section 4.4.2). Although they convey water intermittently or ephemerally, these non-relatively permanent tributary channels drain the San Ramon Creek watershed.



Source: Live Oak Associates, Inc. (2013)

RBF A Baker Company

North

PODVA PROPERTY POTENTIAL WATERS OF THE US

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

10/2013 JN 40-100432

FIGURE 4.4-2

Sufficient evidence exists for all of these channels to support a determination that a hydrologic connection exists between these lower order tributaries and presumed waters of the U.S. The limit of USACE jurisdiction, as well as that of the RWQCB, over these channels is the ordinary high water mark. These features would also likely be subject to the jurisdiction of the CDFW up to the top of bank or the edge of associated riparian vegetation, whichever is greater.

The USACE also has regulatory authority over the wetland swales and both wetland ponds, as these features either abut or are adjacent to the onsite channels (refer to Figure 4.4-2) or appear to have historically been part of an onsite channel system.

TREES

HortScience, Inc. (HortScience) prepared a preliminary arborist report for the proposed project (*Arborist Report, Podva Property, Danville, CA*) dated October 14, 2013. The report provides an assessment of the trees growing within and adjacent to the proposed project area, as well as additional information regarding potential project impacts on the trees, appraised value of trees classified as "Protected" or "Heritage" by the Town of Danville, and guidelines for tree preservation during construction.

According to the report, 53 trees on the project site meet the Town of Danville Tree Preservation ordinance (Municipal Code 32-79) requirements definition of a tree. . HortScience assessed these 53 trees for health and suitability for preservation. The Valley oak, with 34 trees or 64 percent of the population, was the most common species assessed. Valley oaks were in primarily in good to fair condition with two trees assessed as in poor condition, 15 in fair condition, and 17 in good condition. The Coast live oak, with 12 trees (23 percent of the population) was the second most commonly encountered species. Seven were in fair condition and five were in good condition. The remaining four species were represented by three or fewer individuals: Arroyo willow (three trees in poor condition), California black walnut (one tree in fair condition and one tree in good condition), Italian buckthorn (one tree in fair condition), and Siberian elm (one tree in fair condition). Table 4.4-3 (Condition Ratings and Occurrence of Trees, Podva Property) lists the assessed trees and their condition rating. Thus, based on the assessment, 23 trees are in good condition, 25 are in fair condition, and five are in poor condition. The Town of Danville defines the list of native tree species contained within the Tree Preservation Ordinance, with a diameter of ten inches or greater, as "Protected," and all trees with a diameter of 36 inches or greater as "Heritage." Based on this definition there was a total of 27 "Protected" trees and four "Heritage" trees.

TABLE 4.4-3 CONDITION RATINGS AND OCCURRENCE OF TREES, PODVA PROPERTY

Common Name	Scientific Name	Condition Rating			Number of Trees
		Poor (1-2)	Fair (3)	Good (4-5)	
California black walnut	*Juglans hindsii*	-	1	1	2
Coast live oak	*Quercus agrifolia*	-	7	5	12
Valley oak	*Quercus lobata*	2	15	17	34
Italian buckthorn	*Ramnus alaternus*	-	1	-	1
Arroyo willow	*Salix lasiolepis*	3	-	-	3
Siberian elm	*Ulmus pumila*	-	1	-	1
Total		**5**	**25**	**23**	**53**

Source: HortScience, 2013.

4.4.2 REGULATORY SETTING

FEDERAL FRAMEWORK

U.S. Fish and Wildlife Service

USFWS has jurisdiction over species that are formally listed as threatened or endangered under the federal Endangered Species Act (ESA) which protects listed species from harm or "take." The term "take" 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 is defined as a "take" even if it is unintentional or accidental. An endangered plant or wildlife species is one that is considered 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. In addition to endangered and threatened species, which are legally protected under the federal ESA, USFWS maintains a list of proposed and candidate species. Proposed species are those for which a proposed ruling to list them as endangered or threatened has been published in the Federal Record. A candidate species is one for which the USFWS currently has enough information to support a proposal to list it as a threatened or endangered species. These latter species are not afforded legal protection under the federal ESA. However, project-related impacts to federally-listed, proposed and candidate species or their habitats are considered "significant" under the State CEQA Guidelines.

United States Army Corps of Engineers

Areas meeting the regulatory definition of "Waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE) under provisions of Section 404 of the Clean Water Act (CWA 1972) and Section 10 of the Rivers and Harbors Act (1899). The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts.

Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands:
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As recently determined by the United States Supreme Court in the SWANCC decision, channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. However, the Rapanos decision imposes a "significant nexus" test for federal jurisdiction over wetlands. In June 2007, the USACE and EPA established guidelines for applying the significant nexus standard. This standard includes 1) a case-by-case analysis of the flow characteristics and functions of the tributary or wetland to determine if they significantly affect the chemical, physical, and biological integrity of downstream navigable waters and 2) consideration of hydrologic and ecologic factors (EPA and USACE 2007). The USACE regulates the filling or grading of such waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by "ordinary high water marks" on opposing channel banks. Wetlands are habitats with soils that are intermittently or permanently saturated, or inundated. The

resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytic vegetation, hydric soils (soils saturated intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987).

All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE (Wetland Training Institute, Inc. 1991). Such permits are typically issued on the condition that the applicant agrees to provide mitigation that results in no net loss of wetland functions or values. No permit can be issued until the RWQCB issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards. The filling of isolated wetlands, over which the USACE has disclaimed jurisdiction under the SWANCC decision, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System.

As described above under Section 4.4.1, LOA completed a formal wetland delineation and waters of the U.S. analysis for the Project site on August 1, 2011. The jurisdictional determination for the site was issued by the USACE on February 22, 2013. The USACE determined that jurisdictional waters are present on the site in the form of intermittent and ephemeral drainages, two wetland ponds, and seasonal wetland swales; refer to Figure 4.4-2 (Podva Property Potential Waters of the US) and Table 4.4-2 (Potential Waters of the US on the Podva Property).

STATE FRAMEWORK

California Department of Fish and Wildlife

CDFW has jurisdiction over endangered, threatened, or rare ("rare" applies only to plants) species that are formally listed under the California ESA, which is similar to the federal ESA in that it prohibits the "take" of these state listed or proposed species. A difference between the federal and state acts is that candidate species are protected under the California ESA. The California ESA does not supersede the federal ESA but operates in conjunction with it. Species may be listed under both acts (in which case the provisions of both state and federal laws would apply) or under only one act.

The CDFW also maintains informal lists of "species of special concern." These species are broadly defined as plants and wildlife that are of concern to CDFW because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California. Project-related impacts to state listed species and species of special concern are considered "significant" under the CEQA Guidelines.

In addition, CDFW has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1601 and 1602 of the California Fish and Wildlife Code (2003). Activities that would disturb these drainages are regulated by the CDFW via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

As noted above and under Section 4.4.1, LOA completed a formal wetland delineation and waters of the U.S. analysis for the Project site on August 1, 2011. The jurisdictional determination for the site was issued by the USACE on February 22, 2013. The USACE determined that jurisdictional waters are present on the site in the form of intermittent and ephemeral drainages, two wetland ponds, and seasonal wetland swales; refer to Figure 4.4-2 (Podva Property Potential Waters of the US) and Table 4.4-2 (Potential Waters of the US on the Podva Property).Only the USACE can ultimately determine if a given channel, pond, or other aquatic resource would be considered a water of the US. These features may also be considered jurisdictional by the RWQCB and the CDFW.

California Environmental Quality Act Guidelines Section 15380

Although threatened and endangered species are protected by specific federal and state statutes, State CEQA Guidelines Section 15380(b) provides that a species which is not federally or state listed may be considered rare or endangered if the species can be shown to meet certain criteria. These criteria have been modeled after the definitions in the federal ESA and the California Fish and Wildlife Code dealing with rare or endangered species. State CEQA Guidelines Section 15380(b) addresses situations in which a public agency is reviewing a project that may have a significant effect on a species that has not yet been listed by either the USFWS or CDFW. Thus, CEQA provides a lead agency with the ability to protect a species from a project's potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

California Native Plant Society

CNPS, a non-governmental conservation organization, has developed lists of plants of special concern in California, as follows:

- List 1A plant – A species, subspecies, or variety that is considered to be extinct
- List 1B plant – Considered rare, threatened, or endangered in California and elsewhere
- List 2 plant – Considered rare, threatened, or endangered in California but is more common elsewhere
- List 3 plant – A species for which necessary information is lacking to determine if it should be assigned to a list
- List 4 plant – Of limited distribution in California

All of the plant species on List 1 and List 2 meet the requirements of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the Fish and Wildlife Code, and are eligible for state listing. Therefore, plants appearing on Lists 1 or 2 are considered to meet State CEQA Guidelines Section 15380 criteria and effects to these species are considered "significant" in this document.

State Regional Water Quality Control Board

Pursuant to Section 401 of the CWA, projects that apply for a USACE permit for discharge of dredge or fill material into waters of the U.S. or the state must also obtain water quality certification from the RWQCB. This certification ensures that the project will uphold state water quality standards. Alternatively, the RWQCB may elect to notify a project sponsor that the state may issue Waste Discharge Requirements in lieu of a Section 401 certification for a project. Only the USACE can ultimately determine if a given channel, pond, or other aquatic resource would be considered a water of the US. If the USACE disclaims jurisdiction over the delineated features, they may still be considered jurisdictional by the RWQCB and the CDFW.

As noted above and under Section 4.4.1, LOA completed a formal wetland delineation and waters of the U.S. analysis for the Project site on August 1, 2011. The report was submitted to the USACE, for review and concurrence with the wetland mapping. The USACE provided a letter, dated February 22, 2013 stating that the USACE concurred with wetland delineation in the LOA report. Both the USACE letter and LOA Wetland Delineation and are included in Appendices B.2 and B.3, respectively.

TOWN OF DANVILLE

2030 General Plan

The Resources and Hazards Element of the Town of Danville 2030 General Plan outlines the following relevant goals and policies to protect and enhance biological resources:

Goal 21: Protect and enhance Danville's natural features, including its hillsides, ridgelines, creeks, vegetation, and wildlife.

Policy 21.01 Preserve and enhance natural habitat areas that support wildlife, including large continuous areas of open space and wetland and riparian habitat.

Policy 21.02 Maintain open space in appropriate areas, including areas of scenic beauty, areas of economically viable agriculture, and areas where natural hazards such as flooding and land stability preclude safe development.

Policy 21.06 Discourage activities that would harm the health of existing trees. Prevent the unnecessary removal and alteration of trees, including "protected" trees as defined by the Town's Tree Preservation Ordinance and other trees that contribute to the scenic beauty of the Town. Public and private improvements should be designed to avoid removal of trees of any type. If removal is necessary, trees should be replaced with an appropriate number and species.

Policy 21.08 Where appropriate, encourage the retention and reestablishment of native vegetation in private development and public facility projects.

Goal 23: Promote intergovernmental coordination and cooperation to protect environmental quality.

Policy 23.02 Work with other communities and agencies to protect and enhance the significant ecological communities of the Tri-Valley area, including wetlands, riparian areas, and oak woodlands.

Policy 23.03 Promote a subregional approach to protecting sustainable habitat areas, through mitigation banking and other means.

Implementation Strategy, B. Natural Resources

Creek Protection Program (Proposed Action): Additional measures to conserve the Town's creeks should be pursued. Such measures could include additional coordination with the County regarding the design of flood control projects, requirements for easement dedication or setbacks along creeks, design guidelines for creek-front properties, neighborhood creek "clean-ups", development of creek trails where feasible, and applications for creek restoration grants.

Municipal Code

Tree Preservation Ordinance

The Town recognizes the importance of existing beautiful trees in its Tree Preservation Ordinance. The "Purpose and Intent" section of the Ordinance states that the preservation of native and non-native trees that are of great beauty and significance enhances the natural beauty, sustains the long term potential increase in property values which encourages quality development, maintains the natural ecology, retains the tempering effect of extreme

temperatures, helps to create and retain the identity and quality of the Town which is necessary for successful business to continue, improves the attractiveness of the Town to residents and visitors, prevents the erosion of top soil, provides protection against flood hazards and risk of landslide, and increases the oxygen output of the area which is needed to combat air pollution (Tree Preservation Ordinance § 32-79.1).

The Tree Preservation Ordinance upholds these values by defining "protected trees" including "heritage trees," and generally prohibiting removal of such trees unless the Town issues a Tree Removal Permit. The Town considers the following five criteria when deciding whether to issue such permit (Tree Preservation Ordinance § 32.79.6):

1. The condition of the tree(s) with respect to its health, imminent danger of falling, proximity to existing structures, and interference with utility infrastructure.

2. The necessity to remove the tree(s) to allow for the reasonable use, enjoyment, or development of the property.

3. The age and/or size of the protected tree with regard to the appropriateness of the size of the area in which the tree is planted and whether its removal would encourage healthier, more vigorous growth of other plant material.

4. If none of the above criteria are satisfied, the Planning Commission may authorize removal if it finds that, due to the location of the tree on the property and its orientation related to the residence on the property and/or actively used yard area, the tree is unreasonably adversely impacting the property owner's enjoyment and/or use of the property. In this case, mitigation tree replacement plantings may be required as found appropriate by the Planning Commission.

5. The effect of the removal of the tree upon soil erosion or whether its removal will result in a significant diversion or increase in the flow of surface water.

6. The number, species, size and location of other protected trees in the area and the effect the removal of the tree(s) will have upon shade, privacy between properties, and scenic beauty of the area.

7. Possible visual impacts within a Town-identified Major Ridgeline or Scenic Hillside Area created as a result of the tree removal.

OTHER STATUTES, CODES, AND POLICIES AFFORDING LIMITED SPECIES PROTECTION

The federal Migratory Bird Treaty Act (16 U.S.C., Sect. 703, Supp. I, 1989) (MBTA) prohibits killing, possessing, or trading migratory birds, except in accordance with regulations prescribed by the U.S. Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

The federal Bald and Golden Eagle Protection Act prohibits persons within the U.S. (or places subject to U.S. jurisdiction) from "possessing, selling, purchasing, offering to sell, transporting, exporting or importing any bald eagle or any golden eagle, alive or dead, or any part, nest, or egg thereof."

Birds of prey (hawks, eagles, falcons and owls) are protected in California under Fish and Wildlife Code Section 3503.5. This section states that it is "unlawful to take, possess, or destroy any birds in the Falconiformes or Strigiformes (birds of prey) to take, possess, or destroy the nest or eggs of any such bird, except as otherwise provided by this code or any regulation adopted pursuant thereto." Disturbance that causes nest abandonment

and/or loss of reproductive activity is considered "taking" by the CDFW and would constitute a significant impact on biological resources.

4.4.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the CEQA Guidelines, the Podva Property Residential Development would have a significant impact on biological resources if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or U.S. Fish and Wildlife Service (USFWS);
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by CDFW or USFWS;
- Have a substantial adverse effect on federally protected "wetlands" or "Waters of the U.S." as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; and/or,
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Loss of Habitat for Special Status Plants

Impact 4.4-1: Project implementation could result in the loss of habitat for special status plants.

Determination: No Impact.

Grasslands and some riparian habitat present within the development footprint provide potentially suitable habitat for several special status plant species (Table 4.4-1). Therefore, four focused surveys that were timed to coincide with the blooming periods of all potentially occurring rare plant species were conducted by LOA ecologists within the development footprint on June 20 and September 12, 2011 and on March 12 and April 30, 2012 (see Appendix B). No special status plant species were found to be present within the development footprint; therefore, the project would not result in any impacts on special status plants.

MITIGATION MEASURES

None required.

Loss of Habitat for Special Status Animals

Impact 4.4-2: Project implementation could result in the loss of habitat for special status animals.

Determination: Less Than Significant Impact with Mitigation Incorporation.

Twenty-four special status animal species occur, or once occurred, regionally (Table 4.4-1). With the exception of the California red-legged frog, western pond turtle, Alameda whipsnake, white-tailed kite, northern harrier, golden eagle, burrowing owl, yellow warbler, Townsend's big-eared bat, pallid bat, western red bat, western mastiff bat, and American badger, all of these species would be absent from or unlikely to occur on the site due to unsuitable habitat conditions. While suitable habitat conditions are present on the site for California tiger salamander, based on focused surveys conducted at the project site on August 1, 2011 by an LOA herpetologist for this species, the California tiger salamander would also be unlikely to occur on the project site. Proposed development activities would have no effect on these species because there is little or no likelihood that they are present.

The white-tailed kite, northern harrier, golden eagle, yellow warbler, Townsend's big-eared bat, pallid bat, western red bat, and western mastiff bat may occur more frequently as regular foragers or may be resident on the site. These species either occur on the site incidental to home range and migratory movements, thus using the site infrequently, or may forage on the site year-round or during migration. Project buildout would have a minimal effect on the breeding success of these species and would, at most, result in a relatively small reduction of foraging and/or roosting habitat that is abundantly available regionally. Therefore, the loss of habitat for these species would be considered less than significant.

The remaining five species—the California red-legged frog, western pond turtle, Alameda whipsnake, burrowing owl, and American badger—may occur on the site more frequently. Construction activities may result in some habitat loss or mortality to individuals of these species, which would be considered significant (see Impact discussions 4.4-3, 4.4-.4, 4.4-5, 4.4-.7, and 4.4-8 below).

MITIGATION MEASURES

Mitigation measures for impacts on the California red-legged frog, western pond turtle, burrowing owl, and American badger are discussed in sections 4.4-3, 4.4-.4, 4.4-5, 4.4-.7, and 4.4-8, respectively. For the remaining species discussed above, mitigation measures are not required.

Impacts on California Red-Legged Frogs

Impact 4.4-3: Project implementation could result in the loss of California red-legged frog habitat and could result in California red-legged frog mortality.

Determination: Less than Significant Impact with Mitigation Incorporation.

Impacts on jurisdictional waters. CRLF are known to breed in the upper pond onsite and possibly breeds in the lower pond as well. The proposed project would not result in the loss of CRLF breeding habitat because these ponds occur well outside of the development envelope. The ponds and the upland habitat around them would be preserved by the project.

The proposed project would result in the permanent loss of approximately 300 linear ft. and 0.03 acres of jurisdictional waters at the eastern end of the site. These features consist of ephemeral drainages in the upland

habitats of the site. These features are of a degraded quality and have low value as CRLF habitat, as they do not function in a way that is substantially different from the adjacent upland habitats (i.e., they typically do not contain or convey surface water and are dry for most of the year). It is possible, albeit highly unlikely, that these features could facilitate CRLF movements during the wet season.

Impacts on upland habitat. The proposed project would result in the loss of approximately 9.2 acres of upland habitat. However, this habitat is of very low quality for CRLF due to the distance between the development footprint and suitable habitat (i.e., the wetland ponds) in the western part of the site and its close proximity to existing, dense development. Therefore, impacts on CRLF habitat would be considered significant but minimal.

Regulatory issues. In addition to evaluating the potential of the project to affect the CRLF under CEQA, the project applicant would need to comply with provisions of the federal Endangered Species Act and would need to seek take authorization from the USFWS for project-related losses as required by law. To obtain a take permit, consultation with the U.S. Fish and Wildlife Service would need to be initiated either through a federal nexus (i.e., Section 7 consultation, usually through the USACE or the Bureau of Land Management) or through the HCP process (i.e., Section 10 consultation).

Mitigation techniques. The primary approach to mitigate impacts on CRLF would be based upon 1) avoidance of riparian and aquatic resources to the maximum extent possible, 2) implementation of minimization measures, 3) compensation for impacts on riparian habitats and other waters; and, 4) preservation of open space lands that contain suitable upland characteristics adjacent to the onsite ponds, along with opportunities to enhance onsite aquatic features.

Avoidance. Avoidance of a sensitive resource is usually considered the preferred mitigation for any project. Therefore, from a standpoint of avoiding impacts on CRLF, the project should be designed in ways that avoids impacts on riparian, aquatic, and upland habitats to the maximum extent practicable. The proposed project has been sited in the flattest portion of the site with the lowest habitat value for wildlife, as the development footprint occurs immediately adjacent to existing, dense development. Clustering and siting of the project has also allowed for the preservation of approximately 100 acres of open space of much higher habitat quality, as the open space is contiguous with other open space lands to the north, south, and west.

Minimization. The project should be designed, built, and operated in ways that minimize both direct and indirect impacts on the CRLF. Clustering and siting of the project has allowed for the preservation of approximately 100 acres of open space and minimized impacts to CRLF habitat. Implementation of the measures described fully in Mitigation Measure 4.4-3, should be taken during construction to avoid take of individual CRLF.

Compensation: jurisdictional waters. The project would impact approximately 300 linear feet and 0.03 acres of jurisdictional waters that are of a degraded quality and marginal value for the CRLF. The project should replace the lost value of this impact by restoring the impacted aquatic habitats at an appropriate replacement-to-loss ratio. Onsite lands proposed to be preserved as open space are expected to fully accommodate creation of and/or enhancements to aquatic habitats that would be of substantially higher value to CRLF than the impacted waters. Potential opportunities for creating and enhancing CRLF habitat include, but would not be limited to, improving the wetland character of the wetland ponds and enhancing onsite riparian habitat. The implementation of compensation measures for impacts on waters of the U.S. would sufficiently mitigate for the loss of aquatic habitat for CRLF, reducing impacts to a less than significant level (refer to Mitigation Measure 4.4-10a through 4.4-10c.

Compensation: upland habitat. The project proposes to preserve approximately 100 acres of the site as open space. This amount of open space would more than sufficiently compensate for any loss of CRLF upland habitat. Areas proposed for preservation include upland habitats adjacent to the wetland ponds and riparian woodlands. As discussed above, this open space provides opportunities to enhance some of the features within it to fit the needs

of the species to be mitigated. Potential opportunities include enlarging and enhancing the ponds with wetland vegetation to provide cover from predators. Enhancement of the channels and riparian corridor (e.g., formation of plunge pools) would also maximize opportunities for CRLF to disperse from the ponds to even higher-quality habitat offsite. Because most of the proposed open space consists of upland habitats (i.e., grasslands), any aquatic features that are created or enhanced within this area would have sufficient associated uplands.

Implementation of the following measures would mitigate impacts on California red-legged frogs to a less than significant level.

MITIGATION MEASURES

4.4-3a The following measures would minimize direct and indirect impacts on California red-legged frogs.

1. Prior to the start of construction, a qualified biologist shall train all project staff regarding habitat sensitivity, identification of special status species, and required practices. The training shall include the general measures that are being implemented to conserve these species as they relate to the project, the penalties for non-compliance, and the boundaries of the project area. A fact sheet or other supporting materials containing this information shall be prepared and distributed. Upon completion of training, employees shall sign a form stating that they attended the training and understand all the conservation and protection measures.

2. A qualified biologist shall survey the project site prior to, and be present to monitor, construction activities during any initial ground disturbance or vegetation clearing or other periods during construction, as necessary. The biologist shall capture and relocate any California red-legged frogs that are discovered during the surveys or construction monitoring. Any individuals that are captured shall be held for the minimum amount of time necessary to release them to suitable habitat outside of the work area.

3. A qualified biologist shall stake and flag exclusion zones around all known locations of CRLF breeding and upland refugia areas in the construction zone. These areas shall be avoided during construction activities to the maximum extent practicable. All construction areas shall be flagged, and all activity shall be confined to these areas.

4. If a CRLF is encountered during construction work, activities shall cease until the animal is removed and relocated by a qualified biologist.

5. Construction activities shall be limited to the period from May 1 through October 31.

6. Permanent and temporary construction disturbances and other types of project-related disturbances to CRLF habitat shall be minimized to the maximum extent practicable and confined to the project site. To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, designated cross-country routes, and other designated areas. These areas shall also be included in preconstruction surveys and, to the maximum extent possible, should be established in locations disturbed by previous activities to prevent further adverse effects. Sensitive habitat areas shall be delineated with high visibility flagging or fencing to prevent encroachment of construction personnel and equipment into any sensitive areas during project work activities. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site without authorization from the USFWS.

7. Because dusk and dawn are often the times when CRLF are most actively foraging and dispersing, all construction activities should cease one half hour before sunset and shall not begin prior to one half hour before sunrise.

4.4-3b A Mitigation and Monitoring Plan shall be prepared for the explicit purpose of managing the open space area. This plan shall be submitted to the Town of Danville for review and approval. At a minimum this plan shall:

- Identify the location of the restoration efforts for replacing jurisdictional waters. The replacement ratio for jurisdictional waters shall be at a minimum of a 1:1 ratio.
- Identify the approaches to be used such as to what extent should the onsite ponds be expanded, define any reconfiguring of the ponds bottom and increase in depth, provide evidence that sufficient water budget exists for any proposed enhancement.
- Identify a suitable planting regime for restoring or enhancing wetland and riparian habitats.
- Identify success criteria for monitoring both the wetland and riparian habitats that are consistent with similar habitats regionally.
- Monitor restored or enhanced wetland habitats for at least five years and restored or enhanced riparian habitats for five years.
- Define and identify maintenance and management activities to manage the open space habitats to meet the stated goals of support habitat characteristics suitable for the CRLF. This would include suitable fencing so as to control access, limited cattle grazing or other procedures to manage grass height and forage production at levels that benefit the CRLF, removal of trash.
- Define and provide for a financial mechanism such as a non-wasting endowment or an assessment district that funds the management of the open space into perpetuity.

4.4-3c Implement Mitigation Measure 4.4-10a through 4.4-10c (compensation measures for impacts on waters of the U.S.).

Impacts on Western Pond Turtles

Impact 4.4-4: Project implementation would result in the loss of Western pond turtle habitat and could result in Western pond turtle mortality.

Determination: Less than Significant Impact with Mitigation Incorporation.

The proposed project would result in the loss of approximately 9.2 acres of upland habitat that is of very low quality for western pond turtles. Therefore, impacts on WPT habitat would be considered minimal. However, it is possible, albeit highly unlikely, that WPT would move into the construction zone, which may result in mortality to individual western pond turtles. The loss of these individuals would constitute a significant impact under CEQA. Implementation of the avoidance, minimization, and compensation techniques for the

CRLF (see Impact analysis 4.4-3) would adequately address impacts on western pond turtles.

MITIGATION MEASURES

4.4-4a Implementation of Mitigation Measures 4.4-3a through 4.4-3c.

4.4-4b The following measures specific to western pond turtles (WPT) shall be implemented:

- Pre-construction surveys shall be conducted to ensure that WPT are absent from the construction area. If WPT are present, a qualified biologist possessing all necessary permits should relocate them.
- Immediately following the pre-construction surveys, the construction zone shall be cleared, and silt fencing should be erected and maintained around construction zones to prevent WPT from moving into these areas.
- A biological monitor shall be present onsite during particular times of construction to ensure no WPT are harmed, injured, or killed during project buildout.

Impact 4.4-5: Project implementation would result in the loss of Alameda whipsnake habitat and could result in Alameda whipsnake mortality.

Determination: Less than Significant Impact with Mitigation Incorporation.

The proposed project would result in the loss of approximately 9.2 acres of upland habitat. However, this habitat is of very low quality for Alameda whipsnakes due to the distance between the development footprint and suitable habitat (i.e., coyote brush scrub) in the western part of the site and its close proximity to existing, dense development. Therefore, impacts on Alameda whipsnake habitat would be considered significant but minimal. It is possible, albeit highly unlikely, that Alameda whipsnakes would move into the construction zone, which may result in mortality to individuals. The loss of these individuals would constitute a significant impact under CEQA.

Most of the project site, including a portion of the proposed development area, occurs within critical habitat designated by the USFWS for the Alameda whipsnake. The development footrprint does not support the primary constituent elements (i.e, scrub/shrub communities, adjacent woodland or grassland communities, and rock outcrops or talus pilings) needed to sustain the species' life cycle. The upland habitat within the development footprint could be considered dispersal habitat for Alameda whipsnakes, but it would be characterized as low quality because it is adjacent to movement barriers (e.g., roads and development) and due to the presence of predators (e.g., domestic cats and wild turkeys). Therefore, issues related to critical habitat for Alameda whipsnakes are not applicable for proposed project. Implementation of the avoidance, minimization, and compensation techniques for the CRLF (see Impact analysis 4.4-3) would adequately address impacts on the Alameda whipsnake.

MITIGATION MEASURES

4.4-5a Implementation of Mitigation Measures 4.4-3a through 4.4-3c.

4.4-5b The following measures specific to Alameda whipsnake shall be implemented:

- Pre-construction surveys shall be conducted to ensure that Alameda whipsnake are absent from the construction area. If Alameda whipsnake are present, a qualified biologist possessing all necessary permits should relocate them.

- Immediately following the pre-construction surveys, the construction zone shall be cleared, and silt fencing should be erected and maintained around construction zones to prevent Alameda whipsnake from moving into these areas.

- A biological monitor shall be present onsite during particular times of construction to ensure no Alameda whipsnake are harmed, injured, or killed during project buildout.

Impacts on Nesting Raptors and Migratory Birds

Impact 4.4-6: Construction activities could result in the abandonment of active nests or direct mortality of nesting raptors and/or migratory birds.

Determination: Less than Significant Impact with Mitigation Incorporation.

Although no stick nests were observed during biologic surveys, trees throughout the oak woodland and riparian woodland habitats of the site provide suitable nesting habitat for tree-nesting raptors and migratory birds. Yellow warblers, a California species of special concern, may also nest in the riparian habitat onsite. If a raptor or other migratory bird (including yellow warblers), regardless of its federal or state status, were to nest on or adjacent to the site prior to or during proposed construction activities, such activities could result in the abandonment of active nests or direct mortality to these birds. Construction activities that adversely affect the nesting success of raptors or result in mortality of individual birds constitute a violation of state and federal laws (see Section 4.4.2) and would be considered a significant impact under CEQA. Implementation of the following measures would mitigate impacts on tree-nesting raptors and other migratory birds to a less than significant level:

MITIGATION MEASURE

4.4-6 To the maximum extent practicable, trees planned for removal shall be removed during the non-breeding season (September 1 through January 31). If it is not possible to avoid tree removal or other disturbances during the breeding season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey for tree-nesting raptors and other tree- or ground-nesting migratory birds in all trees or other areas of potential nesting habitat within the construction footprint and within 250 ft. of the footprint, if such disturbance would occur during the breeding season. This survey shall be conducted no more than 14 days prior to the initiation of demolition/construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August). If nesting raptors or migratory birds are detected on the site during the survey, a suitable construction-free buffer shall be established around all active nests. The precise dimension of the buffer (up to 250 ft.) shall be determined at that time and may vary depending on location and species. Buffers shall remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents. Pre-construction surveys during the non-breeding season are not necessary, as the birds are expected to abandon their roosts during construction activities.

Impacts on Burrowing Owls

Impact 4.4-7: Project implementation could result in the abandonment of active nests or direct mortality of burrowing owls during construction activities and the permanent loss of burrowing owl habitat during buildout.

Determination: Less than Significant Impact with Mitigation Incorporation.

Although no burrowing owls have been observed on the site, suitable nesting habitat for burrowing owls is present throughout the site in the form of small mammal burrows. If a burrowing owl were to nest in the proposed development area prior to the start of construction, construction activities could result in the abandonment of active nests or direct mortality to these birds. Construction activities that adversely affect the nesting success or result in mortality of individual owls constitute a violation of state and federal laws (see Section 4.4.2) and would be considered a significant impact under CEQA.

Additionally, should burrowing owls occur in the development area during the breeding season, project buildout would result in the permanent loss of burrowing owl habitat. This loss of habitat would also be considered a significant adverse impact. The loss of potential foraging habitat for burrowing owls is less than significant due to the onsite preservation of approximately 100 acres of open space. This land set aside would more than sufficiently accommodate any potential loss of habitat for this species.

Thus, should it be determined that burrowing owls are detected onsite prior to grading, the permanent loss of owl habitat would be compensated for with sufficient area being set aside on onsite conservation lands with habitat that is suitable for the owl. Approximately 100 acres of the site are proposed to be preserved as open space. This area would accommodate any set-asides of burrowing owl habitat.

Implementation of the following measures would mitigate impacts on burrowing owls to a less than significant level.

MITIGATION MEASURE

4.4-7 In order to avoid impacts on active burrowing owl nests, a qualified biologist shall conduct pre-construction surveys for burrowing owls within the construction footprint and within 250 feet of the footprint no more than 30 days prior to the onset of ground disturbance. These surveys shall be conducted in a manner consistent with accepted burrowing owl survey protocols. If pre-construction surveys determine that burrowing owls occupy the site during the non-breeding season (September 1 through January 31), then a passive relocation effort (e.g., blocking burrows with one-way doors and leaving them in place for a minimum of three days) may be necessary to ensure that the owls are not harmed or injured during construction. Once it has been determined that owls have vacated the site, the burrows can be collapsed, and ground disturbance can proceed. If burrowing owls are detected within the construction footprint or immediately adjacent lands (i.e., within 250 feet of the footprint) during the breeding season (February 1 through August 31), a construction-free buffer of 250 feet shall be established around all active owl nests. The buffer area shall be enclosed with temporary fencing, and construction equipment and workers shall not enter the enclosed setback areas. Buffers shall remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents. After the breeding season, passive relocation of any remaining owls may take place as described above.

Impacts on American Badgers

Impact 4.4-8: Construction activities could result in the direct mortality of American badgers.

Determination: Less than Significant Impact with Mitigation Incorporation.

Impacts on the American badger would be similar to those for the burrowing owl. Conversion of grasslands to urban development would result in a less than significant loss of habitat for the American badger due to the onsite preservation of approximately 100 acres of open space. This land set aside would more than sufficiently accommodate any potential loss of habitat for this species. However, construction activities may result in harm or injury to individuals of this species, which would constitute a significant adverse impact. Implementation of the following measures would mitigate impacts on American badgers to a less than significant level.

MITIGATION MEASURE

4.4-8 Pre-construction surveys conducted for burrowing owls shall also be used to determine the presence or absence of badgers in the development footprint. If an active badger den is identified during pre-construction surveys within or immediately adjacent to the construction envelope, a construction-free buffer of up to 300 ft. (or distance specified by the resource agencies, i.e., CDFW) shall be established around the den. Because badgers are known to use multiple burrows in a breeding burrow complex, a biological monitor shall be present onsite during construction activities to ensure the buffer is adequate to avoid direct impact on individuals or den abandonment. The monitor would be necessary onsite until it is determined that young are of an independent age and construction activities would not harm individual badgers. Once it has been determined that badgers have vacated the site, the burrows can be collapsed or excavated, and ground disturbance can proceed.

Impacts on Golden Eagles

Impact 4.4-9: Project implementation could result in the loss of golden eagle habitat.

Determination: Less than Significant Impact.

The site supports suitable breeding and foraging habitat for golden eagles. However, golden eagles have not been reported nesting on the site, and surveys conducted by LOA in 2011 and 2012 have not detected any eagle nests on the site. The closest known nests are approximately nine miles away in Dublin. Therefore, the proposed project is not expected to impact golden eagle nests. While eagles have not been reported historically to nest on the site and have not been found recently on the site, they may forage occasionally on the site. The loss of potential foraging habitat is less than significant due to the onsite preservation of approximately 100 acres of suitable foraging habitat. Impacts on golden eagles would be less than significant.

MITIGATION MEASURE

Mitigation is not required.

Disturbance to Waters of the US and/or Riparian Habitats

Impact 4.4-10: Project implementation would result in the fill of approximately 288 linear feet and 0.03 acres of jurisdictional waters.

Determination: Less than Significant Impact with Mitigation Incorporation.

A formal wetland delineation of the site was conducted by LOA in August 2011 and was verified by the USACE on February 22, 2013. Jurisdictional waters are present on the site in the form of intermittent and ephemeral drainages, two wetland ponds, and seasonal wetland swales. These features are subject to the regulatory authority

of the USACE. The RWQCB would take jurisdiction over these features as well CDFW would exert jurisdiction over the drainages.

Approximately 300 linear feet and 0.03 acres of jurisdictional waters would be filled as a result of proposed project activities. This includes impacts on the two upland seasonal channels along the eastern boundary resulting from construction of two residential lots and bioretention areas. The placement of fill within these features and the loss or degradation of associated riparian habitat value would constitute a significant adverse impact under CEQA.

All other project elements are sited to avoid jurisdictional waters and riparian habitat. Implementation of the following measures would reduce impacts on jurisdictional waters and riparian habitat to a less than significant level.

MITIGATION MEASURES

4.4-10a The project applicant shall implement avoidance, minimization, and/or compensation measures to reduce impacts on jurisdictional waters and riparian habitats to a less than significant level.

Avoidance. The preferred method of mitigation would be avoidance of all waters of the U.S. and State by designing the project so that it avoids the placement of fill within potential jurisdictional waters and impacts on riparian habitat.

The proposed project has been designed to avoid all but approximately 288 linear feet, totaling 0.03 acres, of upland seasonal channels and associated riparian vegetation. Riparian woodland habitat associated with higher order drainages on the site have been avoided. Additionally, to avoid the site's steeper slopes, the proposed project is confined to the flatter area at the east end of the site, which requires some fill of ephemeral drainages in these areas.

Minimization. Because full avoidance is not possible, actions shall be taken to minimize impacts on aquatic and riparian habitats. Measures taken during construction activities shall include placing construction fencing around the aquatic features or riparian areas to be preserved to ensure that construction activities do not inadvertently impact these areas.

As part of project build-out, all proposed lighting shall be designed to avoid light and glare impacts on the riparian corridors to be avoided. Light sources shall not be visible from riparian areas and shall not illuminate riparian areas or cause glare on the opposite side of the channels (e.g., to neighboring properties). Additionally, proposed development activities shall be designed and situated to avoid the loss of trees within any riparian areas to the maximum extent practicable.

Mitigation. Because impacts to the ephemeral drainages at the east end of the site cannot be avoided, an onsite habitat mitigation and monitoring plan shall be developed to mitigate for impacts on these features. It is expected that all mitigation measures can be accommodated within the approximately 100 acres of the site that are proposed for preservation as open space. If the preserved area cannot fully accommodate the mitigation measures, then offsite restoration shall be implemented.

Mitigation measures shall either result in the creation of new habitat as replacement for habitat lost or enhance the quality of existing habitat for native plants and wildlife. Mitigation measures shall include replacement of riparian and aquatic habitat at a replacement-to-loss ratio of up to 3:1 for permanent acreage impacts (up to three acres created for each acre permanently impacted) as well as reseeding or replanting of vegetation in temporarily disturbed areas according to a site-specific

mitigation plan. At a minimum, this plan shall identify mitigation areas, a planting plan, site maintenance activities, success criteria, and remedial measures to compensate for lack of success.

The mitigation goal shall be to create and enhance riparian or aquatic habitats with habitat functions and values greater than or equal to those existing in the impact zone. This could include enhancing the wetland ponds and associated seasonal drainage and tributaries to increase their wetland and riparian value, which would benefit native wildlife in the region, such as CRLF (see Impact discussion 4.4-3).

A detailed monitoring plan, including specific success criteria, shall be developed and submitted to permitting agencies during the permit process. The mitigation area shall be monitored in accordance with the plan approved by those permitting agencies. The basic components of the monitoring plan consist of final success criteria, performance criteria, monitoring methods, data analysis, as-built plans, monitoring schedule, contingency/remedial measures, and reporting requirements.

4.4-10b A Habitat Mitigation and Monitoring Plan shall be prepared that at a minimum:

- Defines the location of all restoration/creation activities;
- Provides evidence of suitable water availability (e.g., from precipitation and surface runoff) to support any created wetland and riparian habitats;
- Identifies the species, amount and location of plants to be installed;
- Identifies time of year for planting and method for supplemental watering during the establishment period;
- Identifies the monitoring period which should be not less than five years for wetland restoration and not less than five years for riparian restoration, defines success criteria that shall be required for the wetland restoration to be deemed a success;
- Identifies adaptive management procedures that accommodate the uncertainty that comes with restoration projects. These include (but not limited to) measures to address colonization by invasive species, unexpected lack of water, excessive foraging of installed wetland plants by native wildlife; etc.;
- Defines management and maintenance activities (weeding of invasive, providing for supplemental water, repair of water delivery systems, etc.); and,
- Provides for surety in funding the monitoring and ensuring that the created wetland and riparian habitats fall within lands to be preserved and managed into perpetuity.

4.4-10c The project applicant shall comply with all state and federal regulations related to construction work that would impact aquatic habitats occurring on the site. The project applicant shall be required to obtain a Section 404 Clean Water Act permit from the USACE, Section 401 Water Quality Certification from the RWQCB, and Section 1600 Streambed Alteration Agreement from the CDFW prior to initiating any construction within these habitats.

Interference with the Movement of Native Wildlife

Impact 4.4-11: Project implementation could result in interference with the movement of native wildlife.

Determination: Less than Significant Impact.

Lands immediately east of the site have been modestly developed with roads and residences. Within the site itself, wildlife uses the upland habitats of the site as part of their home range and dispersal movements. The proposed development footprint occurs in the eastern part of the site adjacent to existing roads and residences. Following project buildout, the majority of the site would remain as open space for use as home range and dispersal movements.

The various seasonal drainages on the site likely facilitate the movement of amphibians, reptiles, birds, and mammals within and through the site. The proposed project is not expected to reduce the capability of these drainages to facilitate the migration and dispersal of wildlife. Wildlife species presently using the site are expected to continue moving through the open areas of the site and within onsite riparian corridors after project buildout. Therefore, impacts on wildlife movements would not be considered significant.

MITIGATION MEASURE

Mitigation is not required.

Degradation of Water Quality in Seasonal Drainages, Stock Ponds, and Downstream Waters

Impact 4.4-12: Project implementation could result in the degradation of water quality in seasonal drainages, stock ponds, and downstream waters.

Determination: Less than Significant Impact.

Proposed construction activities would result in soils left barren in the development footprint. Additionally, extensive grading often leaves the soils of construction zones barren of vegetation and, therefore, vulnerable to sheet, rill, or gully erosion. Furthermore, runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. These pollutants may eventually be carried to sensitive wetland habitats used by a diversity of native wildlife species.

The project applicant would be required to comply with the provisions of a grading permit, including standard erosion control measures that employ best management practices (BMPs). Projects involving the grading of large tracts of land must also be in compliance with provisions of a General Construction permit (a type of NPDES permit) available from the California Regional Water Quality Control Board. With compliance with the above permit(s) the proposed project would not result in less than significant impacts on water quality in seasonal creeks, reservoirs, and downstream waters from the proposed project. Moreover, compliance with the above permit(s) would prevent the deposition of pollutants and sediments in sensitive riparian and wetland habitats. Refer to Section 4.9 (Hydrology and Water Quality) for a more detailed discussion of project impacts on water quality and measures to reduce such impacts to less than significant levels.

MITIGATION MEASURE

Mitigation is not required.

Tree Removal Impacts

Impact 4.4-13: Grading and construction would result in the permanent loss of trees, including those protected under the Town's Tree Preservation Ordinance.

Determination: Less than Significant Impact with Mitigation Incorporated.

Based on HortScience's evaluation of the preliminary project plans, 32 of the 53 trees that meet the Town's Tree Preservation ordinance (Municipal Code 32-79) requirements for meeting the definition of a tree were recommended for preservation, including 14 "Protected" trees and all four "Heritage" trees. Twenty-one of the trees recommended for preservation are located along the eastern property line. These trees would be located in close proximity to proposed retaining walls and v-ditches.

HortScience recommended twenty-four trees for removal, including 21 that would be impacted by grading activities, and three that would be within the proposed road locations. Fourteen of the trees recommended for removal qualified as "Protected" under the Town's Tree Preservation ordinance.

The five criteria described in Section 4.4.2 above are analyzed as follows for this tree removal.

1. Condition. Of the 24 trees recommended to be removed, eight are in good condition, thirteen are in moderate condition, and three are in poor condition. A tree in good condition is in good health and has structural stability and the potential for longevity at the site. A tree in moderate or "fair" condition is in somewhat declining health and/or has structural defects that can be abated with treatment. Such a tree requires more intense management and monitoring than a tree in good condition and may have a shorter lifespan. A tree in poor condition is in poor health or has structural defects that cannot be mitigated; such a tree is expected to continue to decline, regardless of treatment.

   Most of the Town-protected trees proposed for removal are in moderate or good condition; however, none are in imminent danger of falling, although some are in danger of dropping large branches. None of these trees are too close to existing structures or interfere with existing utility infrastructure.

2. Necessity. The primary reason for removal of the Town-protected trees is that their preservation would be inconsistent with the General Plan land use designation for the site which calls for residential development. Grading would be necessary to create residential lots, to build the public street, and to create transitions between project parcels and adjoining parcels. The proposed grading could not be implemented while preserving the Town-protected trees.

3. Erosion/surface water flow. Removal of the Town-protected trees would not cause significant soil erosion or cause a significant diversion or increase in the flow of surface water. Potential erosion and flooding impacts area addressed in Section 4.9 (Hydrology and Drainage) and were found to be less than significant.

4. Visual effects. Of the 53 trees that meet the Town's Tree Preservation ordinance (Municipal Code 32-79) requirements, 31 are "protected" and four of those are "heritage." Thirteen "protected" trees would be removed for the project. In addition, 25 trees (primarily young and semi-mature valley oaks) located near the eastern site boundary (near proposed lots 1, 2 and 3 as well as the proposed open space parcel) would be preserved. Removal of the 14 Town-protected and trees would not significantly affect offsite shade or privacy between properties due to the site's topography, the other trees that would remain, and the locations of the Town-protected trees in relation to other properties.

Town-protected to be removed are either not visible from public vantage points or are relatively small and below the level of public vantage points, and are, therefore, not visually prominent. In addition to proposed mitigation trees on the project site (see discussion below), the new homeowners may plant additional trees. Thus, although the Town values existing trees, the project is likely to result in an overall increase in trees which would improve the scenic quality of the area over time.

5. Major Ridgeline/Scenic Hillside. The project site is within a Town-identified Scenic Hillside area. However, the 24 trees proposed for removal are located on approximately ten acres in the lower, flatter, portion of the site and their removal would not affect the approximately 100-acre hillside area that would remain as open space in perpetuity. Thus, the proposed removal of 24 trees from the project site would not have a significant effect on the visual character of the Town-identified Scenic Hillside area within the project site.

Based on the above factors, the Town could issue a Tree Removal Permit for the proposed loss of 14 Town-protected trees without creating a conflict with the Tree Preservation Ordinance. Approval of a Preliminary and Final Development Plan for the proposed project, along with a Tree Removal Permit, would satisfy the requirements of the Tree Preservation Ordinance.

The project would also require removal of eight trees from the site that are too small to be "protected trees" or "heritage trees" under the Town's Tree Preservation Ordinance. These are single-trunked oak trees less than 10 inches in diameter or multi-trunked oaks totaling less than 20 inches in diameter, measured at a height of 54 inches above natural grade, as well as trees of various non-protected trees that are not large enough to be "heritage trees." The loss of these trees would not significantly affect special-status species, including raptors, because the project would comply with Mitigation Measure 4.4-6.

Finally, no "oak woodlands" would be removed for the project. No development is proposed for areas comprised of oak woodland. These areas are proposed for open space preservation in perpetuity. Therefore, the proposed project would not impact oak woodlands.

To compensate for the proposed removal of 24 trees, the project applicant would be required to implement the mitigation measures identified below. In addition to these mitigation measures, the project would be required to add a minimum of two street trees for each lot and three street trees for each corner lot pursuant to the Town's conditions of approval.

MITIGATION MEASURES

4.4-13a To compensate for the proposed removal of 24 trees, the project applicant would be required to implement the following measures:

1. The project applicant's Consulting Arborist shall calculate the total inches of diameter of protected trees to be removed, as of the date of the grading permit application (the "Total Inches"), and submit that calculation to the Town. The project applicant shall be required to replace the 14 Town-protected trees to be removed with a number and size of oak trees equal to the total inches of the diameter of the trees to be removed. The required tree mitigation planting shall be in addition to the street trees otherwise required to be planted as part of the project's landscape plan.

2. It is currently estimated that all mitigation oak trees can be accommodated onsite. These trees shall be 24-inch box size trees, which shall receive a credit of two-inches per tree toward the total mitigation planting requirement.

3. Tree Preservation Ordinance Section 32.79.9(h) sets forth requirements for preservation of Town "Protected" trees on the project site that would not be removed for the project, but might be affected by the construction process. The ordinance requires payment of security to the extent that the project sponsor proposes construction work that would occur within the dripline of a protected tree intended to be preserved. The current calculated value of these trees is $200,950.

4.4-13b To compensate for the proposed removal of the ten non-protected non-heritage trees the project applicant shall be required to replace the ten trees at 1:1 replacement ratio.

4.4-13c The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

1. Any changes to the plans affecting the trees shall be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, demolition plans, site plans, improvement plans, utility and drainage plans, grading plans, and landscape and irrigation plans.

2. Have the vertical and horizontal locations of the 24 trees to be removed, as identified in the *Arborist Report, Podva Property, Danville, CA*, prepared by HortScience on October 4, 2013, established and plotted on all plans. Once trunk locations are plotted on plans and reviewed by the Consulting Arborist, impacts on individual trees can be assessed and tree protection zones for those trees identified for preservation can be established.

3. A tree protection zone shall be established around each tree to be preserved. No grading, excavation, construction or storage of materials shall occur within that zone. Trees not listed below shall have the tree protection zones established as one foot behind the edge of grading. The tree protection zones for all other trees are as follows:

Number	Species	Diameter	Zone
143	Valley Oak	21	Dripline in all directions
144	Valley Oak	47	Dripline in all directions
171	Valley Oak	36	Dripline in all directions
172	Valley Oak	7	Dripline in all directions
176	Valley Oak	15	Dripline in all directions
179	Valley Oak	18	Dripline in all directions
185	Valley Oak	44	Dripline in all directions
186	Coast Live Oak	14	Dripline in all directions
187	Valley Oak	20	Dripline in all directions
188	Valley Oak	21	Dripline in all directions
192	Valley Oak	56	35' SW, 20' W, dripline in all other directions

4. Underground services including utilities, sub-drains, water or sewer shall be routed around the tree protection zone. Where encroachment cannot be avoided, special construction techniques such as hand digging or tunneling under roots shall be employed where necessary to minimize root injury.

5. Tree Preservation Notes, prepared by the Consulting Arborist, shall be included on all plans.

6. Irrigation systems shall be designed so that no trenching would occur within the tree protection zone.

7. Any herbicides placed under paving materials must be safe for use around trees and labeled for that use.

8. Do not lime within 50' of any tree to be preserved. Lime is toxic to tree roots.

4.4-13d Pre-construction treatments and recommendations:

1. The demolition contractor and construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.

2. Install tree protection around the trunk of trees along the property line of Lots 1, 2, 3, 19, 20 and Parcel A. Tree protection shall consist of either hay bales stacked 6-foot high or rolls of erosion control material wrapped around the tree trunks. Hay bales and rolls will be more effective at protecting the trunk from impacts from equipment than fencing. For all other trees, install fencing enclose the tree protection zone prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link or equivalent as approved by the Town. Fences are to remain until all grading and construction is completed.

3. Locate and stake the property line as well as the proposed location of both the V-ditch and retaining wall prior to the start of demolition. Following staking, the Consulting Arborist will review tree protection and construction procedures with the project superintendent.

4. Remove the existing wire fencing by hand. Remove attachments to tree trunks by hand.

5. Tree pruning may be required to clean the crown and to provide construction clearance. All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300). Brush shall be chipped and spread beneath the trees within the tree protection zone.

6. Structures and underground features to be removed within the tree protection zone shall use the smallest equipment, and operate from outside the tree protection zone. The Consulting Arborist shall be onsite during all operations within the tree protection zone to monitor demolition activity.

4.4-13e Recommendations for tree protection during construction:

1. Prior to beginning work, all contractors working in the vicinity of trees to be preserved shall meet with the Consulting Arborist at the site to review all work procedures, access routes, storage areas and tree protection measures.

2. Where the retaining wall or V-ditch comes within 3' of the trunk, excavate by hand for a distance of 5' on either side of the trunk.

3. Any grading, construction, demolition or other work that is expected to encounter tree roots shall be monitored by the Consulting Arborist.

4. No grading, construction, demolition or other work shall occur within the tree protection zone. Any modifications must be approved and monitored by the Consulting Arborist.

5. Fences shall be erected to protect trees to be preserved. Fences define a specific tree protection zone for each tree or group of trees. Fences are to remain until all site work has been completed. Fences may not be relocated or removed without permission of the Consulting Arborist.

6. Construction trailers, traffic and storage areas shall remain outside fenced areas at all times.

7. Prior to grading, pad preparation, excavation for foundations/footings/walls, trenching, trees may require root pruning outside the tree protection zone by cutting all roots cleanly to the depth of the excavation. Roots shall be cut by manually digging a trench and cutting exposed roots with a saw, vibrating knife, rock saw, or other approved root pruning equipment. The Consulting Arborist shall identify where root pruning is required and monitor all root pruning.

8. All underground utilities, drain lines, or irrigation lines shall be routed outside the tree protection zone. If lines must traverse through the protection area, they shall be tunneled or bored under the tree as directed by the Consulting Arborist.

9. Supplemental irrigation may be required and shall be specified by the Consulting Arborist.

10. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.

11. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the tree protection zone.

12. Any additional tree pruning needed for clearance during construction shall be performed by a Certified Arborist and not by construction personnel.

4.4-13f Maintenance of impacted trees:

Preserved trees will experience a physical environment different from that of predevelopment. As a result, tree health and structural stability shall be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of failure of branches or entire trees increases. Therefore, annual inspection for hazard potential is recommended.

4.4.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.4-14: **Project implementation could result in the cumulative loss of biotic resources.**

Determination: **Less than Significant Impact with Mitigation Incorporated.**

A cumulative effect is a change in the environment resulting from the incremental effect of the project when added to other closely related past, present, and reasonably foreseeable future projects. Past and foreseeable future actions within the Danville area include, but are not limited to, grazing, agriculture, and the construction of housing, commercial, industrial, and infrastructural projects. A number of projects are ongoing, in the planning stages or will be implemented in the near future within the Town related to housing developments and various commercial construction projects.

Although there are no foreseeable further developments within the project area, current actions in combination with other past projects within the vicinity of the project site would result in considerable disturbance to special-status wildlife and plants, their habitats, and other sensitive biological resources. However, the incremental effect of the proposed project, when combined with the effects created by other past and reasonably foreseeable projects, would not be cumulatively considerable or significant because the project applicant will obtain regulatory approvals and implement the mitigation measures previously described to address direct and indirect effects of the project.

MITIGATION MEASURES

Implementation of Mitigation Measures 4.4-2 through 4.4-13.

4.5 CULTURAL RESOURCES

This section evaluates potential impacts on cultural resources that could result from implementation of the proposed project. The description of the affected environment, analysis of impacts, and recommended mitigation is summarized from the Historic Property Survey Report/Finding of Effect (HPSR/FOE) report prepared by Basin Research Associates in August 2012 for the proposed project (*Historic Property Survey Report/Finding of Effect (No Historic Properties Affected) Podva Residential Project, Town of Danville, Contra Costa County, California*). The HPSR/FOE report was prepared to meet applicable federal regulatory requirements that require the identification and evaluation of cultural resources that could be affected by the project and is located in Appendix C. The identification effort included archival research, a review of pertinent literature, a systematic archaeological field inventory, and peer review field reconnaissance, and consultation with the Native American Heritage Commission (NAHC) and individuals and groups recommended by the NAHC.

4.5.1 ENVIRONMENTAL SETTING

PREHISTORIC SETTING

The presence of water and upland resources in the San Francisco Bay Region provided a favorable environment during the prehistoric period with riparian and inland resources readily available. Native American occupation and use of the general area appears to extend over 5,000-7,000 years and may be longer.

Archaeological information suggests an increase in the prehistoric population in the San Francisco Bay Region over time with an increasing focus on permanent settlements with large populations in later periods. This change from hunter-collectors to an increasing sedentary lifestyle is due to more efficient resource procurement, but with a focus on staple food exploitation; the increased ability to store food at village locations; and, the development of increasingly complex social and political systems including long-distance trade networks.

Archaeological research in the San Francisco Bay Region has been interpreted using several chronological schemes based on stratigraphic differences and cultural traits. The complexity of the archaeological record in the central California Delta region has resulted in the development and refinement of local sequences with specific cultural traits and chronologies. Fredrickson (1974) has proposed a tripartite scheme - Archaic, Emergent, and Ethnographic - each with appropriate characteristics. The Lower Archaic (10,000-6,000 B.P.) and the Initial Middle Archaic (6,000-4,500 B.P.) are not well known from Contra Costa County. The other divisions of the Archaic, Emergent, and Ethnographic are reasonably well represented.

Terminal Middle Archaic Period (4,500-2,500 B.P.)

Initial use of the shell mound sites along San Francisco Bay appears to have started during the Terminal Middle Archaic Period. Sites from the period are noted as having prehistoric burials, side-notched and stemmed projectile points, rectangular abalone ornaments, shaped and unshaped mortars and pestles, and rectangular Olivella shell beads. Obsidian sources include the North Coast Ranges and eastern Sierra although local cryptocrystalline raw materials are dominant. Subsistence focused on nuts and berries, as well as Bay shore resources (shellfish, marine fishes, and mammals), while interior sites focused on freshwater fish and shellfish and terrestrial mammals.

Upper Archaic Period (2,500-1,300 B.P.)

Numerous Upper Archaic sites are known from the lowland valleys and the San Francisco Bay shore, as well as inland water sources. Well-developed midden soils typical of long-term residential villages characterize Upper Archaic sites. Archaeological excavations have exposed deposits containing hundreds of flexed human burials and

residential features. Early sites have Berkeley Pattern assemblages (ca. 3000 B.P. to 1000 B.P.) that are characterized by a bone tool and ornament industry, saucer and saddle-shaped Olivella shell beads, abalone ornaments and pendants, and unshaped and well-shaped mortars and pestles. Projectile points are typically shouldered lanceolate forms, although side-notched and stemmed points also occur, along with large lanceolate-shaped bifaces. Locally available chert dominates although obsidian from the North Coast Ranges and a number of eastern Sierran sources was used.

Subsistence appears to have focused on nuts and seeds with the faunal assemblages continuing to reflect either a marine or an interior emphasis depending on site location. However, marine shellfish begin to occur in appreciable amounts in interior valley sites.

This time period is also linked with the appearance of the Meganos Culture - a cultural group originating in the San Joaquin Delta and identified archaeologically as the Meganos Aspect of the Berkeley Pattern. It is postulated as migrating into Contra Costa County and other parts of the Bay Area at about 2,500 B.P. and has been described as a melding of bay and delta populations. The group is recognized archaeologically by a distinctive mortuary complex which featured few to no grave goods and a "non-standardized" mode of burial, including a mix of ventrally and dorsally extended and tightly flexed interments.

Emergent Period (1,300-200 B.P.)

The Emergent Period's distinctive cultural pattern is known at the Augustine Pattern (1,000 B.P. to contact), which is characterized by the appearance of small projectile points. The Meganos culture appears to have retreated to the southern Delta region at the beginning of the Emergent Period.

Emergent Period sites are found in the interior valleys and uplands, as well as Bay shore locations. Larger villages appear in the Delta region, while small occupation sites are found in the smaller interior valleys. The sites generally have a midden deposit with both cremation and inhumation burials and residential features that include house floors. Olivella and clamshell disc beads are frequently found as grave goods and in non-associated midden deposits. It is possible that bead manufacture was practiced at some sites based on the presence of manufacturing debris. Napa Valley obsidian dominates the chipped stone tool assemblages.

Bedrock mortar milling stations appear early in the Emergent Period and are used in association with other portable milling equipment. Nuts, berries, and seeds, especially small seeds, were collected and processed. Large terrestrial mammals (e.g., deer, elk) appear to have been favored. Marine shellfish and marine fishes appear inland in much larger quantities than in previous periods.

Patterns within the Emergent Period differ in terms of primary subsistence activities and increasing social stratification. These patterns have been interpreted as linked to the spread of Utian language groups, followed by possibly the Miwok-Costanoan language groups, and later by the Wintuan language groups.

ETHNOGRAPHIC SETTING

Ethnographers differ as to Native American group(s) who may have occupied the project area. The proposed project may have been located within the ethnographic and historic territory of the eastern extent of Chochenyo of Costanoan language family, or the project area may have been associated with the Saclan tribelet of the Bay Miwok. Both Costanoan and Bay Miwok speakers have been placed in the project area: the Seunen (Costanoan) with their main village at the present-day San Ramon or Dublin and the Tatcan (Bay Miwok) who reportedly held San Ramon Creek with their central village in present-day Danville or Walnut Creek.

Extensive ethnographic data for the San Francisco Bay Region are lacking, and the aboriginal way of life apparently disappeared by approximately 1810 due to introduced diseases, a declining birthrate, the cataclysmic impact of the mission system, and the later secularization of the missions by the Mexican government. The aboriginal inhabitants of the San Francisco Bay Region were transformed from hunters and gatherers into agricultural laborers who lived at the missions and worked with former neighboring groups (e.g., Costanoan, Bay Miwok, Esselen, and Yokuts). Later, because of the secularization of the Missions by Mexico in 1834, most of the aboriginal population gradually moved to ranchos to work as manual laborers. The resulting multi-ethnic Indian communities that developed provided the ethnological data collected from 1878 to 1933.

HISTORIC SETTING

Hispanic Period

The period of initial historic exploration of the project area lasted from 1769 to 1810. Between 1769 and 1776 a number of Spanish expeditions passed through the San Francisco Bay region, including those led by Portola, Fages, Fages and Crespi, Anza, Rivera, and Moraga. Even though the routes of the early explorers cannot be determined with total accuracy, the first party to travel through the San Ramon Valley was the expedition of Pedro Fages and Father Crespi in 1772. The Fages and Crespi expedition camped near Danville on March 31 and proceeded via San Ramon and Dublin to Pleasanton to near Milpitas in what is now Santa Clara County. Still later, an expedition led by Jose Viader in August 1810 proceeded from Mission San Jose via the Valle de San Jose into the San Ramon Valley and through Walnut Creek

Early Spanish expeditions likely followed aboriginal trails. None of the known and/or probable routes of the early explorers included the project area. The Fages Crespi expedition of 1772 traveled through the San Ramon Valley, likely east of the Podva property, likely parallel to San Ramon Creek. None of the other known trails/routes of early Spanish expeditions were located in or adjacent to the proposed project site.

During the Mexican Period (1822 to 1848) and into the American Period, most of the project site was situated within part of Rancho San Ramon (Carpentier). Governor Figueroa granted Rancho San Ramon (Carpentier) to Bartolo Pacheco and Mariano Castro on June 5, 1833. The rancho was claimed and confirmed to Domingo Peralta and Rafaela Soto de Pacheco et al., who had inherited the southern portion of the rancho divided by Pacheco and Castro. Soto de Pacheco et al. deeded part of the land to Horace W. Carpentier, to whom the patent was issued on April 7, 1866 for 8,917.36 acres. This former rancho includes San Ramon, Danville, and Alamo.

The western portion of the project site was situated within the San Ramon Sobrante granted by Governor Micheltorena to brothers, Inocencio, Jose and Mariano Romero on February 4, 1844. This claim was rejected and as a consequence the lower, flatter portion of the project site was included in the Carpentier grant, while the far western triangular and hilly portion of the project site was not granted.

None of the known Hispanic era adobe dwellings or other features (e.g., mills, corrals, roads, etc.) were located in or adjacent to the proposed project site.

American Period

In the mid-19th century, most of the rancho and pueblo lands in California were subdivided as the result of population growth and American colonization. This American ascendancy was the result of the confirmation of property titles throughout California, prior to which the transfer of real estate had been extremely risky. The initial explosion in population was associated with the Gold Rush (1848), followed later by the construction of the transcontinental railroad. Still later, the development of the refrigerator railroad car (ca. 1880s), used for the transport of agricultural produce to distant markets had a major impact on population growth.

Contra Costa was one of the 27 initial counties of the State of California in 1850 and included about two-thirds of what is now Alameda County. Growth in the project area has been linked to factors such as freshwater, the availability of land, and transportation. By far, the towns of Danville and San Ramon were the most important settlement clusters/cities in the project area.

The Podva Property is located approximately one mile south of the historic center of Danville. The Town of Danville had its first house in 1852, ". . . started as a town in 1858," and merited a post office by August 31, 1860. Danville was first settled by the Inman brothers, Daniel and Andrew, who opened a blacksmith shop and also raised sheep and cattle in the area. Originally known as Inmanville, the name was changed to Danville when the post office was established. The first Danville Hotel was opened in 1858 and within a few years was joined by a temporary school, the Oddfellows Hall, and Grange Hall. The Danville Grange Hall No. 85, chartered in 1873, was a lodge and "social hub for the San Ramon Valley" as a gathering place for parties, weddings, movies and lodge meetings.

After the arrival of the Southern Pacific Railroad Company San Ramon branch line in 1877 that extended through Concord, Walnut Creek, and Danville, traffic increased in the area and brought many new passengers from the more distant cities of Oakland and San Francisco. The town of "Limerick," approximately 1.5 mile south/southeast of the Podva Property was transformed into "San Ramon" in 1890. The railroad was extended the following year northward to Danville. These trains also shipped fruit and grain grown in the valley to markets outside of the valley. Danville was among the small agriculturally-oriented towns in the San Ramon Valley later subject to suburban pressures.

Rancher Roger Podva purchased the project site during the early 20th Century. He was the son of pioneer rancher Adolphus Podva, a former resident of Montreal, Canada who came to Danville with his brother Rodger when they were both in their early twenties. The Podva family has prospered in number and two of their former residences are of sufficient local historical interest to be noted in the Town of Danville General Plan and a TriValley History Council publication. None of the properties are present on or adjacent to the project site.

PALEONTOLOGICAL SETTING

The hills in the project area are composed of Miocene (25 – 5 million years old [ma]) marine San Pablo Group sandstone. The San Pablo Group is divided into three geologic units: the Briones Formation is stratigraphically lowest (oldest in age), followed by the Cierbo Formation, and the uppermost (youngest) Neroly Formation. Bivalve fossil shells were identified on the adjacent Elworthy Ranch site to the south of the proposed project site within exposed San Pablo Group bedrock, and 96 fossil localities have been identified within a five-mile radius of the project site[1].

4.5.2 KNOWN CULTURAL RESOURCES

RECORDS SEARCH AND LITERATURE REVIEW

The California Historical Resources Information System, Northwest Information Center, Sonoma State University (SSU), Rohnert Park (CHRIS/NWIC File No. 11-01088 dated 4/16/2012) conducted a prehistoric and historic site records and literature search of the project area. In addition, Basin Research Associates reviewed reference material from its library and from the Bancroft Library, University of California at Berkeley. Specialized listings consulted include the Historic Properties Directory for Contra Costa County (CAL/OHP 2011a) with the most recent updates of the National Register of Historic Places; California Historical Landmarks; and, California Points of Historical Interest, as well as other evaluations of properties reviewed by the State of California Office

[1] *Elworthy Ranch Draft Environmental Impact Report* (State Clearinghouse No. 1999022064), certified July 1, 2008.

of Historic Preservation. Other sources consulted by Basin Research Associates include: California History Plan (CAL/OHP 1973); California Inventory of Historic Resources (CAL/OHP 1976); Five Views: An Ethnic Sites Survey for California (CAL/OHP 1988); Historic Civil Engineering Landmarks of San Francisco and Northern California (American Society of Civil Engineers 1977 [ASCE/SF]); List of Historic Civil Engineering Landmarks (ASCE 2011); Archeological Determinations of Eligibility for Contra Costa County (CAL/OHP 2011b); and, other local inventories, lists, and maps.

The results of the records search and literature review indicate that there are no recorded cultural resources within or adjacent to the project area of potential effects (APE). More specifically,

- No prehistoric, combined prehistoric/historic era, or historic sites (including built environment sites) have been recorded or reported in or adjacent to the project APE.
- No local, state or federal historically or architecturally significant structures, landmarks, or points of interest have been identified within or adjacent to the project APE.

One previous archaeological inventory covers a portion of the project site. A field survey of part of the northern part of the project site was conducted for a former project that had been proposed on the project site. Results were negative for cultural resources including the presence of outcrops normally "used for bedrock mortars by prehistoric peoples."

SACRED LANDS REVIEW

Basin Research Associates contacted the Native American Heritage Commission (NAHC) for a search of the Sacred Lands Inventory. According to the Commission, there is no record of any Sacred Lands within the project site. Basin Research Associates also sent letters soliciting additional information to three Native American individuals/groups and telephone contact and email was initiated as follow-up. No responses were received from two individuals. One individual recommends the implementation of "proper measures" upon discovery and especially if Native American remains are exposed (i.e., contacting the County Coroner and Native American Heritage Commission and following the recommendations of the Most Likely Descendant (MLD) designated by the NAHC).

FIELD SURVEY RESULTS

Basin Research Associates conducted an archaeological inventory of the project APE on April 6, 2012. A historic barn used for hay storage and a prefabricated equipment shed that was built within the last 13 years are present in the northeastern part of the project site, north of Midland Way. An old corral area that consists of a cattle holding/loading area with a livestock chute surrounded by fencing is located in the southeastern portion of the site. Old machinery and farm equipment currently occupies a small portion of the area proposed for development south of Midland Way. Most of the machinery/equipment is in the vicinity of the large prefabricated equipment shed. An exception, a Studebaker water wagon, is situated further south near a drainage.

Basin Research Associates concluded that there was no evidence of prehistoric archaeological resources within the project site and that the Podva barn is not eligible for the National Register of Historic Places because it is not significant under Criteria a, b or c and because it lacks historic integrity, as identified in greater detail below under Impact Analysis 4.5-1, which provides a detailed discussion of onsite historical features.

4.5.3 REGULATORY SETTING

FEDERAL FRAMEWORK

National Historic Preservation Act of 1966 (16 U.S.C. 470)

The National Historic Preservation Act (NHPA) is the most comprehensive national policy on historic preservation. The NHPA, which is designed to encourage the preservation and wise use of our historic resources, establishes the policy of the U.S. Government regarding historic preservation. The NHPA defines historic preservation to include "the protection, rehabilitation, restoration and reconstruction of districts, sites, buildings, structures, and objects significant in American history, architecture, archaeology, or culture." Section 106 of the NHPA requires federal agencies to "take into account" the effect of their undertakings (projects) on historical and archaeological resources. Undertakings are projects funded or permitted by a federal agency. The National Register of Historic Places (National Register or NRHP), which is maintained by the National Park Service (NPS), is a compilation of cultural resources that have been nominated and accepted as having historic, architectural, archaeological, engineering, or cultural significance, at the national, state or local level.

Paleontological Resources Preservation Act

The federal Paleontological Resources Preservation Act of 2002 codifies the generally accepted practice of limited vertebrate fossil collection and limited collection of other rare and scientifically significant fossils by qualified researchers. Researchers must obtain a permit from the appropriate state or federal agency and agree to donate any materials recovered to recognized public institutions, where they will remain accessible to the public and to other researchers.

STATE FRAMEWORK

California Register of Historical Resources

The California Register is a statewide program that is similar in scope to the National Register. It consists of a compilation of cultural resources that are significant within the context of local, California, or national history, but not necessarily history germane to other states. All resources listed in or formally determined eligible for the National Register are also eligible for the California Register, as are properties designated under municipal or county ordinances.

California Environmental Quality Act (CEQA)

The CEQA Statute and Guidelines include procedures for identifying, analyzing, and disclosing potential adverse impacts on historical resources, which include all cultural resources (archaeological sites and historical buildings, structures and objects) listed in or formally determined eligible for the National Register, the California Register, or listed in a local (county or municipal) register of historical resources. CEQA requires agencies that finance or approve public or private projects to assess the effects of the project on historical resources. If a project results in significant effects on important cultural resources, alternative plans or mitigation measures must be considered. However, only significant cultural resources (historical resources, as defined by CEQA) need to be addressed.

California Public Resources Code

California Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site, or any other archaeological, paleontological, or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands." Public lands are

defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Section 5097.5 also states that any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor. Section 30244 requires reasonable mitigation for impacts on paleontological resources that occur as a result of development on public lands.

Section 5097.98 of the California Public Resources Code prohibits obtaining or possessing Native American artifacts or human remains taken from a grave or cairn, and sets penalties for such acts. Additionally, Section 5097.98, as amended by Assembly Bill 2641, states:

(a) Whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American remains and may recommend to the owner or the person responsible for the excavation work means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make their recommendation within 24 hours of their notification by the Native American Heritage Commission. The recommendation may include the scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

(b) Whenever the commission is unable to identify a descendent, or the descendent identified fails to make a recommendation, or the landowner or his or her authorized representative rejects the recommendation of the descendent and the mediation provided for in subdivision (k) of Section 5097.94 fails to provide measures acceptable to the landowner, the landowner or his or her authorized representative shall re-inter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

4.5.4 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the CEQA Guidelines, the Podva Property Residential Development would have a significant impact on cultural resources if it would:

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

POTENTIAL IMPACTS AND MITIGATION MEASURES

Potential Adverse Changes to Known Cultural Resources

Impact 4.5-1: Project implementation would not cause a substantial adverse change in the significance of a known cultural resource as defined in Section 15064.5 of the State CEQA Guidelines.

Determination: Less than Significant Impact.

As described above, under the discussion of known cultural resources on the project site (Section 4.5.2):

- No potentially significant archaeological sites have been identified in the project APE as a result of the CHRIS/NWIC records search, research and/or surveys conducted.
- No known ethnographic, traditional, or contemporary Native American resources have been identified in or adjacent to the project APE.
- No Hispanic era dwellings or features have been recorded or identified in or adjacent to the project APE.
- No American Period features have been identified in or adjacent to the project APE as a result of research conducted for the proposed project.
- No potentially significant prehistoric or historically significant archaeological resources or potentially significant architectural resources were noted during research or the field surveys conducted for the proposed project.
- No historic properties listed, determined eligible, or potentially eligible for inclusion on the NRHP have been identified in or adjacent to the project.

The project proposes the demolition of the historic barn, metal outbuilding, and old corral area. Basin Research Associates determined that the historic wooden barn was constructed on the site by rancher Roger Podva around 1915 to 1920. It is wood framed and rectangular (50 by 25 feet), with a steeply pitched gable roof covered with modern corrugated metal and a wooden truss roof frame. Some of the posts are on concrete footings. The north and south exterior walls are covered with vertical wooden boards. Some north wall boards retain their square nails (indicating they may pre-date 1890). It is likely these boards were recycled from an older barn originally on the north side of the property. Some boards on the south wall also may be older. The north wall has two hinged doors one above the other. The upper door opened to hoist hay bales for storage in the barn. A later shed roof storage addition on the south covered with corrugated metal dates from ca. 1950. The corrugated metal addition measures 20 by 14 feet. Along the base of the east and west sides of the barn are hay troughs for feeding cattle.

According to Basin Research Associates, Podva barn is not eligible for the National Register of Historic Places because it is not significant under Criteria a, b or c and because it lacks historic integrity, as identified in greater detail below:

- the 1950s corrugated metal addition has compromised the barn's historic integrity;
- the barn's deteriorated condition has compromised the historic integrity of the barn's materials;
- it does not appear to have significant associations with local themes or cultural patterns of significance related to cattle ranching (National Register Criterion a);

- it is not a the primary historic building associated with Roger Podva (National Register Criterion b); and,
- it is not an exceptional or distinguished example of the hay barn in the Danville area (National Register Criterion c).

The barn also is not a contributing resource to a National Register eligible historic district, as the original ranch complex around the barn no longer survives.

No other buildings/structures are present on the parcel over 45 years in age. The steel outbuilding consists of a prefabricated equipment shed built within the last 13 years and is not historically significant. Regarding the old machinery and farm equipment on the project site, the current owner plans to auction or donate it prior to site development.

Thus, for the reasons identified above, project implementation would not adversely affect the significance of a known cultural resource as defined in Section 15064.5 of the State CEQA Guidelines, as none exist on the project site.

MITIGATION MEASURES

Mitigation is not required.

Potential Adverse Changes to Unknown Cultural Resources

Impact 4.5-2: Project implementation may cause a substantial adverse change to an unknown historic or archaeological resource, or result in the damage or destruction of unknown paleontological resources or human remains.

Determination: Less than Significant Impact with Mitigation Incorporation.

As noted above under the impact analysis for Known Cultural Resources:

- No prehistoric or historic era archaeological sites have been recorded or observed in or adjacent to the project APE.
- No ethnographic resources or traditional/contemporary Native American use areas and/or other features of cultural significance have been identified in or adjacent to the project APE.
- No Hispanic Period or American Period historic archaeological resources have been recorded or identified in or adjacent to the project APE.
- A wood-frame barn, located in the northeast corner of the project site, was built by rancher Roger Podva ca. 1915-1920. No other buildings/structures are present on the parcel over 45 years in age. The Podva Barn is not eligible for the National Register of Historic Places because it is not significant under Criteria a, b, or c and because it lacks historic integrity. The barn also is not a contributing resource to a National Register eligible historic district.

Thus, site grading and construction activities are not anticipated to result in impacts on cultural, historical, or archaeological resources. However, there is a possibility that potentially significant unrecorded cultural resources, including human remains, are present beneath the ground surface, and that such resources could be exposed during the construction of the project. Any ground disturbing activities have the potential to damage or destroy

potentially significant unknown cultural resources. Implementation of Mitigation Measure 4.5-2, identified below, would reduce potential impacts on significant unknown cultural resources to less than significant.

MITIGATION MEASURE

4.5-2 If subsurface deposits believed to be cultural or human in origin are discovered during the construction of the project, then all work shall halt within a 200-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeologist, shall be retained at the project applicant's expense to evaluate the significance of the find. Work shall not continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either: 1) not cultural in origin; or, 2) not potentially significant or eligible for listing on the National Register of Historic Places or the California Register of Historical Resources.

If a potentially-eligible resource is encountered, then the archaeologist, lead agency and project applicant shall arrange for either: 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, data recovery as mitigation. The determination shall be formally documented in writing and submitted to the lead agency and filed with the Northwest Information Center as verification that the provisions in this mitigation measure have been met.

If human remains of any kind are found during construction activities, all activities shall cease immediately and the Contra Costa County Coroner be notified as required by state law (Section 7050.5 of the Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she shall notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the most likely descendant(s) (MLD) to be consulted regarding treatment and/or reburial of the remains (Section 5097.98 of the Public Resources Code). If an MLD cannot be identified, or the MLD fails to make a recommendation regarding the treatment of the remains within 48 hours after gaining access to the remains, the Town shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. Work can continue once the MLD's recommendations have been implemented or the remains have been reburied if no agreement can be reached with the MLD (Section 5097.98 of the Public Resources Code).

Potential Damage or Destruction of Paleontological Resources

Impact 4.5-3: Project implementation has the potential to destroy unique paleontological resources.

Determination: Less than Significant Impact with Mitigation Incorporation.

Bivalve fossil shells were identified on the adjacent Elworthy property to the south of the project site within exposed San Pablo Group bedrock, and 96 fossil localities have been identified within a five-mile radius of the project site. Construction-related activities may encounter fossils. Any ground disturbing activities have the potential to damage or destroy potentially significant unknown paleontological resources. Implementation of Mitigation Measure 4.5-3, identified below, would reduce potential impacts on significant unknown paleontological resources to less than significant.

MITIGATION MEASURE

4.5-3 A paleontologist shall monitor initial project ground disturbing activities at or below five feet from the original ground surface or at any direct exposure of bedrock. A sample of alluvium below this soil layer depth shall be taken for presence-absence testing of microvertebrate fossils. Subsequent to the initial monitoring and sediment sampling, the paleontologist can then determine if further monitoring, periodic site reviews, or no further monitoring for paleontological resources is appropriate.

Paleontological monitors shall be empowered to halt construction activities at the location of a discovery to review the possible paleontological material and to protect the resource while it is being evaluated. Monitoring shall continue until, in the paleontologist's judgment, paleontological resources are not likely to be discovered.

If paleontological resources are discovered during project activities, all work within 25 feet of the discovery shall be redirected until the paleontological monitor has assessed the situation and made recommendations regarding their treatment. It is recommended that adverse effects on paleontological resources be avoided by project activities. If avoidance is not feasible, the paleontological resources shall be evaluated for their significance. If the resources are not significant, avoidance is not necessary. If the resources are significant, they shall be avoided to ensure no adverse effects, or such effects must be mitigated.

Upon project completion, a report shall be prepared documenting the methods and results of monitoring. The report shall be submitted to the Northwest Information Center, the Town of Danville, and the project applicant.

4.5.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.5-4: Project implementation could result in cumulatively considerable cultural resource impacts.

Determination: Less than Significant Impact with Mitigation Incorporation.

Cumulative cultural resource impacts would result from incremental changes that damage or destroy cultural resources within the Danville area. The proposed project has the potential to damage or destroy potentially significant unknown or unrecorded cultural or paleontological resources. Mitigation Measures 4.5-2 and 4.5-3 would help to protect potentially significant unknown or unrecorded cultural or paleontological resources from damage, destruction, or information loss as a result of future development within the project site. Therefore, implementation of these mitigation measures, along with implementation of similar mitigation measures by other projects in the Town's Planning Area, would prevent the project from contributing to cumulatively considerable cultural or paleontological resources impacts.

MITIGATION MEASURES

4.5-4 Implement Mitigation Measures 4.5-2 and 4.5-3.

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4.6 GEOLOGY AND SOILS

This section describes the geologic and seismic conditions within the project site and evaluates the potential geologic hazards, soils, and/or seismic impacts that could result from implementation of the proposed project. This section is based on information from the Town of Danville General Plan (General Plan), the *Elworthy Ranch Draft Environmental Impact Report* (State Clearinghouse No. 1999022064), certified July 1, 2008, the *Preliminary Geotechnical and Fault Evaluation Report, Podva Parcel, Danville, California* (geotechnical report), prepared by ENGEO Incorporated (ENGEO), August 5, 2011, included in Appendix D, the *Summary of Proposed Grading Concept, Podva Property Memorandum* (grading memo), prepared by Carlson, Barbee & Gibson Inc., July 13, 2012, and the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS).

4.6.1 ENVIRONMENTAL SETTING

REGIONAL GEOLOGY AND SEISMICITY

The project site is situated within the East Bay Hills of the Diablo Range in the Coast Ranges Geomorphic Province. This portion of the East Bay Hills is primarily composed of a complex sequence of Mesozoic- and Cenozoic-age sedimentary and volcanic rocks. The bedrock materials in the area are extensively folded and faulted as a result of regional forces, and their axes generally trend northwest.

The project site is located on the west flank of Las Trampas Ridge. Las Trampas Ridge is a prominent northwest trending ridge formed by uplifted resistant Miocene sandstones that include the Briones, Cierbo, and Nerloy Formations. The ridge crest is the west flank of the overturned Las Trampas Anticline. The core of the anticline is formed by interbedded sandstone and shale of the Middle Miocene Monterey group and contains the Las Trampas Fault. The Las Trampas Fault is a Late Quaternary east-vergent thrust fault, mapped just below the ridge crest. Regional geologic maps identify outcrops of apparently in-place Miocene bedrock in the incised drainages along the north and south project site boundaries. Miocene bedrock also outcrops on the relatively flat eastern terrace area of the project site. ENGEO believes that these outcrops are contiguous and represent the exposed portions of the east limb of the Las Trampas Anticline.

The Las Trampas Anticline and the Las Trampas Fault are features that are related to the regional structure of the East Bay Hills. The East Bay Hills is an uplifted range bordered on the east by the Calaveras Fault, an active strike-slip fault generally located at the east side of Las Trampas Ridge and the active Hayward Fault, located approximately nine miles southwest of the project site. In the project site vicinity, northeast-directed shortening between these two faults has resulted in the formation of several folds and thrust faults, including the Las Trampas and Bollinger Faults. South of the project site, the Calaveras Fault is considered to be "active[1]" by the State of California (State) and is believed to accommodate approximately four millimeters/year of long-term slip that is well expressed geomorphically by east-facing fault scarps, saddles, and deflected drainages. However, the fault bifurcates south of the project site near Bollinger Canyon Road, and the well defined fault traces disappear into a series of large landslide complexes on the east flank of Las Tramps Ridge.

The greater San Francisco Bay Area is recognized as one of the most seismically active regions in the world. Locally, the East Bay Hills region is characterized by northwest to southeast trending ridges that parallel the overall structural trend of the region. The structural trend is primarily controlled by the active faulting and folding related to movement within the San Andreas Fault system.

[1] An active fault is defined by the California State Mining and Geology Board (SMGB) as one which has "had surface displacement within Holocene time, about the last 11,000 years."

SITE GEOLOGY

The project site topography slopes down steeply from west to east with elevations ranging from a high of approximately 1,100 feet above mean sea level (msl) at Las Trampas Ridge line in the southwest corner of the site to a low of approximately 452 feet above msl at the east extent of the site at the terminus of Midland Way. The project site is generally characterized by a western portion of steeply rising slopes and a lower, level to slightly hilly eastern terrace portion. Numerous small ravines and ephemeral drainage channels exist on the site, especially in the higher elevations.

The project site is located over the eastern flank of the Las Trampas Fault fold. The bedrock layers underlying the site are overturned, inclined steeply northwest, and includes the Monterey Group and the Briones and Cierbo Sandstones. Steeply west-dipping sandstone layers are exposed under the relatively flat eastern terrace area and in the incised drainages that flank the property on the north and south.

GEOLOGIC HAZARDS

Faults and Seismicity

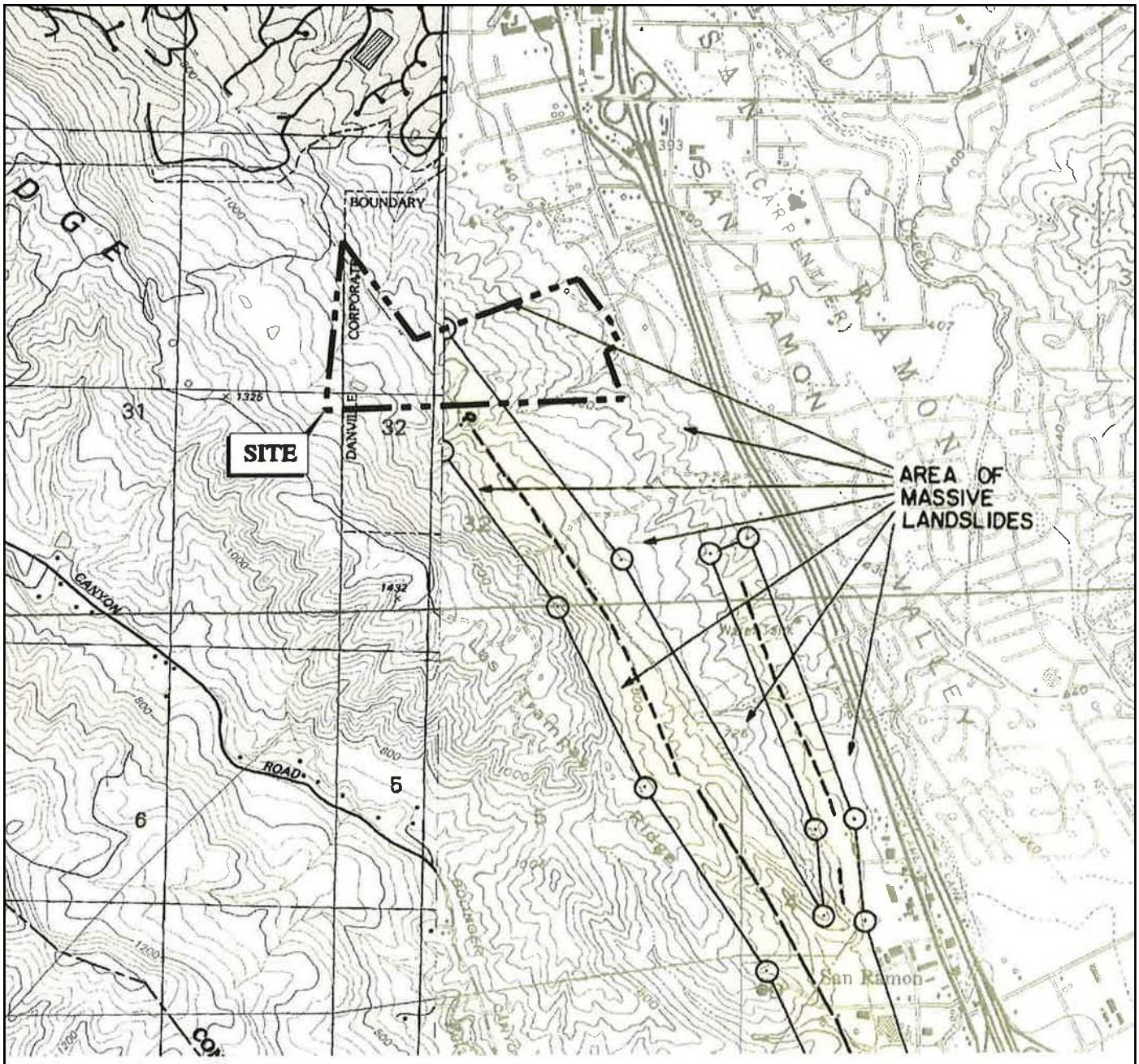
Calaveras Fault

The locations of active traces of the Calaveras Fault have been evaluated by the State of California. The earthquake Fault Hazard Zone map for the Diablo Quadrangle shows a possible active trace of the Calaveras Fault passing through the western portion of the project site, as depicted on Figure 4.6-1 (Project Site Earthquake Fault Zone Map). The State zone ends at the boundary of the Diablo Quadrangle because, beyond that point, the fault is not "sufficiently active and well-defined" to be included on the State maps. A recent study of the northern portion of the Calaveras Fault concluded that the slip from the active portion of the fault transfers through the East Bay Hills north and west of Danville via the complex interaction of several fold, thrust fault, and strike slip fault structures.

As discussed above, the Calaveras Fault is poorly defined in the project vicinity. In addition to the possible active trace of the Calaveras Fault passing through the western portion of the project site, the State of California has also defined two active traces south of the project site: a western trace that appears to be the main fault trace, and a secondary eastern trace that bifurcates from the main about 3,000 feet north of Bollinger Canyon Road, as depicted on Figure 4.6-1. The eastern trace appears to terminate approximately 2,500 feet south of the project site on the adjacent Elworthy Property, while the western trace appears to extend across the upper portion of the adjacent Elworthy Property, terminating just short of the proposed project site's southern boundary. These traces are defined by a series of linear troughs and displaced drainages, and have been investigated and confirmed during a number of consultant trench studies. However, it has been concluded that the fault traces further to the north of these traces could not be sufficiently defined in accordance with State criteria due to the presence of the deep-seated landslide complexes that cover the east side of Las Trampas Ridge. Moreover, none of the trench studies of the traces to the north of the project site found evidence for the Calaveras Fault, either in alluvium or in the underlying bedrock.

Onsite Faults

Fault traces have been mapped in the project site, as noted above, and are depicted in Figure 4.6-2 (Local Fault Mapping and Explorations). ENGEO conducted a subsurface investigation to evaluate the possible presence of these mapped north-south trending fault traces, as identified in Figure 4.6-2, as well as to examine subsurface conditions along the toe of the deep-seated landslide complex mapped in the western portion of the project site. Based on the results of the geologic exploration, ENGEO found no evidence of faulting and concluded that there



EXPLANATION

1906 C — FAULTS CONSIDERED TO HAVE BEEN ACTIVE DURING HOLOCENE TIME AND TO HAVE A RELATIVELY HIGH POTENTIAL FOR SURFACE RUPTURE; SOLID LINE WHERE ACCURATELY LOCATED, LONG DASH WHERE APPROXIMATELY LOCATED, SHORT DASH WHERE INFERRED, DOTTED WHERE CONCEALED; QUERY (?) INDICATES ADDITIONAL UNCERTAINTY. EVIDENCE OF HISTORIC OFFSET INDICATED BY YEAR OF EARTHQUAKE-ASSOCIATED EVENT OR C FOR DISPLACEMENT CAUSED BY CREEP OR POSSIBLE CREEP

EARTHQUAKE FAULT ZONE BOUNDARIES; DELINEATED AS STRAIGHT-LINE SEGMENTS THAT CONNECT ENCIRCLED TURNING POINTS SO AS TO DEFINE EARTHQUAKE FAULT ZONE SEGMENTS

N

0 FEET 2000
0 METERS 1000

Source: ENGEO (2012)

RBF A Baker Company

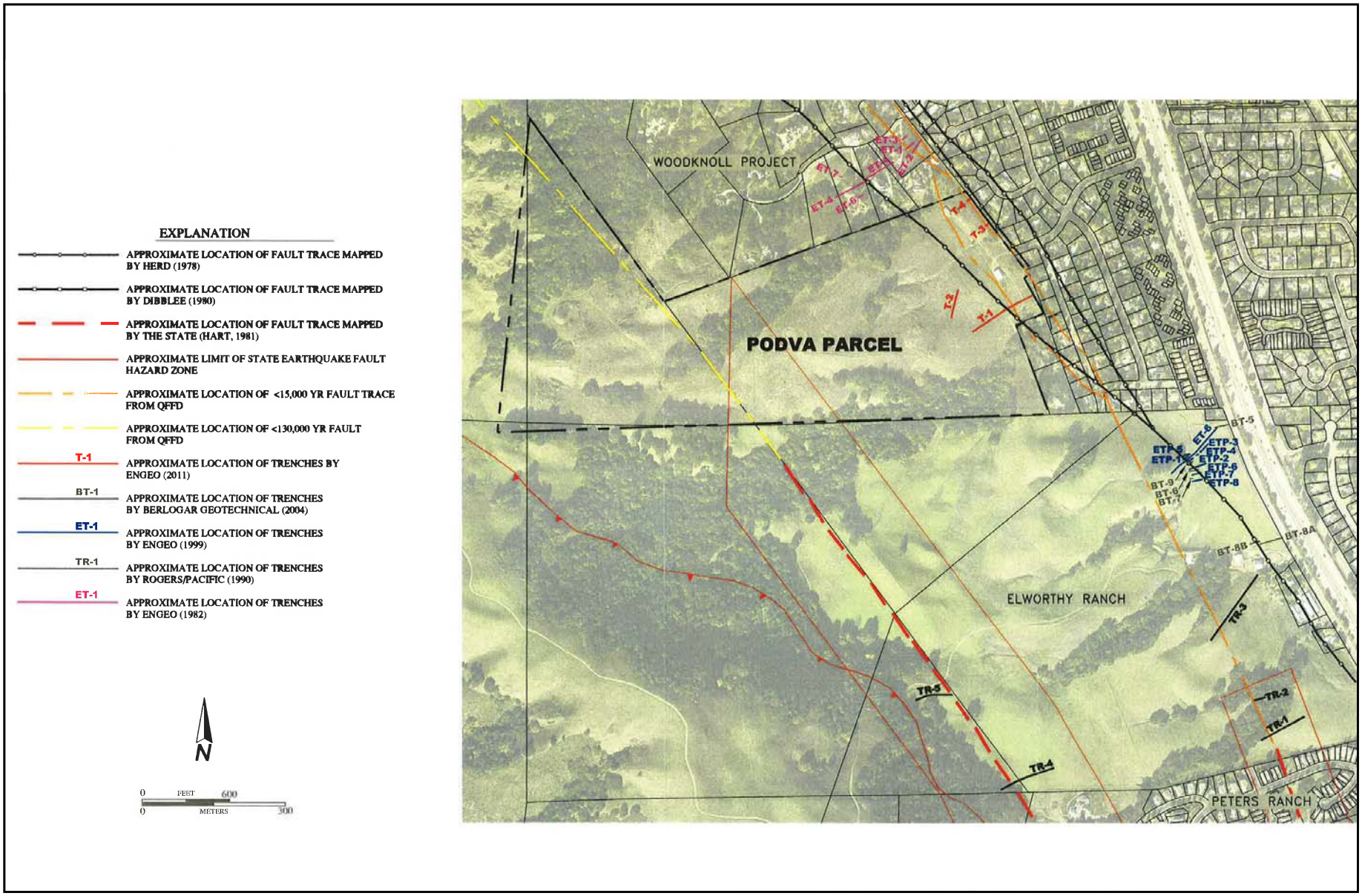
North

PROJECT SITE EARTHQUAKE FAULT ZONE MAP

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.6-1



Source: ENGEO (2012)

RBF A Baker Company

North

LOCAL FAULT MAPPING AND EXPLORATIONS

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.6-2

are no active faults passing through the eastern portion of the project site and that the resulting risk of surface fault rupture at the project site is low.

Landslides

Landslide mapping in the project area identifies a series of large, deep-seated landslide complexes along the east side of Las Trampas Ridge, as depicted in Figure 4.6-3 (Regional Landslide Map). The landslides depicted on Figure 4.6-3 were identified based on geomorphic features that include numerous arcuate headscarps, extensive areas of hummocky terrain, and evidence of relatively recent soil movement and earthflow activity. The geomorphic expression and relative age of these features vary from subdued and presumably old on the south side of the project site to pronounced and locally active on the north portion of the site.

On the project site, the landslides range from deep-seated older features on the upper hillside to relatively recent features of moderate to shallow depth on lower slopes and adjacent to incised drainages. The eastern limit of the older, deep-seated landslide complex and related deposits on the project site occurs at the western edge of exposed Cierbo Formation bedrock. The proposed development area is underlain by Cierbo Formation sandstone that has not been affected by landslides.

Based on its subsurface investigation, ENGEO concluded that the relatively level eastern terrace area proposed for development with the 20-unit subdivision, has not been affected by deep-seated landsliding and is suitable for the proposed development. While recently active landslides mapped on the slopes in the western portion of the project site appear to be slump/earthflow type features that have developed in the stratified debris fan deposits, ENGEO determined that these landslide do not appear to have mobilized and flowed great distances due to the fine-grained and cohesive nature of the soils. Thus, ENGEO concluded that the risk of direct landslide impacts on the proposed development area is low. Landslide and earthflow/debris flow hazards originating on the western site slopes can be successfully mitigated by following the recommendations of a design-level geotechnical engineering investigation required by Mitigation Measure 4.6-2.

Seismic Ground Shaking

Ground shaking, rather than surface fault rupture, is the cause of the most damage during earthquakes, and can cause severe damage to structures located relatively long distances away from faults. The project site could be affected by ground shaking due to movement along any of the active faults in the region, and a large magnitude earthquake has the potential to cause significant ground shaking within the project site. The intensity of ground shaking felt at the site from future earthquakes would depend on several factors, including the distance of the site to the earthquake epicenter, the magnitude and duration of the earthquake, and the character of the underlying soil and/or bedrock. In general, the greater the distance to the earthquake epicenter, the lesser the intensity of the ground shaking that is anticipated. Sites underlain by thick, loose soils, such as alluvium and artificial fill, tend to amplify and prolong ground shaking, while bedrock is less susceptible.

Liquefaction, Lateral Spreading, and Ground Lurching

Liquefaction is a phenomenon in which saturated cohesionless soils are subject to a temporary loss of shear strength because of pore pressure buildup on cyclic shear stresses associated with earthquakes. Later spreading is a failure within a nearly horizontal soil zone, commonly associated with liquefaction, which causes the overlying soil mass to move towards a free face or down a gentle slope Ground lurching can occur in soft, saturated clays and silts that are subjected to strong ground shaking during earthquakes. According to ENGEO's subsurface investigation, the soils in the proposed development footprint are dense, cohesive, and non-liquefiable and therefore, the risk of liquefaction, lateral spreading, and ground lurching for the project is low.

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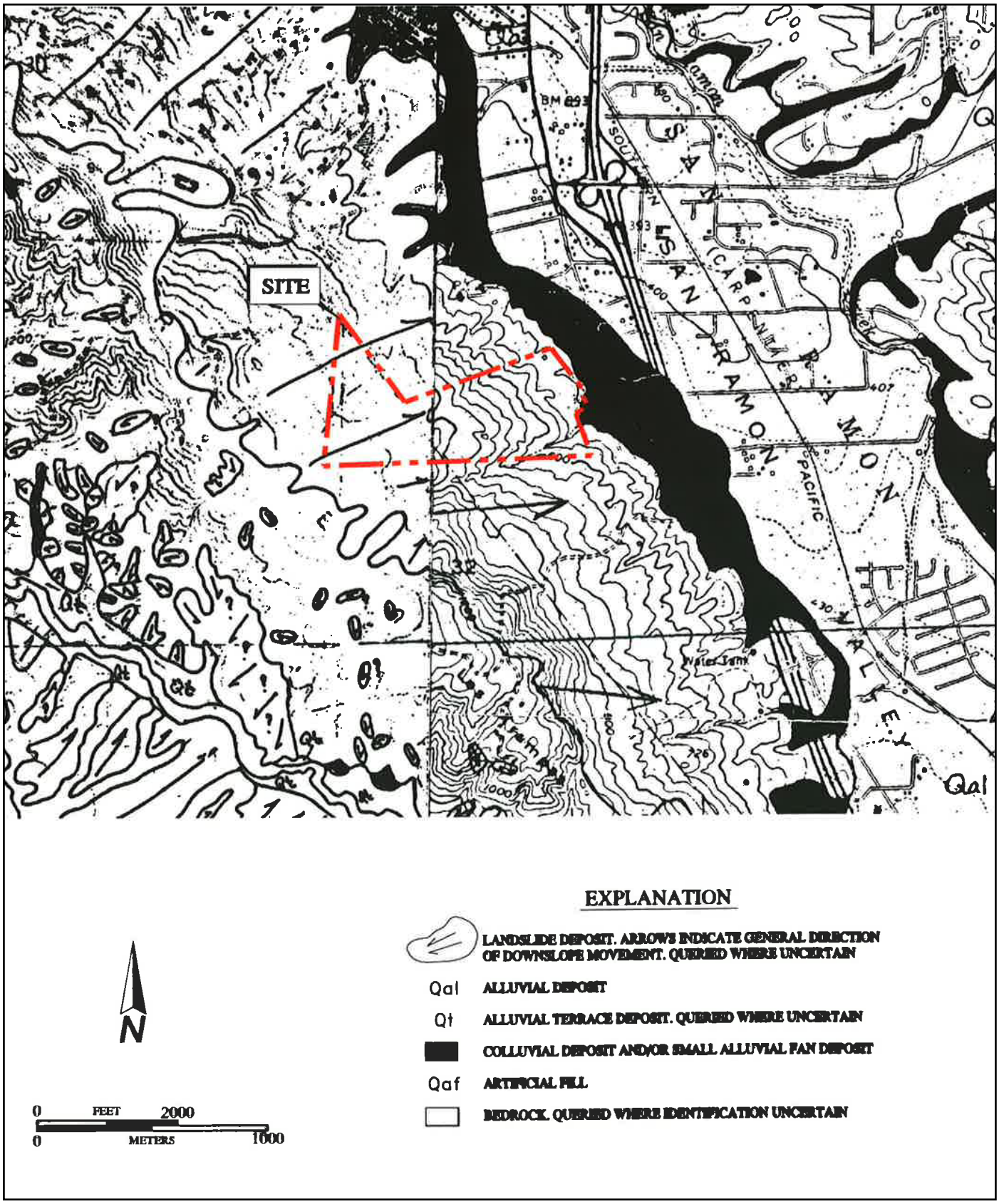

Source: ENGEO (2012)

RBF A Baker Company

North

REGIONAL LANDSLIDE MAP

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.6-3

Expansive Soils

Expansive soils shrink and swell as a result of seasonal fluctuations in moisture content. This can cause heavy cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Building damage due to volume changes associated with expansive soils can be reduced through proper foundation design.

Samples of site surficial soils collected by ENGEO during the subsurface investigation were subjected to laboratory tests to measure grain size distribution and plasticity. The test results show that the surficial soils in the proposed development footprint are of low to moderate plasticity. The sandstone bedrock is non-plastic. Fills derived from cuts in slopes west of the proposed development footprint may contain moderately to highly expansive clay. Expansive soil hazards at the project site can be mitigated by careful handling of excavated soils and treatment of cut-fill transition lots based on the recommendations of a design-level geotechnical engineering investigation as required by Mitigation Measure 4.6-2.

Compressible Soils

According to ENGEO, existing fills and surficial soils at the project site may be compressible due to past disking efforts. Compressible soils can be mitigated by proper grading techniques, such as stripping, ripping, and reprocessing or removal and replacement with engineered fill as identified in the recommendations of a design-level geotechnical engineering investigation required by Mitigation Measure 4.6-2.

Soil Erosion

Soil erosion occurs when soil is loosened and is transported elsewhere, typically by wind or water. It is a natural process and in general, soil is roughly removed as fast as it formed. However, certain activities, such as vegetation removal due to construction or as a result of a fire, can result in "accelerated" soil erosion, or the loss of soil at a much faster rate that it is formed Construction activities associated with the proposed project have the potential to increase the chances of erosion.

4.6.2 REGULATORY SETTING

STATE FRAMEWORK

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to prevent the construction of buildings used for human occupancy on the surface trace of active faults (those having evidence of surface displacement within about the last 11,000 years). It requires the State Geologist to delineate earthquake fault zones around the surface traces of active faults and publish maps showing these zones.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act was developed to protect the public from the effects of strong ground shaking, liquefaction, landslides or other ground failure, and from other hazards caused by earthquakes. The Act requires the State Geologist to delineate various seismic hazard zones and requires cities, counties and other local permitting agencies to regulate certain development projects within these zones. Before a development permit is granted for a site within a seismic hazard zone, a geotechnical investigation of the site must be conducted and appropriate mitigation measures incorporated into the project design.

California Building Code

The California Building Code (CBC) is contained in the California Code of Regulations (CCR), Title 24, Part 2. Title 24 is assigned to the California Building Standards Commission, which is responsible for coordinating building standards. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location and maintenance of all building and structures within its jurisdiction. The CBC is based on the International Building Code. The 2007 CBC is based on the 2006 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments which are based on the American Society of Civil Engineers (ASCE) Minimum Design Standards 7-05. ASCE 7-05 provides requirements for general structural design and includes ways for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion into building codes. The Town adopted the CBC by reference as part of its Municipal Code pursuant to Government Code Section 50022.2 (Danville Municipal Code Section 10-1).

TOWN OF DANVILLE

Danville 2030 General Plan

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to prevent the construction of buildings used for human occupancy on the surface trace of active faults (those having evidence of surface displacement within about the last 11,000 years). It requires the State Geologist to delineate earthquake fault zones around the surface traces of active faults and publish maps showing these zones.

The Resource and Hazards chapter of the General Plan contains several goals and policies with respect to geologic hazards, including the following:

Policy 24.01 Recognize local seismic risks and incorporate earthquake protection measures in the Development Review process.

Policy 24.02 Prohibit construction of any new facilities serving public safety such as fire stations and hospitals in the Alquist-Priolo Earthquake Special Studies Zones.

Policy 24.03 Require soils and geologic reports for all projects proposed in scenic hillside development areas, as defined by the Town's Scenic Hillside and Major Ridgeline Development Ordinance, and in other areas where the potential for landslides, liquefaction, subsidence, or severe ground shaking exists. Assure that development in these areas mitigates potential landslide hazards and other geologic hazards.

Policy 24.04 Require all development on hillside sites to be designed and constructed to minimize cutting and filling of slopes, avoid high risk landslide areas, and fully address environmental and aesthetic concerns.

Policy 24.05 Prohibit the division of land in a manner that would create a new parcel that is entirely 30 percent slope or greater, unless the intended use of the new parcel is open space.

Note: The policy above is intended to prohibit lot splits and subdivisions on slopes greater than 30 percent. The policy does not preclude the development of an individual home on an existing legally created lot if that lot is greater than 30 percent slope. The policy also does not preclude

the subdivision of sites which contain a mix of areas above and below 30 percent slope, provided all future building sites will be on land that is less than 30 percent slope.

Policy 24.06 Require that roads and drainage systems constructed in hillside areas are engineered to standards that prevent excessive maintenance and repair costs.

Policy 24.07 Maintain structural design and engineering standards which ensure that buildings and infrastructure are constructed to minimize damage resulting from expansive soils, erosion, subsidence, and other local geologic conditions.

Policy 24.08 Encourage the retrofitting of existing structures to reduce the potential for damage during a major earthquake, particularly residential soft-story structures and critical public facilities.

Policy 24.09 Ensure that development approvals do not result in the loss of unique paleontological resources or geological features.

Note: This should be accomplished by consulting with a suitably qualified paleontologist or geologist if it is known, or determined, that fossils, or geological features of high scientific value are, or may be, present on land that will be developed. The Town will require consultation with a paleontologist if vertebrate fossils are uncovered during site excavation.

Policy 24.10 Require submittal of a Geotechnical report by a qualified engineering geologist, that specifies the location of active faults, and recommends appropriate setbacks prior to construction of any structure intended for human occupancy within the Alquist-Priolo Fault Zone.

4.6.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the CEQA Guidelines, the Podva Property Residential Development would have a significant impact on geology and soils if it would:

- Expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault, strong seismic ground shaking, seismic-related ground failure (including liquefaction), or landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic formation unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or offsite landslides, lateral spreading, subsidence, liquefaction , or collapse; and/or,
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (2004), creating substantial risks to life or property.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Risks Associated with Earthquake Fault Rupture

Impact 4.6-1: **Implementation of the proposed project would not expose people or structures to potentially adverse effects associated with earthquake fault rupture.**

Determination: **Less than Significant Impact.**

As described under the discussion of geologic hazards, fault traces have been mapped in the project site and are depicted in Figure 4.6-2 (Local Fault Mapping and Explorations). ENGEO conducted a subsurface investigation to evaluate the possible presence of these mapped fault traces and found no evidence of faulting. Thus, ENGEO concluded that there are no active faults passing through the eastern portion of the project site and that the resulting risk of surface fault rupture at the project site is low. Moreover, as described under the discussion of geologic hazards, the Calaveras Fault is poorly defined in the project vicinity. Two traces have been mapped south of the project site. The eastern trace appears to terminate approximately 2,500 feet south of the project site on the adjacent Elworthy Property, while the western trace appears to extend across the upper portion of the adjacent Elworthy Property, terminating just short of the proposed project site's southern boundary. In addition, fault traces further to the north of the project site could not be sufficiently defined in accordance with State criteria and none of the trench studies of the traces to the north of the project site found evidence for the Calaveras Fault, either in alluvium or in the underlying bedrock. As such, impacts associated with fault rupture at the project site are less than significant.

MITIGATION MEASURES

Mitigation is not required.

Seismically-Induced Ground Shaking and Landslides

Impact 4.6-2: **Implementation of the proposed project could expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death as a result of seismically-induced ground shaking or landslides.**

Determination: **Less than Significant Impact with Mitigation Incorporation.**

Implementation of the proposed project would involve the construction of structures in a seismically active area. While surface rupture from a known fault is unlikely to occur, as described above under Impact Analysis 4.6-1, the project site would likely experience moderate ground shaking as a result of earthquakes occurring on offsite faults. Earthquake related ground shaking may cause concrete slabs, building and retaining walls, and pavement at the project site to crack, and potentially threaten the integrity of structures and the safety of people present at the time of the earthquakes. Moreover, ground motions have the potential to initiate secondary events such as landslides on the project site's western slopes, which could also threaten the integrity of structures and the safety of people present on the project site.

The likelihood of ground shaking and seismic-related liquefaction impacts can be reduced if future development is constructed in accordance with the recommendations of a site-specific, design-level geotechnical engineering report and the CBC. Using standard construction techniques and following the recommendations of a site-

specific, design-level geotechnical investigation and applicable codes and requirements, structures can be designed and built to withstand the geologic hazards listed above. Additionally, a Geologic Hazard Abatement District (GHAD) would be formed for the long term remediation and repair of landslides, erosion and other geologic hazards. The formation of a GHAD will provide an ongoing resource for managing geologic hazards that pose a threat to properties within the boundaries of the GHAD. Although some structural damage is typically unavoidable, building codes and local construction requirements help to protect against building collapse and personal injury during seismic events. Future development would be required to comply with applicable regulations, such as the CBC, and the requirements of the Resource and Hazards chapter of the General Plan. Mitigation Measure 4.6-2a below requires a site-specific, design-level geotechnical investigation for all future development in the project site to further reduce potential ground shaking and seismic-related landslide hazards to less than significant. Mitigation 4.6-2b also further reduces potential ground shaking and seismic-related landslide hazards by requiring the formation of a GHAD to mitigate and establish a plan of control to prevent damage resulting from geologic hazards.

Seismically-induced landslides are not expected to occur in the eastern terraced area of the project site due to the presence of stable and competent Miocene bedrock. Thus, as proposed, locating the 20-unit subdivision in this portion of the project site would reduce the project's risks associated with seismically-induced landslides. However, the potential exists for landslides to occur in the western portion of the project site and soil sloughing and earthflows originating in this area could have adverse affects on the proposed 20-unit subdivision. To reduce the risk of seismically-induced landslides in the western portion of the project site affecting the proposed 20-unit subdivision in the eastern terraced portion of the project site, future development in the project site would be required to comply with the recommendations of a site-specific, design-level geotechnical investigation. Compliance with the recommendations of a site-specific, design-level geotechnical investigation would reduce potential landslide impacts to less than significant.

MITIGATION MEASURES

4.6-2a A design-level geotechnical engineering investigation shall be performed prior to the issuance of grading permits for all future development within the project site. The design and construction of project-related development shall incorporate the recommendations of the design-level geotechnical engineering investigation.

4.6-2b The applicant shall grant the formation of a Geologic Hazard Abatement District (GHAD) on the proposed project in order to address long term remediation and repair of landslides, erosion and other geologic hazards.

Soil Erosion

Impact 4.6-3: Implementation of the proposed project could result in substantial soil erosion or the loss of topsoil.

Determination: Less than Significant Impact with Mitigation Incorporation.

Future development of the project site would involve vegetation removal, grading, and earth excavation, which would expose soils and increase the potential for soil erosion from wind or stormwater runoff. Erosion can be controlled using standard construction practices, based on a site-specific design-level geotechnical study that is required by Mitigation Measure 4.6-2a. In addition, the formation of a GHAD as required in Mitigation Measure 4.6-2b and adherence to applicable state and local regulations, codes and requirements, as identified in Section 4.9 (Hydrology and Water Quality) would ensure that impacts associated with construction related soil erosion would be less than significant.

MITIGATION MEASURES

4.6-3 Implement Mitigation Measures 4.6-2a and 4.6-2b.

Unstable Soils

Impact 4.6-4: Project implementation would result in soils that could become unstable and potentially result in slope failure.

Determination: Less than Significant Impact with Mitigation Incorporation.

As described under the discussion of geologic hazards, based on ENGEO's subsurface investigation, the soils in the proposed development footprint are dense, cohesive, and non-liquefiable and therefore, the risk of liquefaction, lateral spreading, and ground lurching for the project is low. Impacts would be less than significant.

Graded slopes proposed for the project could be subject to slope stability issues related to natural soil and groundwater conditions in cut slopes and in found soils below fills. The stability of graded slopes is also affect by construction methods such as slop inclination, fill compaction, and the adequacy of subsurface drainage systems. Seismic ground shaking can result in lateral and vertical deformation of graded slopes. Construction of the project would require grading and construction of both fill and cut slopes to accommodate roads and improvements.

Graded slopes constructed for the proposed project would be required to meet standards of slope stability that are appropriate for residential construction. Standards for Contra Costa County and Northern California typically require that all graded slopes have a minimum factor of 1.5 for static conditions and 1.1 for seismic loading conditions. According to ENGEO, cut slopes in Cierbo Sandstone can be inclined as steep as 2:1 for heights up to 30 feet. Fill slopes can be inclined as steep as 2:1 for heights up to 30 feet if they are constructed of selected granular fill derived from Cierbo Sandstone.

Detailed recommendations for graded slopes would be identified in the design-level geotechnical engineering investigation required by Mitigation Measure 4.6-2a. With the implementation of the recommendations of the design-level geotechnical engineering investigation required by Mitigation Measure 4.6-2a, impacts associated with failure of graded slopes would be less than significant.

MITIGATION MEASURES

4.6-4 Implement Mitigation Measure 4.-6-2a.

Expansive Soils

Impact 4.6-5: Expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) may be used as fill for the proposed project.

Determination: Less than Significant Impact with Mitigation Incorporation.

As described under the discussion of geologic hazards, the surficial soils in the proposed development footprint are of low to moderate plasticity and not highly expansive. The Cierbo sandstone bedrock is non-expansive. Fills derived from mixtures of Ciebro bedrock cuts and thin surficial soils are not anticipated to be highly expansive. However, fills derived from cuts in slopes west of the proposed development footprint may contain moderately to highly expansive clay. Thus, the composition of fills to be placed in the slopes or in the upper five feet of

building pads should be carefully controlled to avoid concentration of surface soils in those locations. Expansive soil hazards at the project site can be mitigated by careful handling of excavated soils and treatment of cut-fill transition lots based on the recommendations of a design-level geotechnical engineering investigation as required by Mitigation Measure 4.6-2a.

MITIGATION MEASURES

4.6-5 Implement Mitigation Measure 4.-6-2a.

Compressible Soils

Impact 4.6-6: Project site soils may be compressible and could result in potentially adverse effects on people or structure.

Determination: Less than Significant Impact with Mitigation Incorporation.

As described under the discussion of geologic hazards, existing fills and surficial soils at the project site may be compressible due to past disking efforts. Compressible soils can be mitigated by proper grading techniques, such as stripping, ripping, and reprocessing or removal and replacement with engineered fill as identified in the recommendations of a design-level geotechnical engineering investigation required by Mitigation Measure 4.6-2a. Additionally, the formation of a GHAD as required in Mitigation Measure 4.6-2b will further reduce impacts related to compressible soils to less than significant.

MITIGATION MEASURES

4.6-6 Implement Mitigation Measure 4.-6-2a and 4.6-2b.

4.6.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.6-7: Project implementation could result in cumulatively considerable seismic or soil hazards.

Determination: Less than Significant Impact with Mitigation Incorporation.

As described above, project implementation would not result in significant effects associated with seismic or soil hazards with adherence to applicable state and local regulations, codes and requirements and the implementation of Mitigation Measure 4.6-2a and Mitigation Measure 4.6-2b. Other individual development projects would be reviewed for seismic safety and would be required to comply with local regulations, codes and requirements. Moreover, none of the cumulative projects would reasonably be expected to be affected by the exact same seismic or soil impacts as the proposed project due to the unique characteristics of each project and site. Therefore, the proposed project's geology and soils impacts would not be cumulatively considerable.

MITIGATION MEASURES

4.6-7 Implement Mitigation Measure 4.-6-2a and 4.6-2b.

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4.7 GREENHOUSE GAS EMISSIONS

This section evaluates greenhouse gas (GHG) emissions associated with the proposed project and analyzes project compliance with applicable regulations. Consideration of the project's consistency with applicable plans, policies and regulations, as well as the introduction of new sources of GHGs, is included in this section.

4.7.1 ENVIRONMENTAL SETTING

GLOBAL CLIMATE CHANGE GASES

The natural process through which heat is retained in the troposphere is called the "greenhouse effect."[1] The greenhouse effect traps heat in the troposphere through a three-fold process as follows: short wave radiation emitted by the Sun is absorbed by the Earth; the Earth emits a portion of this energy in the form of long wave radiation; and GHGs in the upper atmosphere absorb this long wave radiation and emit this long wave radiation into space and toward the Earth. This "trapping" of the long wave (thermal) radiation emitted back toward the Earth is the underlying process of the greenhouse effect.

The most abundant GHGs are water vapor and carbon dioxide (CO_2). Many other trace gases have greater ability to absorb and re-radiate long wave radiation; however, these gases are not as plentiful. For this reason, and to gauge the potency of GHGs, scientists have established a Global Warming Potential (GWP) for each GHG based on its ability to absorb and re-radiate long wave radiation.

GHGs normally associated with the proposed project include the following:[2]

- *Water Vapor (H_2O)*. Although water vapor has not received the scrutiny of other greenhouse gases, it is the primary contributor to the greenhouse effect. Natural processes, such as evaporation from oceans and rivers, and transpiration from plants, contribute 90 percent and 10 percent of the water vapor in our atmosphere, respectively.

  The primary human related source of water vapor comes from fuel combustion in motor vehicles; however, this is not believed to contribute a significant amount (less than one percent) to atmospheric concentrations of water vapor. The Intergovernmental Panel on Climate Change (IPCC) has not determined a GWP for water vapor.

- *Carbon Dioxide (CO_2)*. CO_2 is primarily generated by fossil fuel combustion in stationary and mobile sources. Due to the emergence of industrial facilities and mobile sources in the past 250 years, the concentration of CO_2 in the atmosphere has increased 35 percent.[3] CO_2 is the most widely emitted greenhouse gas and is the reference gas (GWP of 1) for determining GWPs for other greenhouse gases.

- *Methane (CH_4)*. Methane is emitted from biogenic sources, incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. In the U.S., the top three sources of methane are landfills, natural gas systems, and enteric fermentation. Methane is the primary component of natural gas, which is used for space and water heating, steam production, and power generation. The GWP of methane is 21.

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1 The troposphere is the bottom layer of the atmosphere, which varies in height from the Earth's surface to 10 to 12 kilometers.

2 All GWPs are given as 100-year GWP. Unless noted otherwise, all GWPs were obtained from the Intergovernmental Panel on Climate Change. Climate Change (Intergovernmental Panel on Climate Change, *Climate Change, The Science of Climate Change – Contribution of Working Group I to the Second Assessment Report of the IPCC*, 1996).

3 U.S. Environmental Protection Agency, *Inventory of United States Greenhouse Gas Emissions and Sinks 1990 to 2004*, April 2006.

- *Nitrous Oxide (N_2O)*. N_2O is produced by both natural and human related sources. Primary human related sources include agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N_2O is 310.
- *Hydrofluorocarbons (HFCs)*. HFCs are typically used as refrigerants for both stationary refrigeration and mobile air conditioning. The use of HFCs for cooling and foam blowing is growing, as the continued phase out of chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs) gains momentum. The GWP of HFCs range from 140 for HFC-152a to 11,700 for HFC-23.[4]
- *Perfluorocarbons (PFCs)*. PFCs are compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semi conductor manufacturing. PFCs are potent greenhouse gases with a GWP several thousand times that of CO_2, depending on the specific PFC. Another area of concern regarding PFCs is their long atmospheric lifetime (up to 50,000 years).[5] The GWP of PFCs range from 6,500 to 9,200.
- *Sulfur hexafluoride (SF_6)*. SF_6 is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF_6 is the most potent greenhouse gas that has been evaluated by the Intergovernmental Panel on Climate Change with a GWP of 23,900. However, its global warming contribution is not as high as the GWP would indicate due to its low mixing ratio compared to CO_2 (four parts per trillion [ppt] in 1990 versus 365 parts per million [ppm], respectively).[6]

In addition to the six major greenhouse gases discussed above (excluding water vapor), many other compounds have the potential to contribute to the greenhouse effect. Some of these substances were previously identified as stratospheric ozone (O_3) depletors; therefore, their gradual phase out is currently in effect. The following is a listing of these compounds:

- *Hydrochlorofluorocarbons (HCFCs)*. HCFCs are solvents, similar in use and chemical composition to CFCs. The main uses of HCFCs are for refrigerant products and air conditioning systems. As part of the Montreal Protocol, all developed countries that adhere to the Montreal Protocol are subject to a consumption cap and gradual phase out of HCFCs. The U.S. is scheduled to achieve a 100 percent reduction to the cap by 2030. The GWPs of HCFCs range from 93 for HCFC-123 to 2,000 for HCFC-142b.[7]
- *1,1,1 trichloroethane*. 1,1,1 trichloroethane or methyl chloroform is a solvent and degreasing agent commonly used by manufacturers. The GWP of methyl chloroform is 110 times that of CO_2.[8]
- *Chlorofluorocarbons (CFCs)*. CFCs are used as refrigerants, cleaning solvents, and aerosols spray propellants. CFCs were also part of the U.S. Environmental Protection Agency (EPA) Final Rule (57 FR 3374) for the phase out of O_3 depleting substances. Currently, CFCs have been replaced by HFCs in cooling systems and a variety of alternatives for cleaning solvents. Nevertheless, CFCs remain suspended in the

[4] U.S. Environmental Protection Agency, *High GWP Gases and Climate Change*, June 22, 2010. http://www.epa.gov/highgwp/scientific.html#hfc
[5] U.S. Environmental Protection Agency, *High GWP Gases and Climate Change*, June 22, 2010. http://www.epa.gov/highgwp/scientific.html#pfc
[6] U.S. Environmental Protection Agency, *High GWP Gases and Climate Change*, June 22, 2010. http://www.epa.gov/highgwp/scientific.html#sf6
[7] U.S. Environmental Protection Agency, *Protection of Stratospheric Ozone: Listing of Global Warming Potential for Ozone Depleting Substances*, dated October 29, 2009. http://www.epa.gov/EPA-AIR/1996/January/Day-19/pr-372.html
[8] Ibid.

atmosphere contributing to the greenhouse effect. CFCs are potent greenhouse gases with GWPs ranging from 4,600 for CFC 11 to 14,000 for CFC 13.[9]

4.7.2 REGULATORY SETTING

FEDERAL

The Federal Clean Air Act (FCAA) requires the U.S. Environmental Protection Agency (EPA) to define national ambient air quality standards (national standards) to protect public health and welfare in the United States. The FCAA does not specifically regulate GHG emissions; however, on April 2, 2007 the U.S. Supreme Court in *Massachusetts v. U.S. Environmental Protection Agency*, determined that GHGs are pollutants that can be regulated under the FCAA. The EPA adopted an endangerment finding and cause or contribute finding for GHGs on December 7, 2009. Under the endangerment finding, the Administrator found that the current and projected atmospheric concentrations of the six, key, well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) threaten the public health and welfare of current and future generations. Under the cause of contribute finding, the Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Based on these findings, on April 1, 2010, the EPA finalized the light-duty vehicle rule controlling GHG emissions. This rule confirmed that January 2, 2011, is the earliest date that a 2012 model year vehicle meeting these rule requirements may be sold in the United States. On May 13, 2010, the EPA issued the final GHG Tailoring Rule. This rule set thresholds for GHG emissions that define when permits under the Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. Implementation of the Federal rules is expected to reduce the level of emissions from new motor vehicles and large stationary sources.

STATE OF CALIFORNIA

California Global Climate Change Regulatory Programs

Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is occurring, and that there is a real potential for severe adverse environmental, social, and economic effects in the long term. Every nation emits GHGs and as a result makes an incremental cumulative contribution to global climate change; therefore, global cooperation will be required to reduce the rate of GHG emissions enough to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

Executive Order S-1-07. Executive Order S-1-07 proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in California by at least ten percent by 2020. This order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

Executive Order S-3-05. Executive Order S-3-05 set forth a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels;

[9] U.S. Environmental Protection Agency, *Class I Ozone Depleting Substances*, August 19, 2010. http://www.epa.gov/ozone/ods.html

- By 2020, reduce GHG emissions to 1990 levels; and
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The Executive Order directed the secretary of the California Environmental Protection Agency (Cal/EPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. The secretary will also submit biannual reports to the governor and California Legislature describing the progress made toward the emissions targets, the impacts of global climate change on California's resources, and mitigation and adaptation plans to combat these impacts. To comply with the executive order, the secretary of Cal/EPA created the California Climate Action Team (CAT), made up of members from various State agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of California businesses, local governments, and communities and through State incentive and regulatory programs.

Executive Order S-13-08. Executive Order S-13-08 seeks to enhance the State's management of climate impacts including sea level rise, increased temperatures, shifting precipitation, and extreme weather events by facilitating the development of State's first climate adaptation strategy. This will result in consistent guidance from experts on how to address climate change impacts in the State of California.

Executive Order S-14-08. Executive Order S-14-08 expands the State's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. CARB adopted the "Renewable Electricity Standard" on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-20-04. Executive Order S-20-04, the California Green Building Initiative, (signed into law on December 14, 2004), establishes a goal of reducing energy use in State-owned buildings by 20 percent from a 2003 baseline by 2015. It also encourages the private commercial sector to set the same goal. The initiative places the California Energy Commission (CEC) in charge of developing a building efficiency benchmarking system, commissioning and retro-commissioning (commissioning for existing commercial buildings) guidelines, and developing and refining building energy efficiency standards under Title 24 to meet this goal.

Executive Order S-21-09. Executive Order S-21-09, 33 percent Renewable Energy for California, directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002) which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006) which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Assembly Bill 32 (California Global Warming Solutions Act of 2006). California passed the California Global Warming Solutions Act of 2006 (AB 32; *California Health and Safety Code* Division 25.5, Sections 38500 - 38599). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and establishes a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then CARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

Assembly Bill 1493. AB 1493 (also known as the Pavley Bill) requires that CARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of GHG emitted by passenger vehicles and light-duty trucks and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State."

To meet the requirements of AB 1493, CARB approved amendments to the California Code of Regulations (CCR) in 2004 by adding GHG emissions standards to California's existing standards for motor vehicle emissions. Amendments to CCR Title 13, Sections 1900 and 1961 and adoption of 13 CCR Section 1961.1 require automobile manufacturers to meet fleet-average GHG emissions limits for all passenger cars, light-duty trucks within various weight criteria, and medium-duty weight classes for passenger vehicles (i.e., any medium-duty vehicle with a gross vehicle weight rating less than 10,000 pounds that is designed primarily to transport people), beginning with the 2009 model year. Emissions limits are reduced further in each model year through 2016. When fully phased in, the near-term standards will result in a reduction of about 22 percent in GHG emissions compared to the emissions from the 2002 fleet, while the mid-term standards will result in a reduction of about 30 percent.

Assembly Bill 3018. AB 3018 established the Green Collar Jobs Council (GCJC) under the California Workforce Investment Board (CWIB). The GCJC will develop a comprehensive approach to address California's emerging workforce needs associated with the emerging green economy. This bill will ignite the development of job training programs in the clean and green technology sectors.

Senate Bill 97. SB 97, signed in August 2007 (Chapter 185, Statutes of 2007; PRC Sections 21083.05 and 21097), acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. This bill directs the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA.

OPR published a technical advisory recommending that CEQA lead agencies make a good-faith effort to estimate the quantity of GHG emissions that would be generated by a proposed project. Specifically, based on available information, CEQA lead agencies should estimate the emissions associated with project-related vehicular traffic, energy consumption, water usage, and construction activities to determine whether project-level or cumulative impacts could occur, and should mitigate the impacts where feasible. OPR requested CARB technical staff to recommend a method for setting CEQA thresholds of significance as described in *CEQA Guidelines* Section 15064.7 that will encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the State.

The Natural Resources Agency adopted the CEQA Guidelines Amendments prepared by OPR, as directed by SB 97. On February 16, 2010, the Office of Administration Law approved the CEQA Guidelines Amendments, and filed them with the Secretary of State for inclusion in the California Code of Regulations. The CEQA Guidelines Amendments became effective on March 18, 2010.

Senate Bill 375. SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPOs regional transportation plan. CARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects may not be eligible for funding programmed after January 1, 2012.

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

Senate Bill 1368. SB 1368 (Chapter 598, Statutes of 2006) is the companion bill of AB 32 and was signed into law in September 2006. SB 1368 required the California Public Utilities Commission (CPUC) to establish a performance standard for baseload generation of GHG emissions by investor-owned utilities by February 1, 2007. SB 1368 also required the CEC to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards could not exceed the GHG emissions rate from a baseload combined-cycle, natural gas–fired plant. Furthermore, the legislation states that all electricity provided to California, including imported electricity, must be generated by plants that meet the standards set by CPUC and CEC.

CARB Scoping Plan. On December 11, 2008, CARB adopted its Scoping Plan, which functions as a roadmap to achieve GHG reductions in California required by AB 32 through subsequently enacted regulations. CARB's Scoping Plan contains the main strategies California will implement to reduce CO_2eq emissions by 174 million metric tons (MT), or approximately 30 percent, from the State's projected 2020 emissions level of 596 million MT CO_2eq[10] under a business as usual (BAU)[11] scenario. This is a reduction of 42 million MT CO_2eq, or almost ten percent, from 2002 to 2004 average emissions, but requires the reductions in the face of population and economic growth through 2020.

CARB's Scoping Plan calculates 2020 BAU emissions as the emissions that would be expected to occur in the absence of any GHG reduction measures. The 2020 BAU emissions estimate was derived by projecting emissions from a past baseline year using growth factors specific to each of the different economic sectors (e.g., transportation, electrical power, commercial and residential, industrial, etc.). CARB used three-year average emissions, by sector, for 2002 to 2004 to forecast emissions to 2020. At the time CARB's Scoping Plan process was initiated, 2004 was the most recent year for which actual data was available. The measures described in CARB's Scoping Plan are intended to reduce the projected 2020 BAU to 1990 levels, as required by AB 32.

In *Association of Irritated Residents v. California Air Resources Board*, the Superior Court of California for the County of San Francisco (Superior Court) issued a "tentative statement of decision" (Tentative Decision) that prevents CARB from implementing a state-wide GHG regulatory program under AB 32 until the agency complies with the requirements of CEQA. The Tentative Decision partially grants a petition for a writ of mandate brought by a coalition of environmental justice organizations (Petitioners) that alleged that CARB's Scoping Plan violated both AB 32 and CEQA. Although the Superior Court denied all claims related to AB 32, the court found that CARB: 1) failed to adequately discuss and analyze the impacts of alternatives in its proposed Scoping Plan as required by its CEQA implementing regulations; and 2) improperly approved the Scoping Plan prior to completing the environmental review required by CEQA. In upholding the Petitioners' challenge on these two CEQA issues, the Superior Court issued a Peremptory Writ of Mandate and enjoined CARB from further implementation of the Scoping Plan until it complies with all CEQA requirements. Parties to the case had 15 days from the issuance of the Tentative Decision to file objections before the Superior Court issued a final decision in the case.

On March 18, 2011, the Superior Court issued its Final Statement of Decision, which is substantially similar to the Tentative Decision. The Superior Court ruled in favor of CARB concerning AB 32 mandates and how to best reach the GHG reduction goals set by AB 32. However, the Superior Court determined that CARB failed to conduct adequate CEQA review for the Scoping Plan. Specifically, the Superior Court concluded that CARB failed to consider adequate alternatives to the mix of measures adopted in the Scoping Plan, including especially alternatives to cap-and-trade measures, and that CARB improperly began implementing the Scoping Plan

[10] Carbon Dioxide Equivalent (CO_2eq) - A metric measure used to compare the emissions from various greenhouse gases based upon their global warming potential.

[11] "Business as Usual" refers to emissions that would be expected to occur in the absence of GHG reductions. See http://www.arb.ca.gov/cc/inventory/data/forecast.htm. Note that there is significant controversy as to what BAU means. In determining the GHG 2020 limit, CARB used the above as the "definition." It is broad enough to allow for design features to be counted as reductions.

measures before its CEQA review process was complete. Therefore, the Superior Court has suspended any further implementation of the measures contained in the Scoping Plan until the State has complied with CEQA.

On June 19, 2012, the California First District Court of Appeal ruled in favor of CARB and upheld the Scoping Plan. The decision also found the Scoping Plan to be in compliance with AB 32. The Court determined the entirety of the Scoping Plan "reflects an exercise of sound judgment" and was not arbitrary or capricious.

TOWN OF DANVILLE

2030 General Plan

Adopted in March 2013, the Town's 2030 General Plan sets forth the Town's vision for long-term growth and development. The following goals and policies from the General Plan are relevant to the proposed project:

Circulation Element

Goal 14: Integrate land use and transportation planning to increase the viability of alternative transportation modes, minimize vehicle trips, reduce trip lengths, and make more efficient use of the transportation system.

Policy 12.02 Require design measures to accommodate access by pedestrians, bicycles, and transit within new development, and to provide connections to adjacent and Ordinance development.

Policy 13.04 Encourage ridesharing, car and vanpooling, infrastructure improvements (such as the Sycamore Valley Road Park and Ride lot) and services which jointly reduce the need to travel by single occupant automobile.

Policy 14.04 Promote bicycle and pedestrian oriented mixed use development in appropriate locations, including residential, commercial, and employment activities and that are easily accessible by foot, bicycle, or transit.

Policy 14.05 As a means of reducing peak hour trips, encourage owner/ resident-operated home based businesses and telecommuting from home where the business is not perceptible from the exterior of the home.

Resources and Hazards Element

Policy 31.01 Promote the efficient use of water by encouraging drought tolerant landscaping, plumbing fixtures and irrigation systems designed for water efficiency, and other building and landscape systems designed to reduce potable water use and water waste.

Policy 31.02 Support the use of reclaimed water ("gray water") for landscape irrigation on medians, in parks, and in other landscaped areas.

Policy 31.03 Promote composting, recycling, and other programs that reduce the amount of household solid waste requiring disposal in landfills.

Policy 33.01 Make land use and transportation decisions which promote walking and bicycling, and help to make sustain public transportation more viable, reduce the need for driving, and shorten the average length of vehicle trips within the Town of Danville.

Policy 33.02 Strive to reduce the number of residents commuting in and out of Danville by car. This can be achieved in part by providing a better balance between jobs and housing, and providing housing which is responsive to the types of jobs that exist in Danville.

Policy 33.03 Support programs by local employers which encourage employees to carpool, use public transportation, telecommute, or pursue other alternatives to driving alone to work.

Climate Action Plan

In May 2009, the Town adopted a Climate Action Plan (CAP) in response to AB 32. Consistent with the recommendations of the CARB Scoping Plan, the Town's CAP establishes a GHG reduction goal of 15 percent by year 2020. To achieve the reduction goal, the CAP provides various goals and best practices that focus on energy efficiency and conservation, water use efficiency and conservation, sustainable landscaping, green building standards, waste reduction and recycling, climate friendly purchasing, renewable energy and low-carbon fuels, efficient transportation, land use and community design, and storing and off-setting carbon emissions.

Sustainability Action Plan

In August 2012, the Town adopted the Sustainability Action Plan. The Sustainability Action Plan is one of the key implementation measures for the Danville 2030 General Plan. It is a detailed, long-range strategy to reduce GHG emissions and achieve greater sustainability in transportation and land use, energy, water, solid waste, and other areas. The Sustainability Action Plan addresses the major sources of GHG emissions in Danville and the strategies that the Town and community can implement to attain and exceed the State GHG emissions reduction target. Implementation of this Sustainability Action Plan Is intended to guide Danville's actions to reduce its contribution to global climate change and support ambitious emission reduction targets adopted by the State of California. The Sustainability Action Plan may also be utilized for tiering and streamlining of future development within Danville, pursuant to CEQA Guidelines 15152 and 15183.5. If deemed a "qualified" Plan, the Sustainability Action Plan will serve as the CEQA threshold of significance within the Town for climate change, by which all applicable developments within the Town will be reviewed.

4.7.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the CEQA Guidelines, the Podva Property Residential Development would have a significant impact regarding greenhouse gas emissions if it would:

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

Bay Area Air Quality Management District Thresholds

Under CEQA, the Bay Area Air Quality Management District (BAAQMD) is an expert commenting agency on air quality and GHG emissions within its jurisdiction or impacting its jurisdiction. The BAAQMD reviews projects to ensure that they would: (1) support the primary goals of the latest Air Quality Plan; (2) include applicable control measures from the Air Quality Plan; and (3) not disrupt or hinder implementation of any Air Quality Plan control measures.

In May 2011, the BAAQMD adopted their *CEQA Air Quality Guidelines* to assist lead agencies in evaluating air quality impacts of projects and plans proposed in the Basin. The Guidelines provide BAAQMD-recommended procedures for evaluating potential air quality and GHG impacts during the environmental review process consistent with CEQA requirements.[12] In addition to providing new thresholds for GHG emissions, the revised *CEQA Air Quality Guidelines* provide updated significance thresholds for criteria pollutants and supersede the BAAQMD's previous CEQA guidance titled *BAAQMD CEQA Guidelines: Assessing the Air Quality Impacts of Projects and Plans* (1999).

BAAQMD's approach to developing a threshold of significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move us towards climate stabilization. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant.

Stationary-source projects include land uses that would accommodate processes and equipment that emit GHG emissions and would require an Air District permit to operate. If annual emissions of operational-related GHGs exceed these levels, the proposed project would result in a cumulatively considerable contribution of GHG emissions and a cumulatively significant impact to global climate change. Table 4.7-1 (BAAQMD GHG Thresholds) presents the May 2011 project-level thresholds for GHG emissions.

TABLE 4.7-1 BAAQMD GHG THRESHOLDS

Project Type	Construction-Related	Operational-Related
Projects other than Stationary Sources[1]	None	Compliance with Qualified Climate Action Plan OR 1,100 $MTCO_2eq/yr$ OR 4.6 $MTCO_2eq/SP^2/yr$
Stationary Sources[1]	None	10,000 $MTCO_2/yr$
MTCO2eq/yr = metric tons of carbon dioxide equivalent per year		
Notes: 1: According to the BAAQMD CEQA Guidelines, a stationary source project is one that includes land uses that would accommodate processes and equipment that emit GHG emissions and would require a BAAQMD permit to operate. Projects other than stationary sources are land use development projects including residential, commercial, industrial, and public uses that do not require a BAAQMD permit to operate. 2: SP = service population (residents + employees)		
Source: Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2011.		

[12] On March 5, 2012, the Alameda County Superior Court issued a decision in *California Building Industry Association v. Bay Area Air Quality Management District* (Superior Court Case No. RG10548693). The Court determined that the adoption of BAAQMD's CEQA Guidelines was a "project" requiring CEQA review. Because no CEQA review was conducted, the Court set aside the Guidelines. The Court ordered BAAQMD not to disseminate the Guidelines and the threshold standards set forth therein until CEQA review was conducted. Although adoption of the Guidelines has been set aside, the significance criteria contained in the Guidelines is supported by extensive studies and analysis (see www.baaqmd.gov/Divisions/Planning-and-Research/CEQAGUIDELINES/Tools-and-Methodology.aspx). Pursuant to the Town's discretion under CEQA Guidelines Section 15064 (b) and the recent holding in *Citizen for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal.App.4th 327, 335-336, ("[t]he determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data."), the Town has decided to utilize the air quality threshold standards in the Guidelines to analyze such potential impacts from the project.

The BAAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, the BAAQMD *CEQA Air Quality Guidelines* recommend quantification and disclosure of construction GHG emissions. The BAAQMD also recommends that the lead agency should make a determination on the significance of these construction generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals, as required by the Public Resources Code, Section 21082.2. The lead agency is encouraged to incorporate best management practices to reduce GHG emissions during construction, as feasible and applicable.

Screening Criteria

The BAAQMD has developed screening criteria for GHG emissions based on conservative default emission modeling and using additional GHG estimates and emission factors for indirect emissions from electrical generation, solid waste, and water conveyance. The BAAQMD developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether the proposed project could result in potentially significant air quality impacts. If all of the screening criteria are met by a proposed project, then the lead agency or applicant would not need to perform a detailed air quality assessment of their project's air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration. In addition, the screening criteria do not account for project design features, attributes, or local development requirements that could also result in lower emissions. Projects below the applicable screening criteria would not exceed the 1,100 $MTCO_2eq/yr$ GHG threshold of significance for projects other than permitted stationary sources.

If a project, including stationary sources, is located in a community with an adopted qualified GHG Reduction Strategy, the project may be considered less than significant if it is consistent with the GHG Reduction Strategy. A project must demonstrate its consistency by identifying and implementing all applicable feasible measures and policies from the GHG Reduction Strategy into the project.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Greenhouse Gas Emissions Impacts

Impact 4.7-1: Greenhouse gas emissions generated by the project would not have a significant impact on the environment and would not conflict with an applicable greenhouse gas reduction plan, policy, or regulation.

Determination: Less than Significant Impact.

The proposed project would develop 20 single-family homes on approximately 10 acres of the 110-acre project site. The first step in determining the significance of operational-related GHG emissions is to compare the attributes of the proposed project with the applicable screening criteria provided in the BAAQMD *CEQA Air Quality Guidelines*. If all of the screening criteria are met, the operation of the proposed project would result in a less than significant impact to global climate change and GHG emissions. If the proposed project does not meet all the screening criteria, then project emissions need to be quantified.

The BAAQMD's GHG screening criteria for single-family residential uses is 56 dwelling units.[13] As the project proposes 20 single-family homes, the project would fall below the BAAQMD's screening criteria. Projects below the applicable screening criteria would not exceed the 1,100 $MTCO_2eq/yr$ GHG threshold of significance. Therefore, impacts would be less than significant and no mitigation measures would be required.

[13] Bay Area Air Quality Management District, *CEQA Air Quality Guidelines*, May 2011. (Table 3-1) Operational-Related Criteria Air Pollutant and Precursor Screening Level Sizes.

MITIGATION MEASURES

Mitigation is not required.

Consistency with Applicable GHG Plans, Policies, or Regulations

Impact 4.7-2: Implementation of the proposed project would not conflict with an applicable greenhouse gas reduction plan, policy, or regulation.

Determination: Less than Significant Impact.

According to the BAAQMD as well as CEQA Guidelines Section 15183.5(b), a GHG reduction plan should:

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels
- Be adopted in a public process following environmental review

The GHG reduction plan should identify goals, policies, and implementation measures that would achieve the goals of AB 32 for the entire community. As stated previously, the Town prepared and adopted a CAP in April 2009. The CAP is intended as best practices and provides a combination of actions the Town would take with respect to its own operations, regulatory actions, and cooperative efforts within the community to provide residents and business owners ways to reduce GHG emissions. The CAP includes a list of implementing programs intended to target reductions in GHG emissions and to increase sustainability in Danville. The majority of the goals and best practices within the Town's CAP pertain to municipal measures that the Town will implement. Additionally, in October 2012 the Town prepared a Sustainability Action Plan (SAP) to encourage more environmentally sustainable transportation, construction, energy use, solid waste disposal, and water conservation practices in Danville. It is anticipated that the SAP would be adopted concurrently with the Danville 2030 General Plan and an accompanying Environmental Impact Report.

The project proposes 20 dwelling units within an existing residential community in the Town. The project site is also adjacent to existing residential uses to the north, south, and east. The location of the project site would be consistent with the Land Use and Community Design Goals of the Town's Climate Action Plan. For example, the project would help the Town achieve the goal to create neighborhoods that are attractive, safe, and convenient for walkers and bicyclists.

As stated above, the proposed project would be below the BAAQMD's screening criteria for GHG emissions and would not exceed the 1,100 $MTCO_2eq/yr$ GHG threshold of significance. Therefore, the project would not

conflict with the Town's adopted Climate Action Plan, or any other applicable plan, policy, or regulation to reduce GHG emissions. Impacts would be less than significant and no mitigation is required.

MITIGATION MEASURES

Mitigation is not required.

4.7.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.7-3: Greenhouse gas emissions resulting from development associated with implementation of the proposed project would not impact greenhouse gas levels on a cumulatively considerable basis.

Determination: Less than Significant Impact.

GHG emissions contribute, on a cumulative basis, to global climate change. No single project could generate enough GHG emissions to noticeably change the global average temperature. The combination of GHG emissions from past, present and future projects contribute substantially to the phenomenon of global climate change and its associated environmental impacts. The BAAQMD's approach to developing their GHG emissions threshold was to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move toward climate stabilization. If a project would generate GHG emissions above the threshold level, it would be considered to contribute substantially to a cumulative impact, and would be considered significant. As stated above, the proposed project would result in a less than significant impact regarding GHG emissions, as the project would be below the BAAQMD's screening criteria for GHG emissions.

The Town's CAP provides various goals and best practices that would reduce the Town's current level of GHG emissions by 15 percent by the year 2020. Therefore, cumulative projects would be required to be consistent with the Town's Climate Action Plan and reduction goals, which would ensure that all cumulative projects would reduce their GHG emissions to a less than significant level. As the related cumulative projects would be less than significant, the project's cumulative contribution would also be less than significant. Therefore, the amount of cumulative GHG emissions would not be cumulatively considerable, and would not hinder the intent and statewide reduction goals of AB 32. Impacts in this regard would be less than significant.

MITIGATION MEASURES

Mitigation is not required.

4.8 HAZARDS AND HAZARDOUS MATERIALS

This section describes existing site conditions related to hazards and hazardous materials and evaluates associated risks to human health and the environment that could result from project implementation. Information in this section is summarized from the *Phase I Environmental Site Assessment, Podva Parcel, Danville, California*, prepared by ENGEO Incorporated (ENGEO), June 5, 2012 (refer to Appendix E).

For this EIR, the term "hazardous material" is defined as any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment, if released into the workplace or environment. "Hazardous waste," a subset of hazardous material, is hazardous material that is to be discharged, discarded, recycled, and/or reprocessed.

4.8.1 ENVIRONMENTAL SETTING

PHASE I ENVIRONMENTAL SITE ASSESSMENT

Methods

ENGEO conducted a Phase I Environmental Site Assessment (Phase I ESA) of the project site to identify recognized environmental conditions (RECs). ENGEO performed the Phase I ESA in general conformance with the scope and limitations of American Society for Testing and Materials (ASTM) Standard Practice E 1527-05 "Standard Practice for Environmental Site Assessments" and the United States Environmental Protection Agency (EPA) "Standards and Practices for All Appropriate Inquires," 40 CFR Part 312. As defined in the ASTM E 1527-05, a REC is "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property."

ENGEO's Phase I ESA involved the following:

- A review of publicly available and practically reviewable standard local, state, tribal, and federal environmental record sources.
- A review of publicly available and practically reviewable standard historical sources, aerial photographs, fire insurance maps and physical setting sources.
- A reconnaissance of the project site to review site use and current conditions. The reconnaissance was conducted to check for the storage, use, production, or disposal of hazardous or potentially hazardous materials.
- Interviews with owners/occupants and public sector officials knowledgeable about site use.

Findings

The site reconnaissance and records review did not find documentation or physical evidence of soil or groundwater impairments associated with the current or past use of the project site. A review of regulatory databases maintained by county, state, tribal, and federal agencies found no documentation of hazardous materials violations or discharge on the project site and did not identify contaminated facilities within the appropriate ASTM search distances that would reasonably be expected to impact the project site. Thus, ENGEO concluded that no RECs or any historical RECs are associated with the project site. Other features identified at the project

site that are not considered to be RECs as defined in the ASTM E 1527-05, but are nonetheless of potential environmental concern include the following:

- Drums and remnants of numerous farm implements (plows, tractors, trucks, wagons), construction debris, and other similar materials, many of which are in an advanced state of disrepair (no surface staining was observed at the storage locations of these materials).
- The wooden barn may contain lead-based paint (LBP) and/or asbestos-containing materials (ACMs).

WILDLAND FIRE

The risk of wildland fires is related to a combination of factors, including winds, temperatures, humidity levels, and fuel moisture content. Of these four factors, wind is the most crucial. Steep slopes also contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Features at the project site and adjacent areas, including open space with highly flammable vegetation and steep slopes in combination with warm and dry summer and fall conditions, create a situation that results in potential wildland fires. Where there is easy human access to dry vegetation, fire hazards increase because of the greater chance of human carelessness. According to the Town of Danville General Plan (General Plan), the project site is located within an area that is particularly subject to wildfire risks.

4.8.2 REGULATORY SETTING

The USEPA is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes responsibility for issuing permits and monitoring and enforcing compliance. The management of hazardous materials and waste within the State of California (State) is under the jurisdiction of the California Environmental Protection Agency (Cal/EPA) and the Department of Toxic Substances Control (DTSC). Cal/EPA was created by the State of California to establish a cabinet level voice for the protection of human health and the environment and to assure the coordinated deployment of State resources. DTSC regulates hazardous waste, clean-up of existing contamination, emergency planning, and identifies alternatives to reduce the hazardous waste produced in California. Additionally, the nine Regional Water Quality Control Boards (RWQCBs) regulate the quality of water within the State, including contamination of State waters as a result of hazardous materials and/or waste. Other local departments (i.e., fire department, environmental health services department, etc.) may also have jurisdiction over hazardous materials; refer to Table 4.8-1 (Summary of Hazardous Materials Regulatory Authority) on the following page for a list of government agencies with hazardous materials regulatory authority.

FEDERAL AND STATE FRAMEWORK

Environmental Protection Agency

The USEPA defines a "hazardous" waste as one "which because of its quantity, concentrations, or physiochemical or infectious properties, may either increase mortality or produce irreversible or incapacitating illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed" (U.S. Public Health and Welfare Code Section 6903). Special handling and management are required for materials and wastes that exhibit hazardous properties. Treatment, storage, transport, and disposal of these materials are highly regulated at both the federal and state levels. Compliance with federal and state hazardous materials laws and regulations minimizes the potential risks to the public and the environment presented by these potential hazards, which include, but are not limited to, the following:

- Resources Conservation and Recovery Act (RCRA) – hazardous waste management
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – cleanup of contamination
- Superfund Amendment and Reauthorization Act (SARA) – cleanup of contamination
- Hazardous Materials Transportation Act (HMTA) – safe transport of hazardous materials

These laws provide the "cradle to grave" regulation of hazardous wastes. Businesses, institutions, and other entities that generate hazardous waste are required to identify and track their hazardous waste from the point of generation until it is recycled, reused, or disposed. The primary responsibility for implementing RCRA is assigned to the EPA, although individual states are encouraged to seek authorization to implement some or all RCRA provisions.

TABLE 4.8-1 SUMMARY OF HAZARDOUS MATERIALS REGULATORY AUTHORITY

Government Agency with Hazardous Materials Regulatory Authority	Laws and Guidelines Governing Hazardous Materials
Federal Agencies	
U.S. Department of Transportation (DOT)	Hazardous Materials Transport Act – Code of Federal Regulations (CFR) 49
Environmental Protection Agency (EPA)	• Federal Water Pollution Control Act (Clean Water Act) • Clean Air Act • Toxic Substance Control Act • Resource Conservation and Recovery Act (RCRA) • Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) • Superfund Amendments and Reauthorization Act (SARA) • Federal Insecticide, Fungicide and Rodenticide Act
Occupational Safety and Health Administration (OSHA)	Occupational Safety and Health Act and CFR 29
State Agencies	
Department of Toxic Substances Control (DTSC)	California Code of Regulations (CCR)
Department of Industrial Relations (CAL-OSHA)	California Occupational Safety and Health Act, CCR Title 8
State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB)	• Porter-Cologne Water Quality Act • Underground Storage Tank Law
Health and Welfare Agency	Safe Drinking Water and Toxic Enforcement Act
Air Resources Board and Air Pollution Control District	Air Resources Act
Office of Emergency Services (OES)	Hazardous Materials Release Response Plans/Inventory Law
Department of Food and Agriculture	Food and Agriculture Code
State Fire Marshal	Uniform Fire Code, CR Title 19

TABLE 4.8-1, CONTINUED

Government Agency with Hazardous Materials Regulatory Authority	Laws and Guidelines Governing Hazardous Materials
Local Agencies	
Contra Costa County Health Services – Hazardous Materials Programs (CCHS-HMP)	• County Hazardous Waste Management Plan • Certified Unified Program Agency (CUPA)
San Ramon Valley Fire Protection District	California Fire Code (CFC)

Cal/EPA and DTSC have developed and continue to update lists of hazardous wastes subject to regulation. Other state agencies involved in hazardous materials management include the Office of Emergency Services, California Department of Transportation (Caltrans), California Highway Patrol (CHP), California Air Resources Board (CARB), and CalRecycle. California hazardous materials management laws include, but are not limited to, the following:

- Hazardous Materials Management Act – business plan reporting
- Hazardous Substance Act – cleanup of contamination
- Hazardous Waste Control Act – Hazardous waste management
- Safe Drinking Water and Toxic Enforcement Act of 1986 – releases of and exposure to carcinogenic chemicals

Department of Toxic Substances Control

The responsibility for implementation of RCRA was given to Cal/EPA's DTSC in August 1992. DTSC is also responsible for implementing and enforcing California's own hazardous waste laws, which are known collectively as the Hazardous Waste Control Law. Although similar to RCRA, the California Hazardous Waste Control Law and its associated regulations define hazardous waste more broadly and regulate a larger number of chemicals. Hazardous wastes regulated by California, but not by the EPA, are called "non-RCRA hazardous wastes."

San Francisco Bay Regional Water Quality Control Board

The San Francisco Bay RWQCB is the enforcing agency for the protection of water quality through the regulation of potentially water polluting practices. Key water quality program areas include municipal and industrial waste disposal, construction/erosion and stormwater runoff, and pollution cleanup. The Underground Storage Tank (UST) Program includes the cleanup of leaking tanks that often involve soil and groundwater investigation and remediation under the direction of a regulatory agency, which may include the RWQCB or county or city health departments. The various agencies coordinate to ensure that the requirements from each agency are met. Also, the Cleanup Program involves past waste disposal and handling practices, spills, and leaks that have contributed to polluted sites that could threaten municipal and private water supply wells. The RWQCB staff ensure that investigations proceed and regulations are met.

LOCAL FRAMEWORK

Contra Costa County Health Services – Hazardous Materials Programs

The CCHS-HMP is the designated local agency assigned to implement the program to protect the public health from exposure to hazardous waste. Activities to obtain this objective include regular inspections, business education activities, and the issuance of hazardous waste generator permits. It is the duty of the CCHS-HMP to safeguard the Contra Costa County ecosystem from the release of hazardous materials and other pollutants. As

inspectors, engineers, and responders, CCHS-HMP ensures that regulated businesses are in compliance with state hazardous materials laws and regulations and local storm water ordinances. The CCHS-HMP is the designated California Unified Program Agency (CUPA) for Contra Costa County. The purpose of the CUPA is to consolidate, coordinate and make consistent the administrative requirements, permitting, inspection activities, enforcement activities and fees for hazardous waste and hazardous materials programs in each jurisdiction.

San Ramon Valley Fire Protection District

The San Ramon Valley Fire Protection District (District) responds to emergency and non-emergency hazardous materials incidents. Such incidents include actual or potential spills, leaks, and exposures to substances that pose a threat to life, health, and/or property. District personnel are certified as Hazardous Materials First Responders and are trained to recognize a hazardous material incident, placing the safety of the public and emergency responders as the foremost priority.

In addition to Hazmat First Responder personnel, the District provides a highly trained Hazardous Materials Response Team (Hazmat Team). The mission of the Hazmat Team is to reduce the impact of hazardous materials incidents on life, the environment, and property. The Team is made up of thirty-one California State Certified Hazardous Materials Technician/Specialists and is an all risks hazmat team capable of specialized entry, chemical analysis, and hazard mitigation.

The District also provides all-risk fire, rescue, and emergency medical services to the communities of Alamo, Blackhawk, the Town of Danville, Diablo, the City of San Ramon, the southern area of Morgan Territory and the Tassajara Valley. The District's service area encompasses approximately 155 square miles and serves a population of 169,900. Refer to Section 4.13 (Public Services and Utilities) for more information regarding the fire protection services provided by the San Ramon Valley Fire Protection District.

Town of Danville

The Resource and Hazards Chapter of the 2030 General Plan contains several goals and policies with respect to hazards, including the following:

Goal 25 Prevent catastrophic fires and minimize the loss of property and life due to fire hazards in Danville.

Policy 25.01 Require safe roofing and other fire prevention standards for development in high fire hazard areas by maintaining a Fire Safe Roofing Ordinance, in coordination with the San Ramon Valley Fire Protection District.

Policy 25.02 Cooperate with the San Ramon Valley Fire Protection District in efforts to reduce fire risks through controlled burning and fuel removal.

Policy 25.03 Assure provision of adequate access for fire equipment to all developed and open space areas.

Policy 25.04 Maintain a response time of less than five minutes for emergency fire calls, to be met a minimum of 90 percent of the time and/or a fire station within 1.5 miles of all residential and nonresidential development. Where this standard cannot be met, and/or where severe wildland fire hazards exist, require special mitigation measures for fire prevention as necessary.

Policy 25.05 Prior to project approval, require written verification from the San Ramon Valley Fire Protection District on the anticipated response time to the project and the distance from existing stations.

Policy 25.06 Require the maintenance of "defensible space" (e.g., areas free of highly flammable vegetation) around homes in fire-prone areas. Require the clearing or thinning of fire-prone vegetation within 30 feet of access and evacuation routes, and routes to critical facilities.

Goal 26 Reduce the potential for flooding and minimize the risks to life and property resulting from flooding that does occur in Danville.

Policy 26.01 Take appropriate steps in the development review process to protect life and property from flooding and erosion along local creeks.

Policy 26.02 Restrict new development in floodways and flood plains in accordance with FEMA requirements.

Policy 26.03 Require that new development result in runoff rates that are within the 100-year flood capacity of the Town flood control system.

Policy 26.04 Cooperate with the Contra Costa County Flood Control and Water Conservation District in watershed evaluations and projects intended to reduce flood hazards.

Policy 26.05 Work in conjunction with the Contra Costa County Flood Control and Water Conservation District to maintain natural creek settings to the extent possible while providing for adequate drainage capacity.

Policy 26.06 Encourage, and where appropriate require, the use of detention basins by developers to reduce peak stormwater runoff during significant rainfall events. No net increase in peak flow runoff should be allowed unless adequate drainage capacity exists or other mitigation measures are provided. Where feasible, support the use of common detention facilities serving more than one development.

Policy 26.07 Make structural improvements to public storm drains, pipelines, and channels where needed to ensure that these facilities can perform to their design capacity in handling stormwater flows.

4.8.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the CEQA Guidelines, the Podva Property Residential Development would have a significant impact regarding hazards and hazardous materials if it would:

- 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; and/or,
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Accidental Release of Hazardous Materials

Impact 4.8-1: Project construction may result in an accidental release of hazardous materials that creates a significant hazard to the public or environment.

Determination: Less than Significant Impact with Mitigation Incorporation.

One of the means through which human exposure to a hazardous substance could occur is through accidental release. Incidents that result in an accidental release of a hazardous substance into the environment can cause contamination of soil, surface water, and groundwater, in addition to any toxic fumes that might be generated. Human exposure of contaminated soil or water can have potential health effects based on a variety of factors, such as the nature of the contaminant and the degree of exposure. Site disturbance/construction activities associated with development of the project site could release hazardous materials into the environment through reasonably foreseeable upset and accident conditions.

Although no RECs were identified at the project site during the Phase I ESA, other features that are nonetheless of potential environmental concern include the following:

- Drums and remnants of numerous farm implements (plows, tractors, trucks, wagons), construction debris, and other similar materials, many of which are in an advanced state of disrepair.
- The wooden barn may contain LBP and/or ACMs.

Prior to construction, the various drums and farm implement remnants, construction debris, and other similar materials would be removed from the project site. Implementation of Mitigation Measure 4.8-1a below would ensure that they are removed from the project site and disposed of in a proper manner. While no surface staining was observed at the storage locations of these materials, it is possible that surface staining may be present and become visible once the materials are removed. If surface staining is present, it may be indicative of contamination with potentially hazardous materials. Mitigation Measure 4.8-1a requires that an environmental professional be present to observe the removal operations of these materials to check for evidence of soil impacts.

All of the existing onsite structures would need to be demolished prior to construction of new buildings. Demolition of structures could expose construction personnel and the public to hazardous materials such as LBP and/or ACMs. Given the age of the wooden barn, it is likely that it could contain LBP, ACMs, and/or other contaminants. As a result, construction workers and the public could be exposed. Federal and State regulations govern the renovation and demolition of structures where LBP and ACMs are present. All demolition that could result in the release of LBP and/or ACMs must be conducted according to federal and State laws and regulations.

The National Emission Standards for Hazardous Air Pollutants (NESHAP), implemented through the Bay Area Air Quality Management District (BAAQMD) Regulation 11, Rule 2, mandates that building owners conduct an asbestos survey to determine the presence of ACMs prior to the commencement of any remedial work, including demolition. If ACM material is found, abatement of asbestos would be required prior to any demolition activities. Also, if paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste would be required to be evaluated independently from the building material by a qualified Environmental Professional. If lead-based paint is found and is separating from the building material, abatement would be required to be completed by a qualified Lead Specialist prior to any demolition activities. Compliance

with Mitigation Measures 4.8-1b and 4.8-1c and compliance with BAAQMD Regulation 11, Rule 2 would reduce potential impacts in this regard to less than significant levels.

Although implementation of Mitigation Measures 4.8-1a through 4.8-1c would reduce potential impacts from site disturbance activities, accidental conditions may arise during construction of future development within the project site. If unknown wastes or suspect materials are discovered during construction by the contractor, which he/she believes may involve hazardous wastes/materials, the contractor would be required to implement Mitigation Measure 4.8-1d. Therefore, with implementation of Mitigation Measures 4.8-1a through 4.8-1d and compliance with applicable federal, State, and local regulatory requirements pertaining to hazardous materials, potential accidental releases would be reduced to less than significant levels.

MITIGATION MEASURES

4.8-1a A qualified Environmental Professional shall be present during the removal of onsite debris located in the southeastern portion of the project site near the steel outbuilding. If stained soil is present beneath any debris, soil samples shall be collected from the stained soil and analyzed. The debris shall be removed and, based on the results sample analyses, disposed of in accordance with regulatory requirements.

4.8-1b Prior to demolition activities, an asbestos survey shall be conducted by an Asbestos Hazard Emergency Response Act (AHERA) and California Division of Occupational Safety and Health (Cal/OSHA) certified building inspector to determine the presence or absence of asbestos containing-materials (ACMs). If ACMs are located, abatement of asbestos shall be completed prior to any activities that would disturb ACMs or create an airborne asbestos hazard. Asbestos removal shall be performed by a State certified asbestos containment contractor in accordance with the Bay Area Air Quality Management District (BAAQMD) Regulation 11, Rule 2.

4.8-1c If paint is separated from building materials (chemically or physically) during demolition of the structures, the paint waste shall be evaluated independently from the building material for lead by a qualified Environmental Professional. If lead-based paint is found, abatement shall be completed by a qualified Lead Specialist prior to any activities that would create lead dust or fume hazard. Lead-based paint removal and disposal shall be performed in accordance with California Code of Regulation Title 8, Section 1532.1, which specifies exposure limits, exposure monitoring and respiratory protection, and mandates good worker practices by workers exposed to lead. Contractors performing lead-based paint removal shall provide evidence of abatement activities to the Town Engineer.

4.8-1d Prior to grading and other construction activities, construction personnel shall be trained to recognize indications of Underground Storage Tanks (USTs), buried debris, and other potential adverse environmental condition which may be discovered on the property. If unknown wastes or suspect materials are discovered during construction by the contractor that are believed to involve hazardous waste or materials, the contractor shall comply with the following:

- Immediately stop work in the vicinity of the suspected contaminant, removing workers and the public from the area.
- Notify the Town Engineer.
- Secure the areas as directed by the Town Engineer.

- Notify the Contra Costa County Health Services – Hazardous Materials Programs (CCHS-HMP) Coordinator.

Wildland Fire

Impact 4.8-2: Implementation of the proposed project could expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Determination: Less than Significant Impact with Mitigation Incorporation.

The woodlands and grasslands located on and adjacent to the project site create a potential wildfire hazard during the summer and fall dry seasons. Construction activities pose fire risks. The time of the greatest fire danger is during the clearing phase, when people and machines are working among vegetative fuels that can be highly flammable; if piled onsite, the cleared vegetative materials could also become a fire fuel. Potential sources of ignition include equipment with internal combustion engines, gasoline powered tools, and equipment or tools that produce a spark, fire, or flame. Such sources include sparks from blades or other metal parts scraping against rock, overheated brakes on wheeled equipment, friction from worn or unaligned belts and drive chains, and burned out bearings or bushings. Sparking as a result of scraping against rock is difficult to prevent. The other hazards result primarily from poor maintenance of the equipment. Smoking by onsite construction personnel is also a potential source of ignition during construction. After construction is complete, the project would continue to pose a risk above baseline levels once the residences are built, due to the greater numbers of people who would have access to the open space areas. The interface between the proposed project and the open space and proposed trailhead parking area would increase the risk of wildland fires. As a result, the proposed project would increase demand for fire suppression and could require additional services from the San Ramon Fire Protection District.

Regulations governing the use of construction equipment in fire prone areas are designed to minimize the risk of wildland fires during construction activity, and would be part of the project. In accordance with the California Public Resources Code (PRC), the construction contractor would be required to comply with the following requirements during construction activities:

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

In addition, all new residential structures would be required to comply with the Town's Fire-Safe Roofing Ordinance (see General Plan Policy 21.01) and all applicable fire and building safety codes (Uniform Building Code and Uniform Fire Code). Moreover, the project would be required to be constructed with all applicable San Ramon Fire Protection District conditions of approval related to access, roadway widths, turning radii, fire flow requirements, fire hydrant locations, and other requirements to ensure that the project is able to safely

accommodate emergency response apparatus. Implementation of Mitigation Measure 4.8-2 would further reduce impacts involving wildland fires to less than significant.

Thus, compliance with existing regulatory requirements and adherence to Town of Danville and San Ramon Valley Fire Protection District conditions of project approval, in addition to implementation of Mitigation Measure 4.8-2 would ensure that potential impacts associated with wildland fires would be less than significant.

MITIGATION MEASURE

4.8-2 Prior to grading permit approval, the project applicant shall submit an Open Space Management Plan to the San Ramon Valley Fire Protection District and the Town of Danville for review and approval. The Open Space Management Plan shall incorporate all applicable San Ramon Fire Protection District conditions of approval related to access, roadway widths, turning radii, fire flow requirements, fire hydrant locations, and other requirements to assure access to open space for fire protection personnel and for fuel modification and maintenance in perpetuity.

4.8.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.8-3: Project implementation could result in cumulatively considerable impacts associated with hazards, including risks associated with wildand fires and accidental release of hazardous materials.

Determination: Less than Significant Impact with Mitigation Incorporation.

For hazards and hazardous materials, the study area considered for cumulative impacts consists of: (a) the area that could be affected by proposed project activities; and, (b) the areas that could be affected by other past, present, or future projects whose activities could directly or indirectly affect the presence or fate of hazardous materials on the project site. Additional hazardous materials investigations on a project-by-project basis would reduce the existing human health risk from on and offsite contamination.

The incremental effect of the proposed project, when combined with the effects created by other past, present, and reasonably foreseeable projects, would not be cumulatively considerable or significant because the project would be required to comply with federal, State, and local regulations, which would ensure that potential exposure to hazardous materials would be avoided or minimized on a case-by-case basis. Impacts in this regard would be less than significant with compliance of applicable federal, State, and local regulations and implementation of recommended mitigation measures.

MITIGATION MEASURES

4.8-3 Implement Mitigation Measures 4.8-1a through 4.8-1b and 4.8-2.

4.9 HYDROLOGY AND WATER QUALITY

This section evaluates the potential hydrology and water quality impacts that could result from implementation of the proposed project. Information in this section is based on the *Preliminary Stormwater Control Plan, Subdivision 9309 Podva Property, Town of Danville, California* (SWCP), prepared by Balance Hydrologics, Inc. (Balance), September 24, 2013 (Appendix F), the *Contra Costa County Watershed Atlas*, prepared by the Contra Costa Community Development Department, November 2003, and the *Preliminary Geotechnical and Fault Evaluation Report, Podva Parcel, Danville, California* (geotechnical report), prepared by ENGEO Incorporated (ENGEO), August 5, 2011 (Appendix D).

4.9.1 ENVIRONMENTAL SETTING

REGIONAL HYDROLOGY AND DRAINAGE

The Town of Danville (Town) lies completely within the boundaries of the Walnut Creek Watershed, which drains approximately 93,500 acres of central Contra Costa County into San Francisco Bay. The region's climate characteristics reflect the general Mediterranean climate of central coastal regions of California, which is characterized by cool, wet winters and hot, dry summers with occasional periods of fog. Evaporation rates are quite high in summer and exceed rainfall in all but the wettest winter months. The Town is also situated in the San Ramon Valley. The entire valley lies within the rain shadow of the coastal mountains of the East Bay that remove much of the moisture from incoming storm systems. Annual precipitation primarily occurs from October through April and can range from ten to 32.5 inches per year in Contra Costa County.

SITE HYDROLOGY AND DRAINAGE

The project site sits at the eastern toe of the coastal mountains of the East Bay Area. The site topography is characterized by relatively steeply sloping terrain in the western portion of the project site that eventually flattens out in the area proposed for development. Elevations range from a high of approximately 1,100 feet above mean sea level (msl) at Las Trampas Ridge line in the southwest corner of the site to a low of approximately 452 feet above msl at the east extent of the site at the terminus of Midland Way. The highest elevation in the area proposed for development is approximately 530 feet on the western side and the lowest elevation is approximately 452 feet on the eastern side near the terminus of Midland Way.

The project site is essentially underlain by only one major soil group (Los Osos Clay Loam (LhE)). This soil is classified as soil group C under the National Resources Conservation Service (NRCS) hydrologic soil group (HSG) system, with an infiltration rate of between 0.17 and 0.27 inches/hour, but decreasing rapidly with depth. These Group C soils have low natural percolation rates. Mean seasonal rainfall at the site is approximately 22.5 inches per year.

Approximately 27 acres of the project site would be affected hydrologically by the proposed project. Of these 27 acres, a small creek captures the overland flow from approximately 17 acres. The small creek conveys flow to the east and empties into a storm drain under Midland Way. A storm drain just south of Midland Way receives flow from a separate sub-watershed that includes approximately seven acres of undeveloped land. This southern storm drain flows north under Westridge Ave to eventually connect with the storm drain under Midland Way.

WATER QUALITY

Surface Water Quality

According to the Contra Costa County Watershed Atlas, diazinon is a recognized pollutant of concern in the Walnut Creek Watershed. However, diazinon is unlikely to be present in the runoff from the project site due to its primarily undeveloped nature and low intensity grazing use. While no site-specific data regarding stormwater runoff quality from the project site exist, several pollutants could be present, such as sediment from stormwater runoff, or pathogenic bacteria and viruses from common wildlife.

Groundwater Quality

According to the California Department of Water Resources' *California's Groundwater Bulletin 118, San Francisco Bay Hydrologic Region*, there is no published data regarding the groundwater quality of the San Ramon Groundwater Basin, which underlies the project site.

GROUNDWATER

Groundwater levels are expected to fluctuate depending on weather conditions and seasonal rainfall, local irrigation, and water levels in creeks. Groundwater recharge at the project site is likely to be limited given the prevalence of low permeability soils.

FLOODING

The Federal Emergency Management Agency (FEMA) determines floodplain zones in an effort to assist cities in mitigating flooding hazards through land use planning. FEMA also outlines specific regulations for any construction within a 100-year floodplain. The 100-year floodplain denotes an area that has a one percent chance of being inundated during any particular 12-month period. The Flood Insurance Rate Map (FIRM) map panel that covers the project site (06077C0590F) shows that the project site is outside of the 100-year floodplain.

TSUNAMI, SEICHE, AND MUDFLOW

A tsunami is a large sea wave generated by earthquakes that can travel across the ocean at hundreds of miles an hour and cause tall ten foot (and higher) waves. Tsunamis are not a risk factor for the project area due to its inland location. A seiche is a wave generated in a closed body of water, which can be compared to the back-and-forth sloshing of water in a tub. Seiches can be caused by winds, changes in atmospheric pressure, underwater earthquakes, or landslides into the water. Bodies of water such as reservoirs, ponds, and swimming pools are likely to experience seiche waves up to several feet in height during a strong earthquake. The Town is not located near areas likely to be affected by seiche flooding.

As discussed in Section 4.6 (Geology and Soils), ENGEO Incorporated (ENGEO) conducted a subsurface investigation of the project site to evaluate to examine subsurface conditions along the toe of the deep-seated landslide complex mapped in the western portion of the project site. ENGEO concluded that the relatively level eastern terrace area proposed for development has not been affected by deep-seated landsliding and is suitable for the proposed development. While recently active landslides mapped on the slopes in the western portion of the project site appear to be slump/earthflow type features that have developed in the stratified debris fan deposits, ENGEO determined that these landslide do not appear to have mobilized and flowed great distances due to the fine-grained and cohesive nature of the soils. Thus, ENGEO concluded that the risk of direct landslide impacts on the proposed development area is low. Landslide and earthflow/debris flow hazards originating on the

western site slopes can be successfully mitigated by following the recommendations of a design-level geotechnical engineering investigation required by Mitigation Measure 4.6-2 in Section 4.6.

4.9.2 REGULATORY SETTING

FEDERAL FRAMEWORK

Clean Water Act

The Federal Clean Water Act (CWA) places the primary responsibility for surface water pollution control and water resources development planning with the states. However, the act requires the states to follow certain guidelines in developing their programs and allows the U.S. Environmental Protection Agency (EPA) to withdraw control from states with inadequate implementation mechanisms. The CWA requires states to adopt water quality standards for receiving surface water bodies and to have those standards approved by the EPA. Water quality standards consist of designating beneficial uses for a particular receiving water body (e.g., wildlife habitat, agricultural supply and fishing), along with water quality criteria necessary to support those uses. Water quality criteria are prescribed concentrations or levels of constituents, such as lead, suspended sediment, and fecal coliform bacteria, or narrative statements which represent the quality of water that supports a particular use.

Section 303(d) – Total Maximum Daily Loads

When water quality does not meet CWA standards and compromises designated beneficial uses (e.g., wildlife habitat, agricultural supply and fishing) of a particular receiving water body, Section 303(d) of the CWA requires that water body be identified and listed as "impaired." Once a water body has been deemed impaired, a Total Maximum Daily Load (TMDL) must be developed for the impairing pollutant(s). A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (with a "factor of safety" included). Once established, the TMDL allocates the loads among current and future pollutant sources to the water body.

The San Francisco Bay is listed as Section 303(d) impaired waters, due to impairment by exotic species and contaminants found in urban runoff, including chlordane, DDT, diazinon, dieldrin, dioxins, furans, mercury, PCBs, selenium, and nickel.

Section 401 Water Quality Certification

Under Section 401 of the CWA (33 USC 466 et seq.) every discharger that may discharge pollutants into the waters of the U.S. must apply for a federal permit or license (including permits under Section 404 of the CWA) to ensure that the proposed activity complies with State water quality standards.

Section 402 National Pollutant Discharge Elimination System General Construction Strom Water Permit

In 1972, the Federal Water Pollution Control Act (later referred to as the CWA) was amended to require National Pollutant Discharge Elimination System (NPDES) permits for the discharge of pollutants to navigable waters of the U.S. from any point source. In 1987, the CWA was amended to require that the EPA establish regulations for the permitting of municipal and industrial stormwater discharges under the NPDES permit program. The EPA published final regulations regarding stormwater discharges on November 16, 1990. The regulations require that municipal storm sewer system discharges to surface waters be regulated by a NPDES permit. NPDES permits are issued under the CWA, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.).

Clean Water Act Section 402(p)(3)(iii) sets the standard for stormwater controls as "maximum extent practicable," but doesn't define that term. As implemented, "maximum extent practicable" is ever-changing and varies with conditions.

Clean Water Act Section 402(p) and EPA regulations (40 CFR 122.26) specify a municipal program of "management practices" to control stormwater pollutants. Best Management Practice (BMP) refers to any kind of procedure or device designed to minimize the quantity of pollutants that enter the storm drain system.

Federal Emergency Management Agency

FEMA, a former independent agency that became part of the new Department of Homeland Security in March 2003, is tasked with responding to, planning for, recovering from, and mitigating against disasters. Formed in 1979 to merge many of the separate disaster-related responsibilities of the Federal government into one agency, FEMA is responsible for coordinating the Federal response to floods, earthquakes, hurricanes, and other natural or human created disasters and providing disaster assistance to states, communities, and individuals.

The Federal Insurance and Mitigation Administration (FIMA) within FEMA is responsible for administering the National Flood Insurance Program (NFIP) and administering programs that provide assistance for mitigating future damages from natural hazards. Established in 1968 with the passage of the National Flood Insurance Act, the NFIP is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for state and community floodplain management regulations that reduce future flood damages.

Participation in the NFIP is based on an agreement between communities and the federal government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the federal government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods.

STATE FRAMEWORK

Waters of the State consist of all surface water or groundwater, including saline waters, within the boundaries of the State of California.

California Toxics Rule

Because California had not established a complete list of acceptable water quality criteria, the USEPA (under the authority of the CWA) established numeric water quality criteria in the form of the California Toxics Rule (CTR) (40 CFR 131.38), which was finalized May 18, 2000. CTR covers potentially toxic constituents in receiving waters with human health or aquatic life designated uses.

Porter-Cologne Water Quality Control Act

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code). The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) grants the State Water Resources Control Board (SWRCB) and each of the nine Regional Water Quality Control Boards (RWQCBs) power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the CWA. The applicable RWQCB for the project is the San Francisco Bay Regional Water Quality Control Board. Under the Porter-Cologne Act, the SWRCB and RWQCBs have the authority and responsibility to adopt plans

and policies, regulate discharges to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substances, sewage, or oil, or petroleum products.

Non-Point Source Management Plan (SWRCB Resolution No. 88-123)

In 1988, the SWRCB adopted the Nonpoint Source Management Plan, which established the framework for Statewide nonpoint source activities. Four of the six Statewide objectives and implementation strategies to manage nonpoint source problems are included in the plan. Nonpoint source pollution comes from many diffuse sources including agriculture (pesticides, herbicides), urban runoff (construction sites, roads, industry, and residential areas), marinas and boating, hydromodification, and mining.

NPDES General Permit for Stormwater Discharges Associated with Construction Activity

As described previously, NPDES permits are required for discharges of pollutants to navigable waters of the U.S. These waters consist of surface waters such as, lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body.

The RWQCB issues NPDES permits in lieu of direct issuance by the USEPA, subject to review and approval by the EPA Regional Administrator (EPA Region 9 for the proposed project). The terms of these NPDES permits implement pertinent provisions of the CWA and the act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the CWA's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the California Water Code.

Construction activities disturbing one acre or more of land are subject to the permit requirements of the NPDES program. The applicant must file a Notice of Intent (NOI) to seek coverage under the Statewide General Construction Activity Stormwater Permit (General Permit) prior to the beginning of construction and prepare and maintain a Stormwater Pollution Prevention Plan (SWPPP) per local municipality and State ordinances. The NOI is submitted to the Division of Water Quality of the SWRCB.

On September 2, 2009, the SWRCB adopted a General Permit (Order No. 2009-0009-DWQ), which superseded the previous General Permit as of July 1, 2010. On November 16, 2010, the SWRCB adopted Order No. 2010-0014-DWQ, which amends Order No. 2009-0009-DWQ as of February 14, 2011. The San Francisco Bay RWQCB adopted the Municipal Regional Stormwater Permit (MRP) on October 14, 2009. The MRP governs discharges from municipal storm drains operated by 76 local government entities, including those in western and central Contra Costa County.

In Contra Costa County (County), the cities of Clayton, Concord, El Cerrito, Hercules, Lafayette, Martinez, Orinda, Pinole, Pittsburg, Pleasant Hill, Richmond, San Pablo, San Ramon, and Walnut Creek, the towns of Danville and Moraga, Contra Costa County, and the Contra Costa County Flood Control and Water Conservation District all share one NPDES Permit. This is done through a consortium of the agencies called the Contra Costa Clean Water Program (CCCWP). The NPDES Permits are usually adopted in five year cycles.

The San Francisco Bay RWQCB first issued a municipal stormwater NPDES permit to Contra Costa County, its 19 cities and towns, and the Contra Costa Flood Control and Water Conservation District in 1993. The permit mandates a comprehensive program to prevent stormwater pollution. That program now includes street sweeping, maintenance of storm drains, identification and elimination of illicit discharges to storm drains,

business inspections, public outreach, construction site inspections, monitoring and studies of stream health, and control of runoff pollutants from new developments and redevelopments.

The San Francisco Bay RWQCB added Provision C.3 in 2003, and the permittees began implementing the provision in 2005. The San Francisco Bay RWQCB added hydrograph modification management (flow control) requirements in 2006. Provision C.3 requires municipalities to condition development approvals with incorporation of specified stormwater controls. The municipalities' annual report to the San Francisco Bay RWQCB includes a list of development projects approved during the year and the specific stormwater controls required for each project. In the annual report, the municipalities also document their program to verify stormwater treatment and flow-control facilities are being adequately maintained.

Provision C.3 requires that applicable new developments and redevelopments:

- Design the site to minimize imperviousness, detain runoff, and infiltrate runoff where feasible
- Cover or control sources of stormwater pollutants
- Treat runoff prior to discharge from the site
- Ensure runoff does not exceed pre-project peaks and durations
- Maintain treatment and flow-control facilities

The current MRP supersedes C.3 requirements in the preceding permit, which were in effect from 2005 until 2009. The additional MRP requirements are being phased over the five-year permit term. In September 2010, the Central Valley Regional Water Quality Control Board adopted requirements, similar to those in the MRP, that apply to eastern Contra Costa cities. The San Francisco Bay RWQCB amended the MRP C.3 Provisions on November 28, 2011. The C.3 requirements are separate from, and in addition to, requirements for erosion and sediment control and for pollution prevention measures during construction.

LOCAL FRAMEWORK

Contra Costa County

Contra Costa Clean Water Program

The CCCWP is a program of the Contra Costa County Public Works Department. The CCCWP strives to eliminate stormwater pollution through public education, inspection and enforcement activities, and industrial outreach. The CCCWP provides guidance and training on the following:

- Adopting legal ordinances
- Conducting public education programs such as stenciling informational signs like "No Dumping Drains to Bay" on storm drain covers
- Instituting or enhancing programs such as street sweeping, storm drain maintenance
- Performing erosion control practices
- Identifying illicit pollutant discharges to the storm drain system, and requiring new development and industrial discharge controls.

Through the CCCWP, Contra Costa municipalities have prepared a Stormwater C.3 Guidebook to assist applicants through the process of submittals and reviews for new developments and redevelopments. Additionally, the CCCWP has created a Low Impact Development (LID) approach that ensures consistent and thorough implementation of the San Francisco Bay RWQCB's requirements. The CCCWP's LID design guidance was crafted to ensure LID facilities comply with the NPDES permit's hydraulic sizing requirements for stormwater treatment facilities and flow-control facilities.

As required by the NPDES permit, Contra Costa municipalities require project proponents "design and implement stormwater treatment measures to reduce the discharge of stormwater pollutants to the maximum extent practicable." The CCCWP has determined the following types of facilities can meet the "maximum extent practicable" standard:

- Bioretention facilities, flow-through planters, and other facilities using filtration through soil or sand (sized with a surface area at least 0.04 times the effective impervious tributary area).
- Dry wells, infiltration trenches, infiltration basins, and other facilities using infiltration to native soils (in locations where soils and tributary land uses are appropriate).
- Extended detention basins, constructed wetlands or other facilities using settling (sized according to the volume-based criterion, with a detention time of 48 hours).

Town of Danville

General Plan

The Danville 2030 General Plan (General Plan) contains several goals and policies regarding hydrology and water quality that are applicable to the project site:

Policy 22.01 Maintain and enhance the natural quality of Danville's creeks, including the riparian vegetation along the banks. Setbacks should be maintained along creeks to maintain their natural appearance, reduce erosion and flood hazards, and protect their ecological functions.

Policy 22.02 Require qualifying new development projects and redevelopment projects to comply with the Municipal Regional Permit for stormwater control and treatment.Policy 22.03 Conduct education and outreach activities to increase public awareness of water quality issues and the steps Danville residents and businesses can take to reduce water pollution.

Policy 22.04 Manage the Town's storm drainage facilities in a manner which minimizes pollution of local streams and waterways. Storm drains and other drainage facilities should be regularly maintained.

Policy 23.02 Work with other communities and agencies to protect and enhance the significant ecological communities of the Tri- Valley area, including wetlands, riparian areas, and oak woodlands.

Policy 23.03 Promote a regional approach to protecting sustainable habitat in the Danville Planning Area, through mitigation banking and other means.

Policy 23.05 Continue cooperative planning and implementation efforts at the countywide level to ensure that qualifying new development projects and redevelopment projects comply with the hydro-modification plan/program requirements imposed through the Municipal Regional Permit.

Policy 23.06 Work with other jurisdictions and water providers to ensure a sufficient and sustainable long-term supply of potable water for existing Danville customers and for future development that is consistent with the goals of this General Plan.

Policy 23.07 Recognize the state and federal regulations that serve to protect wetlands and require full compliance with these regulations as part of development review. This would include detailed wetland delineations and assessments where waters under the jurisdiction of the Corps of Engineers may be affected.

Policy 26.01 Take appropriate steps in the development review process to protect life and property from flooding and erosion along local creeks.

Policy 26.02 Restrict new development in floodways and flood plains in accordance with FEMA requirements.

Policy 26.03 Require that new development result in runoff rates that are within the 100-year flood capacity of the Town flood control system.

Policy 26.04 Cooperate with the Contra Costa County Flood Control and Water Conservation District in watershed evaluations and projects intended to reduce flood hazards.

Policy 26.05 Work in conjunction with the Contra Costa County Flood Control and Water Conservation District to maintain natural creek settings to the extent possible while providing for adequate drainage capacity.

Policy 26.06 Encourage, and where appropriate require, the use of detention basins by developers to reduce peak stormwater runoff during significant rainfall events. No net increase in peak flow runoff should be allowed unless adequate drainage capacity exists or other mitigation measures are provided. Where feasible, support the use of common detention facilities serving more than one development.

Policy 26.07 Make structural improvements to public storm drains, pipelines, and channels where needed to ensure that these facilities can perform to their design capacity in handling stormwater flows.

4.9.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the State CEQA Guidelines, the Podva Property Residential Development would have a significant impact on hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, or flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; and/or,
- Otherwise substantially degrade water quality.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Water Quality/Waste Discharge

Impact 4.9-1: Implementation of the proposed project could violate water quality standards or waste discharge requirements .

Determination: Less than Significant Impact with Mitigation Incorporation.

Construction

Future construction activities associated with the proposed project could negatively affect the water quality of surface waters. Grading and other earthmoving activities during construction would expose soils, which could be eroded and deposited into downstream receiving waters. This in turn would increase the amount of sediment and turbidity in these water bodies, which could harm aquatic life. Additionally, chemicals or fuels could accidentally spill and be washed into receiving waters. The accidental introduction of toxic compounds into surface waters could adversely alter water chemistry.

Future development within the project site would be required to comply with State and local water quality regulations designed to control erosion and protect water quality during construction. This includes compliance with the requirements of the NPDES General Permit. The General Permit requires preparation and implementation of a SWPPP. The SWPPP must include erosion and sediment control BMPs that would meet or exceed measures required by the General Permit, as well as BMPs that control hydrocarbons, trash and debris, and other potential construction-related pollutants.

Erosion control BMPs are designed to prevent erosion, whereas sediment controls are designed to trap sediment once it has been mobilized. The General Permit requires a SWPPP to include a menu of BMPs to be selected and implemented based on the phase of construction and the weather conditions to effectively control erosion and sediment, as well as proper handling of hydrocarbons, hazardous material and trash, and debris onsite. Implementation of BMPs would prevent or minimize environmental impacts and ensure that discharges during the construction phase of the Project would not cause or contribute to the degradation of water quality in receiving waters, reducing construction-related water quality impacts to less than significant.

Post-Construction and Operation

While sedimentation is the primary source of water quality impacts during construction, it would not be considered a significant issue during post-construction and operation because the area proposed for development would be paved or landscaped, which would stabilize soils for the long term. However, after construction and during the life of the project, the amount of impervious surfaces within the area proposed for development would increase, which would increase the amount of storm water runoff from the site and introduce potentially more pollutants into storm water system than existing conditions.

Pollutants would be washed by rainwater from rooftops, landscaped areas, parking areas, and other impervious surfaces. The potential pollutants include chemicals from maintenance and cleaning supplies; landscape materials and products (pesticides, herbicides, and fertilizers); oil, grease, and heavy metals from automobiles; and, petroleum hydrocarbons from fuels. The limited amount of proposed private landscaped areas indicates that metals and oils and greases would likely be the primary constituents of concern. The introduction of polluted runoff into receiving waters from the project site would be a potentially significant impact. However, the potential water quality impacts of the project would be minimized and/or avoided by implementation of the water quality management approach identified in the SWCP prepared for the project.

Proposed Storm Water Control Plan

The proposed SWCP sets forth the strategy for management of post-construction storm water runoff flows and water quality as required by the Town of Danville, the CCCWP, and the San Francisco Bay RWQCB per the Municipal Regional Storm Water NPDES permit. More specifically, the CCCWP's Stormwater C.3 Guidebook provided background for the storm drain infrastructure design. Balance Hydrologics, Inc. evaluated specific site conditions and combined them with regional water quality recommendations to create a comprehensive preliminary management plan. The overall SWCP refines a six step approach advocated in the CCCWP's Stormwater C.3 Guidebook into three key elements: site design, source control, and treatment measures.

Properly implemented site design features "set the stage" for an effective plan by establishing a land use pattern that limits the amount of directly connected impervious areas (DCIA), encourages infiltration and runoff reduction to the greatest extent practicable, and complements other BMPs that may be used. The clustered character of the project site presents challenges for reducing impervious area as a percentage of land use. However, the number of homes proposed and limited on-street parking would result in impervious coverage values that are relatively low.

A strong source control program capitalizes on the fact that it is generally more effective, in terms of both impact and cost, to prevent or limit constituents of concern from being released than it is to remove them from the environment once they have been mobilized. Proposed source controls would include, but are not limited to, the following:

- Maintenance activities such as regular street sweeping and storm drain inlet cleaning.
- Storm drain inlets would be stenciled with appropriate warnings indicating that the runoff flows to the Walnut Creek system.
- Homeowners would be provided with access to educational materials to assist them in reducing the introduction of pollutants to the storm water management system.

Finally, proper treatment measures are those Integrated Management Practices (IMPs) that are designed to reduce the constituents of concern once they have been mobilized in storm water runoff. Treatment measures are generally considered necessary BMPs since even the most aggressive site design and source control programs cannot guarantee that constituents of concern will not be mobilized from a site. In fact, the Stormwater C.3 Guidebook sets minimum standards for the use of treatment measures to assure that an appropriate portion of the annual runoff would be treated. The proposed clustering of houses at the site coupled with the low permeability of the surface soils constrains the range of treatment measures that can be implemented. Therefore, the project would construct a select treatment control designed to assure that all runoff from the site is treated before being conveyed to the Town's storm drain system. The specific control measures would utilize a bio-retention (also known as bio-filtration) approach.

The area proposed for the 20-unit development would utilize a conventional gravity-flow pipe system to convey stormwater runoff from all lots and roads into a bio-retention facility that would be located in the eastern portion of the development near its entrance along the north side of Midland Way. The proposed storm drainage system would maintain the existing drainage patterns and rates at the site, with all impervious runoff being conveyed into the bio-retention facility to meet CCCWP water quality standards prior to leaving the site. Refer to Figure 3-4 (Proposed Grading and Utility Plan).

Ongoing maintenance is an important consideration in the success of the storm water management strategy for the project. An Operation and Maintenance Agreement with the Town would be recorded as part of the project final permitting. All features would be maintained and funded by the local homeowners' association (HOA). The

specific funding requirements would be identified as the project design is finalized. Anticipated maintenance routines would be defined for the project once the site design is finalized. The maintenance protocols would address both routine and non-routine maintenance activities and would explicitly identify monitoring and reporting requirements. These protocols would include an estimate of annual monitoring and maintenance costs. Implementation of Mitigation Measure 4.9-1 identified below would ensure that the project applicant prepares the Operation and Maintenance Agreement and records it with the Town.

All wastewater from the project site would be discharged into the EBMUD sanitary sewer system where it would be treated at the Contra Costa County Wastewater Treatment Plant in accordance with state water treatment requirements. Therefore, the operations phase of the project would comply with state water treatment requirements and would not result in a violation of water quality standards or waste discharge requirements or otherwise degrade water quality.

Thus, compliance with applicable policies and regulations and implementation of the proposed SWCP and Mitigation Measure 4.9-1 would reduce the project's impacts on water quality during construction and throughout the life of the project to less than significant.

MITIGATION MEASURE

4.9-1: Prior to recordation of the final map, the project applicant shall prepare and submit a detailed Operation and Maintenance Agreement to the Development and Services Department for review and approval. The Operation and Maintenance Agreement shall identify the maintenance and funding for proposed storm water management features at the project site (i.e. bio-retention facility, storm water detention basin). All features shall be maintained and funded by the local homeowners' association (HOA) or GHAD. The maintenance protocols shall address both routine and non-routine maintenance activities and shall explicitly identify monitoring and reporting requirements. These protocols shall include an estimate of annual monitoring and maintenance costs.

Impact 4.9-2: Implementation of the proposed project could substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation or flooding on- or off-site.

Determination: Less than Significant with Mitigation Incorporation.

The proposed project site does not include any existing streams or water courses that could be altered or diverted. Therefore, there would be no impact related to alteration of drainage patterns by altering the course of a stream or river. However, project implementation would involve vegetation removal, grading, earth excavation, and the construction of homes, access roads, sidewalks, and driveways. These activities would alter existing drainage patterns and increase the potential for erosion, siltation and flooding during construction. As previously discussed under Impact 4.9-1, standard erosion control measures would be implemented as part of the SWPPP for the project to minimize the risk during construction, including erosion and sediment control BMPs that would meet or exceed measures required by the General Permit, as well as BMPs that control hydrocarbons, trash and debris, and other potential construction-related pollutants.

Post-construction, replacement of impervious surfaces could increase the rate, duration, and quantity of stormwater runoff, potentially causing erosion, related flooding and water quality effects in the receiving water.

However, the project proposes facilities to control for changes in runoff quantity and duration in order to be fully compliant with the CCCWP's hydromodification management goals. The project hydromodification control measures include the detention basin proposed for the northwestern boundary of the development area and the bio-retention facility proposed in the eastern portion of the development near its entrance along the north side of Midland Way; refer to Figure 3-4. Table 4.9-1 summarizes the pre-project and post-project peak flow rates for the proposed project with implementation of the on-site bio-retention facility and detention basin. The crest of the detention basin is designed at approximately 474 ft to retain all stormwater, up to a 24 hour 100-year storm event.

TABLE 4.9-1 EVENT-BASED MODELING RESULTS FOR THE PROPOSED DETENTION BASIN

Storm Event	Storm Duration	Pre-Project Peak Flow (cfs)	Post-Project Peak Flow[1] (cfs)	Maximum Water Surface Elevation[2] (ft)
10-year	3 hour	34.6	23.5	472.2
	6 hour	33.6	23.3	472.3
	12 hour	34.0	20.4	472.1
	24 hour	37.4	24.3	472.4
100-year	3 hour	54.1	50.8	472.8
	6 hour	50.1	42.6	472.7
	12 hour	53.4	46.9	472.8
	24 hour	62.8	64.6	473.1

Source: Stormwater Control Plan prepared by Balance Hydrologics, Inc, July 2012.
1. The detention basin was designed to mitigate a 10-year storm event, and pass a 100-year event
2. The crest of the detention basin is approximately 474 ft

While the increase in impervious surfaces would alter the existing drainage pattern on site, the implementation of the SWCP and associated bio-retention facility and detention basin would decrease off-site erosion, siltation and flooding. Additionally, the implementation of Mitigation Measure 4.9-1 would assure the bio-retention facility and detention basin are properly maintained and funded by the local homeowners' association (HOA). Therefore, impacts related to alteration of drainage patterns are considered less than significant.

Because the project would result in an increase in impervious surface area which would change the total runoff volume to the existing stormwater system to the existing stormdrain system offsite, surface water runoff projections from the proposed detention basin was were evaluated using a hydraulic model. The model, the MIKE URBAN software platform (DHI, Inc.) was developed to simulate interactions of flood pulses over space and time. The methodology used in the model is provided in Appendix F. This particular modeling software was chosen for its ability to model unsteady flow in networks (e.g., storm drain systems) with complex geometry, and its ability to evaluate changes in flow direction, differences in inverts (pipe elevations) across manholes, and expansion and contraction losses.

The specific purpose of the model is to evaluate the existing offsite storm drain network with pre- and post-project conditions. The off-site modeling effort extends from the Project site down gradient to an existing stormwater vault located at the intersection of Ocho Rios Drive and Podva Road. Setting the model inputs at this location was agreed upon by Town staff based on the fact that below this point the capacity of the storm drain system increases considerably and no significant known capacity issues exist down gradient. Furthermore, at this point flows from subbasins where drainage boundaries and patterns have changed have re-converged. Since Town standards call only for containment of the 10-year storm event, the model was configured to anticipate spillage from manholes into roadways. Anecdotal information was also available that indicated significant stormwater flow in streets is common for moderate to large storm events in this neighborhood. However, simulating the interchange of runoff between pipe and street flow is challenging in applications where detailed information on stormwater inlet capacity is limited. To circumvent this problem, as well as to provide a

conservative estimate of street flooding, the model was configured so no runoff was allowed to re-enter the storm drain via manholes or catch basins once it was conveyed in the street.

Based on the modeling results provided in Appendix F, the proposed outlet control structure for the project detention basin has been designed to limit durations of surface water flows to meet hydromodification criteria, and attenuates peak flows to meet Town requirements. This is demonstrated in Table 4.9-1 above. The project would not exacerbate the existing roadway flooding problems or pose additional threats to public safety. The proposed detention basin and outlet structure would detain and release flow in a way that allows runoff from the project site to enter the system without being detained. The net effect is a tradeoff of less roadway flow for slight and highly localized increases in pipe flow. For low to moderate recurrence interval events, flow rates and durations leaving the site comply with hydromodification criteria. As such, potential impacts to offsite stormdrain facilities are considered less than significant.

MITIGATION MEASURES

4.9-2: Implement Mitigation Measure 4.9-1.

Impact 4.9-3: The proposed project could create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.

Determination: Less than Significant with Mitigation Incorporation.

The project proposes facilities to control for changes in runoff quantity and duration in order to be fully compliant with the CCCWP's hydromodification management goals. The project hydromodification control measures include the detention basin proposed for the northwestern boundary of the development area and the bio-retention facility proposed in the eastern portion of the development near its entrance along the north side of Midland Way; refer to Figure 3-4.

As proposed, all stormwater runoff from the hillside located to the southwest of the proposed 20 unit development would be directed into the detention basin. The detention basin would control the amount of stormwater runoff entering the Town's storm drain system to meet hydromodification and peak runoff requirements outlined by the Town of Danville. All stormwater runoff from the hillside would pass through the detention basin control prior to entering the Town's storm drain under Midland Way.

The primary hydromodification controls would consist of orifices and weirs placed at various elevations in the detention basin. Preliminary modeling conducted by Balance Hydrologics, Inc is based on the detention basin being constructed to provide a total effective storage volume of approximately 37,000 cubic feet (0.85 acre-feet). Flow would be metered out of the basin through two low flow orifices and two high flow weirs in a combination that provides marked reductions in low flows, while providing capacity to safely pass very large storm events (greater than the 100-year storm). Maintenance and performance would be significantly enhanced through installation of a maintenance road that would provide maintenance crews with regular access to the basin. The maintenance crews would be responsible for removing sediment accumulation and coarse debris that would otherwise have the potential to clog the low flow orifices.

Additional hydromodification control would be provided near the entrance to the development where the bio-retention facility is proposed. The key design component would be the use of a lower gravel course under the bio-retention facility to provide storage of runoff from smaller storm events. All runoff from the area proposed for development would be routed to this control. The bio-retention facility would receive runoff from approximately

8.5 acres. The proposed storm drainage system would maintain the existing drainage patterns and rates at the site, with all impervious runoff being conveyed into the bio-retention facility to meet CCCWP water quality standards prior to leaving the site.

As described in the SWCP prepared for the proposed project, the proposed detention basin and bio-retention facility are adequate to accommodate the increases in runoff from the project. Thus, the project would not result in hydromodification impacts of on or offsite erosion or flooding or exceedence of the of the Town's storm water drainage system capacity. As noted above under Impact 4.9-1, ongoing maintenance is important for the success of the project's storm water management strategy and would be ensured with the implementation of Mitigation Measure 4.9-1. Therefore, based on the above discussion, compliance with applicable policies and regulations and implementation of the proposed SWCP and Mitigation Measure 4.9-1 would reduce the project's impacts associated with exceeding the Town's stormwater drainage system capacity to less than significant.

MITIGATION MEASURES

4.9-3: Implement Mitigation Measure 4.9-1

Impact 4.9-4: The proposed project would not otherwise substantially degrade water quality.

Determination: Less than Significant with Mitigation Incorporation.

As previously discussed, the proposed SWCP sets forth the strategy for management of both construction and post-construction storm water runoff flows and water quality as required by the Town of Danville, the CCCWP, and the San Francisco Bay RWQCB per the Municipal Regional Storm Water NPDES permit. Future development within the project site would be required to comply with State and local water quality regulations designed to control erosion and protect water quality during construction. This includes compliance with the requirements of the NPDES General Permit. The General Permit requires preparation and implementation of a SWPPP. The SWPPP must include erosion and sediment control BMPs that would meet or exceed measures required by the General Permit, as well as BMPs that control hydrocarbons, trash and debris, and other potential construction-related pollutants.

The introduction of polluted runoff into receiving waters from the project site would be a potentially significant impact. However, the potential water quality impacts of the project would be minimized and/or avoided by implementation of the water quality management approach identified in the SWCP prepared for the project including the implementation of the bio-retention facility and detention basin which would accommodate the increases in runoff from the project.

MITITGATION MEASURES

4.9-4: Implement Mitigation Measure 4.9-1

4.9.5 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.9-5: Future development of the project site could result in cumulatively considerable hydrology and water quality impacts.

Determination: Less than Significant Impact with Mitigation Incorporation.

Cumulative impacts on hydrology and water quality would result from incremental changes that degrade water quality or contribute to drainage and flooding problems within and immediately adjacent to the project area and downstream of the project area within the San Francisco Bay. As discussed above, future development of the project site would not result in any significant impacts with the implementation of mitigation measures and compliance with federal, State, and local policies and regulations. In addition, future development within the vicinity of the project area would be guided by the General Plan, and associated planning and environmental documents. Each project would be subject to the Town planning process. Thus, based on this, impacts on hydrology and water quality would not be cumulatively considerable.

MITIGATION MEASURES

4.9-5: Implement Mitigation Measure 4.9-1.

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4.10 LAND USE AND PLANNING

This section evaluates the project's potential conflicts with applicable land use plans, policies, or regulations of any agency with jurisdiction over the proposed project adopted for the purpose of avoiding or mitigating an environmental effect. The evaluation is based on the following documentation:

- Town of Danville 2030 General Plan (2030 General Plan)
- Town of Danville 1990 Municipal Code
- Town of Danville 2009 Tree Preservation Ordinance

4.10.1 ENVIRONMENTAL SETTING

SURROUNDING USES

The project region has historically been used for cattle ranching, agricultural lands, orchards and similar land uses and has gradually converted to residential uses over time. Surrounding land uses primarily consist of open space and residential development. More specifically, the project site is bounded by open space and sparse residential development to the north, open space to the south, single-family residences to the east, and Las Trampas Regional Wilderness to the west. Open space to the south of the project site consists of the Elworthy property, which received approval in 2008 for a Planned Unit Development District and associated subdivision.

PROJECT SITE

As described in Chapter 3, Project Description, the site consists of rangelands that are currently used for cattle grazing and are characterized by primarily, rolling, grass covered hills that extend to a ridgeline in the west, with tree covered drainage channels and scattered trees in open areas. The approximately 109-acre project site slopes down steeply from west to east with elevations ranging from a high of approximately 1,100 feet above mean sea level (msl) at Las Trampas Ridge line in the southwest corner of the site to a low of approximately 452 feet above msl at the east extent of the site at the terminus of Midland Way. The project site is generally characterized by a western portion of steeply rising slopes and a lower, level to slightly hilly eastern portion.

The project site currently has a zoning designation of A-2; General Agricultural District.

The project site has a Town of Danville 2030 General Plan Land Use Designation of Residential - Rural Residential, five acre lot minimum. The areas within the Town with the Residential - Rural Residential Land Use Designation are generally located in outlying areas of the Town and are intended as transitional areas between lower density single family development and significant agricultural or open space resources. Areas designated Residential - Rural Residential are generally moderately to severely constrained by topographic and/or soil conditions, have accessibility limitations, and/or are subject to special development standards such as the Scenic Hillside and Major Ridgeline Development Ordinance.

4.10.2 REGULATORY SETTING

TOWN OF DANVILLE 2030 GENERAL PLAN

Overview

The 2030 General Plan was adopted on March 19, 2013 and balances the desire to retain Danville's small town character with the realities of life in the Bay Area and the state of California in the next 170 years. The General Plan establishes goals, objectives, policies, and actions to guide this change in a desired direction. The General Plan presents existing conditions in the Town, including physical, social, cultural, and environmental resources and opportunities. The General Plan looks at trends, issues, and concerns that affect the region. The General Plan also articulates a vision for the Town's long-term physical form and development.

Plan Contents

The 2030 General Plan integrates technical studies, General Plan Amendments, Special Study Area Plans, implementing ordinances, and design guidelines prepared by the Town since the 2010 General Plan was adopted. It maintains many of the goals and policies from the 2010 General Plan. New goals and policies have been added in response to the issues of the past 13 years and the emerging challenges the Town will face in the decades ahead. The 2030 General Plan also includes minor revisions to the Town's Land Use Map. The new goals, policies, and Land Use Map designations will not result in significant changes to the amount or rate of development in Danville.

While the general plan elements mandated by the state are incorporated into the 2030 General Plan, the General Plan is not organized into traditional "elements" as defined by state law. Rather, it is organized into four major policy areas: Planning and Development, Mobility, Public Facilities, and Resources and Hazards. The Planning and Development Chapter includes the Town's Growth Management Element, a mandated element for Contra Costa County jurisdictions in light of obligations established by the voter approved Measure J (2005).

Planning and Development Element

This chapter of the 2030 General Plan addresses issues typically included in the land use element of general plans, including type, distribution, and rate of urban development. This chapter also includes a discussion of community development, growth management, and historic preservation.

The Planning and Development chapter of the 2030 Plan identifies the project site as one of 11 areas in the Town designated as a Special Concern Area (the Elworthy West/Podva area). Each Special Concern Area has unique planning concerns and opportunities and the 2030 General Plan includes special language to direct how these areas should develop. The Elworthy West/Podva area includes two of the largest undeveloped properties in Danville. The area encompasses approximately 531 acres extending from San Ramon Valley Boulevard west to the Town boundary. In 2008, the approximately 459 acre Elworthy Ranch property received approval of a Rezoning and Major Subdivision application, rezoning the site to a P-1; Planned Unit Development District and subdividing the site to create 84 single family lot and 13 apartment units. All of the development will occur on approximately 12 acres of the site along San Ramon Valley Boulevard, with the remainder of the site being preserved as permanent open space.

The proposed project site sits to the north of Elworthy West site and encompasses approximately 109 acres of undeveloped land. Much of this area is considered unsuitable for development and would be retained as permanent open space. The higher elevations, steeper slopes and ravines, areas of potential geologic instability, and the most visually prominent parts of the site would remain undeveloped.

According to the 2030 General Plan, any future decisions involving the Podva property should reflect the area's environmental constraints and should acknowledge the importance of this area as a visual and open space resource for the entire town. As on the Elworthy West site, extensive cut and fill to accommodate development of the steeper areas of the Podva site is considered inappropriate. The limited amount of development potential that exists on the site should be clustered to the extent feasible. Any lots that are not part of a clustered development project must include a buildable homesite that can be developed with minimal visual impact and made accessible without substantial grading or site disturbance. Trails from the Podva site to Elworthy West also should be provided, enabling a connection to Las Trampas Ridge Regional Park.

Relevant Goals and Policies

The Planning and Development Element identifies the following relevant goals and policies that address land uses:

Goal 1 Assure that future development compliments Danville's existing small town character and established quality of life.

Policy 1.01 Recognize Danville's predominantly single family residential character and distinctive Downtown retail core in planning and development decisions.

Policy 1.02 Require that new development be consistent with the scale, appearance, and small town character of Danville.

Policy 1.07 Combine urban development with the goal of preservation of land for open space uses in appropriate areas.

Policy 1.09 In areas where different land uses abut one another, promote land use compatibility by utilizing buffering techniques such as landscaping, setbacks, and screening.

Goal 2 Integrate new development visually and functionally in a manner compatible with the physical character of the surrounding community.

Policy 2.01 Achieve a high standard of residential design through project review and approval for all new residential developments.

Policy 2.02 Preserve the Danville's visual qualities and the identity of its neighborhoods by restricting development on visible ridges and hillsides, protecting trees and riparian areas, and maintaining open space in the community.

Policy 2.03 Where development is allowed on existing legal lots within Scenic Hillside or Major Ridgeline area, require the preservation of the undeveloped remainder of the parcel in its natural state through the dedication of scenic easements in the Town of Danville.

Policy 2.05 On developable properties with steep hillsides, encourage clustering in flatter parts, conservation of open space on the steeper parts, and the protection of natural features such as trees, creeks, knolls, ridgelines and rock outcroppings.

Policy 2.07 Improve the appearance of the community by encouraging aesthetically designed buildings, screening, adequate setbacks, and landscaping.

Goal 5 Protect the quality of Danville's residential neighborhoods while providing opportunities for new housing that meets community needs.

Public Facilities Element

This chapter of the 2030 General Plan includes a discussion of parks/recreation/open space, civic and community facilities, circulation, and infrastructure.

Relevant Goals and Policies

The Planning and Development Element identifies the following relevant goals and policies that address land uses:

Goal 17 Provide a comprehensive network of high quality park and recreation facilities that are attractive, efficient, convenient to users, appropriately distributed throughout the community, and that reinforce community identity, culture, history, and visual character.

Policy 17.13 Assemble open space areas from contiguous parcels to the extent possible to minimize management problems and increase public access.

Land Use Designation

As stated in the Environmental Setting section, the project site has a Town of Danville 2030 General Plan Land Use Designation of Residential - Rural Residential. The Residential - Rural Residential designation requires a minimum density of one unit per five acres. The Town's zoning districts of P-1; Planned Unit Development and A-2; General Agricultural are consistent with the Residential - Rural Residential designation.

TOWN OF DANVILLE MUNICIPAL CODE

The following is an overview of relevant Town policy documents and mechanisms used to evaluate the potential land use impacts that could occur with project implementation.

A-2; General Agricultural District

As previously stated, the project site currently has a zoning designation of A-2; General Agricultural District, as detailed within the Danville Municipal Code (Code) Section 32-37. The following uses are permitted in this district: all types of agriculture, including general farming, horticulture, floriculture, nurseries and greenhouses, mushroom rooms, dairying, livestock production, fur farms, poultry raising, animal breeding, aviaries, apiaries, forestry, and similar agricultural uses; other agricultural uses, including the erection and maintenance of sheds, warehouses, granaries, dehydration plants, hullers, fruit and vegetable packing plants, and buildings for the storage of agricultural products and equipment; a stand not exceeding two hundred (200) square feet for sale of agricultural products grown on the premises, detached single family dwelling on each parcel and the accessory structures and uses normally auxiliary to it; and, a foster home or family care home.

P-1; Planned Unit Development District

Municipal Code Section 32-63, P-1; Planned Unit District, outlines the regulations that pertain to development within the P-1 District. The P-1 District allows large scale development, infill development, or a General Plan Special Area of Concern that provides an opportunity for, and requires cohesive design when flexible regulations are applied. The P-1 District is intended to allow diversification in the relationship of various uses, buildings,

structures, lot sizes and open spaces, ensure compatibility with surrounding land uses, and to ensure substantial compliance with the General Plan and the intent of the Town Municipal Code in requiring adequate standards necessary to satisfy the requirements of the public health, safety and general welfare. These standards shall be observed without unduly inhibiting the advantages of a large-scale site or special area planning. The P-1 District may also be used to provide additional zoning control by establishing site specific conditions of approval and standards for a specific P-1 District.

The following uses are allowed in the P-1 District:

1. Any land uses permitted by an approved final development plan which are in harmony with each other, serve to fulfill the function of the planned unit development, and are consistent with the General Plan;

2. A detached single family dwelling on each legally established lot and the accessory structures and uses normally auxiliary to it;

3. A second unit which complies with Section 32-76 of the Municipal Code, if a land use permit is first obtained.

Scenic Hillside and Major Ridgeline Development Ordinance

The Town's Scenic Hillside and Major Ridgeline Development Ordinance is codified in Section 32-69 of the Municipal Code. The purpose of the Scenic Hillside and Major Ridgeline Development Ordinance is to recognize the importance of the scenic qualities and geologic hazards of the hills and ridges within the Town. The project site is within a scenic hillside area, as depicted on Figure 11- of the General Plan. According to the ordinance, the permitted uses in Scenic Hillside and the Major Ridgeline areas are the same as the uses allowed in the underlying zoning district.

Tree Preservation Ordinance

The Town's Tree Preservation Ordinance is codified in Municipal Code Section 32-79, Tree Preservation. The Ordinance recognizes the preservation of the Town's native and non-native trees enhances the natural beauty, helps to create and retain the Town's identity and quality, and improves the Town's attractiveness. Accordingly, the Town has enacted regulations controlling the removal and requiring preservation of the Town's trees. Except as provided in this section, no person may destroy or remove a protected tree on any property within the Town without obtaining a Tree Removal Permit. Protected trees are:

- Native trees of a specific species or size (refer to Code Section 32-79.3.a)
- Heritage trees: Any single trunked tree in Town, regardless of species, which has a trunk diameter of thirty-six (36) inches or greater measured 4.5 feet above the ground
- Memorial trees: A tree planted on public property in memory of or commemoration of an individual or individuals
- A tree shown to be preserved on an approved Development Plan or specifically required by the Planning Commission to be retained
- A tree required to be planted as mitigation for the removal of a protected tree

4.10.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the CEQA Guidelines, the Podva Property Residential Development would have a significant impact on land use and planning if it would:

- 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.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Conflicts with Applicable Plans

Impact 4.10-1: The proposed project would not 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.

Determination: Less Than Significant Impact.

General Plan and Zoning

The project proposes to rezone the project site from A-2; General Agricultural District to P-1; Planned Unit Development District to facilitate the construction of 20 single-family homes on approximately 10 acres of the project site and incorporate an approximately 99-acre remainder parcel that would be dedicated to permanent open space. Rezoning to the P-l Planned Unit Development District allows for flexibility in project design. In addition, the project requests approval of a Final Development Plan – Major Subdivision to subdivide the approximately 99-acre site into 20 single-family residential lots and an approximately 99-acre remainder parcel to facilitate the proposed development and dedication of land to the East Bay Regional Park District (EBRPD) to permanent open space given that the majority of the area is not suitable for large scale agricultural uses due to its location, size and limited access as identified by the General Agricultural District. Rezoning the project site from A-2 to P-1 would not create any inconsistencies with the General Plan because, as previously stated, zoning districts P-1 and A-2 are consistent with the Residential - Rural Residential designation of the General Plan (Town of Danville 2030 General Plan page 3-37). Therefore, this impact would be less than significant.

The project site is also categorized as an Area of Special Concern in the Town of Danville General Plan. The proposed residential development would be clustered on the lower, flatter portion of the site, while approximately 99 acres in the western portion of the project site are proposed for permanent open space, leaving the higher elevations, the steeper slopes and ravines, areas of potential geologic instability, and the most visually prominent parts of the site undeveloped, resulting in very little change to the natural features that define the project site. Moreover, extensive cut and fill would be avoided by clustering the proposed development on the lower, flatter, eastern portion of the project site. Clustering development in the eastern portion of the project site would also respect the elevation of existing development to the north Lot size and corresponding density would also be consistent with adjacent existing development to the north and east. The project also proposes a trail connection with the adjacent Las Trampas Regional Wilderness to the west, which would provide an important link to the

adjoining regional park (Las Trampas Ridge) and watershed lands beyond the ridge. Therefore, the project would be consistent with the General Plan in this respect.

Scenic Hillside and Major Ridgeline Development Ordinance

The Scenic Hillside and Major Ridgeline Development Ordinance is supported by several objectives, including the preservation of significant landforms in essentially their natural state, preserving uncluttered natural topographic features, encouraging alternatives to flatland development approaches, and keeping grading consistent with the natural character of the hillside. The proposed project would comply with these objectives, as it would retain the majority of the project site as open space in perpetuity and cluster the development on the lower, flatter portion of the site.

As noted previously, the proposed residential development would be within the scenic hillside area, but outside of the major ridgeline area, as defined by Figure 10 in the General Plan. According to the ordinance, the permitted uses in the scenic hillside area and the major ridgeline area are the same as the uses allowed in the underlying zoning district. The project proposes to change the zoning of the site from an A-2 District to a P-1 District, which allows single-family residences as well as "any land use permitted by an approved final development plan which are in harmony with each other, serve to fulfill the function of the planned unit development, and are consistent with the General Plan." Therefore, the proposed 20-lot subdivision and associated access roads may be permitted with the proposed Final Development Plan and would be consistent with the scenic hillside area designation.

East Bay Regional Park District

The project sponsor will work directly with EBRPD to offer for dedication of the approximately 99 acre open space parcel in order to ensure its preservation and to provide public access for recreational use. As the property had historically been grazed, the Park District would manage the open space dedication parcel in accordance with its Wildland Management Policies and Guidelines as revised in June 2001. In addition, the District would retain a grazing tenant under contract and will require that party to abide by the terms and conditions of the District's Grazing license. Park District acceptance of the land would be provisioned on the developer's establishment of a long-term funding mechanism for parking, trail and open space upkeep and management.

Public access to the dedication parcel would be from the southern end of the development's westernmost cul-de-sac. This street will be constructed as single-loaded with on-street parking spaces provided for trail users on the western side of the street, across from houses. From this area, a trail would provide pedestrian, equestrian, and bicycle access to the EBRPD dedication parcel and Las Trampas Regional Wilderness beyond. The project sponsor would construct the parking and trail and offer an easement for emergency vehicle maintenance access (EVMA) purposes and public access. The trail would be constructed to EBRPD trail standards and equipped with appropriate informational signs. A gate or other mechanism would prevent public vehicular access but would also allow for maintenance and emergency vehicles to access the trail for maintenance and fire suppression activities. Trail access would follow portions of the former ranch roads, but to avoid excessive soil erosion and potential sedimentation of riparian areas the final alignment may be slightly re-aligned within an appropriate corridor located outside sensitive habitat and enhancement areas following a curvilinear alignment more appropriate to the topography. Additional improvements may include fencing and gates.

Tree Preservation Ordinance

As concluded in Section 4.4 (Biological Resources) of this Draft EIR, the Town could issue a Tree Removal Permit for the proposed removal of 21 Town-protected trees without creating a conflict with the Tree Preservation Ordinance. Therefore, upon approval of the project's requested Tree Removal Permit, and

Preliminary and Final Development Plan, the proposed project would satisfy the requirements of the Town's Tree Preservation Ordinance.

MITIGATION MEASURES

Mitigation is not required.

4.10.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.10-2: The proposed project would not result in potential cumulative land use conflicts.

Determination: Less than Significant Impact

The geographic scope of this impact is cumulative development generally located within the Town of Danville.

The proposed project would be an extension of the existing residential uses within the project vicinity and would not create substantial land use impacts. The past, present, and reasonably foreseeable future projects anticipated by the General Plan, as most recently updated, could contribute incrementally to changes in the character of the City and surrounding area. However, it is anticipated that a majority of cumulative development would take place within areas previously contemplated for development within the General Plan and would not require significant land use changes, potentially resulting in land use conflicts. The Town currently has one other residential project application under review and one recently approved project that is currently under construction. The project application currently under review proposes up to 69 single family residential units. The project currently under construction, the Weber property, includes 22 single family residential units. These projects are consistent with the growth assumptions identified in the 2030 General Plan. Therefore, cumulative land use impacts are considered less than significant.

MITIGATION MEASURES

Mitigation is not required.

4.11 NOISE

This section describes the existing noise levels at the project site, the potential impacts from future traffic volumes, and mitigation measures that would reduce identified impacts to less than significant levels. This section summarizes the *Traffic Noise Assessment Study* (Noise Study) (dated November 22, 2011) prepared by Edward L. Pack Associates, Inc. which is included in Appendix G (Noise Assessment).

4.11.1 ENVIRONMENTAL SETTING

NOISE CHARACTERISTICS AND MEASUREMENTS

Noise is typically described as any unwanted or objectionable sound. Sound is technically described in terms of the loudness (amplitude) and frequency (pitch) of the sound. The standard unit of measurement of the loudness of sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, a special frequency-dependent rating scale has been devised to relate noise to human sensitivity. The A-weighted decibel scale (dBA) performs this compensation by discriminating against sound frequencies in a manner approximating the sensitivity of the human ear.

The decibel scale is logarithmic. The logarithmic scale compresses the wide range in sound pressure levels to a more usable range, similar to how the Richter scale measures earthquake magnitudes. In terms of human response to noise, a sound that is 10 dBA higher than another is perceived to be twice as loud; 20 dBA higher, four times as loud; and so forth. Everyday sounds normally range from 30 dBA (very quiet) to 100 dBA (very loud). Examples of various sound levels in different environments are shown in Exhibit 4.11-1 (Common Environmental Noise Levels).

In most situations, a 3-dBA change in sound pressure level is considered a "just-detectable" difference. A 5-dBA change (either louder or quieter) is readily noticeable, and a 10-dBA change is a doubling (if louder) or a halving (if quieter) of the subjective loudness. Sound from a small localized source (approximating a "point" source) radiates uniformly outward as it travels away from the source in a spherical pattern. The sound level attenuates (drops off) at a rate of 6 dBA for each doubling of the distance. This decrease, due to the geometric spreading of the energy over an ever-increasing area, is referred to as the inverse square law.

Noise Measurement Scales

Numerous methods have been developed to measure sound over a period of time. These methods include: (1) the community noise equivalent level (CNEL); (2) the equivalent sound level (Leq); and (3) the day/night average sound level (Ldn). These methods are described below in Table 4.11-1 (Noise Descriptors).

Vibration Characteristics

Vibration is a unique form of noise. It is unique because its energy is carried through structures and the earth, whereas other noise is carried through the air. Thus, vibration is generally felt rather than heard. Some vibration effects can be caused by noise (e.g., the rattling of windows from passing trucks). The vibration phenomenon is related to the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Typically, groundborne vibration generated by man-made activities attenuates rapidly as distance from the source of the vibration increases. Vibration, which spreads through the ground rapidly, diminishes in amplitude with distance from the source. The ground motion caused by vibration is measured as particle velocity in inches per second and, in the U.S., is referenced as vibration decibels (VdB).

TABLE 4.11-1 NOISE DESCRIPTORS

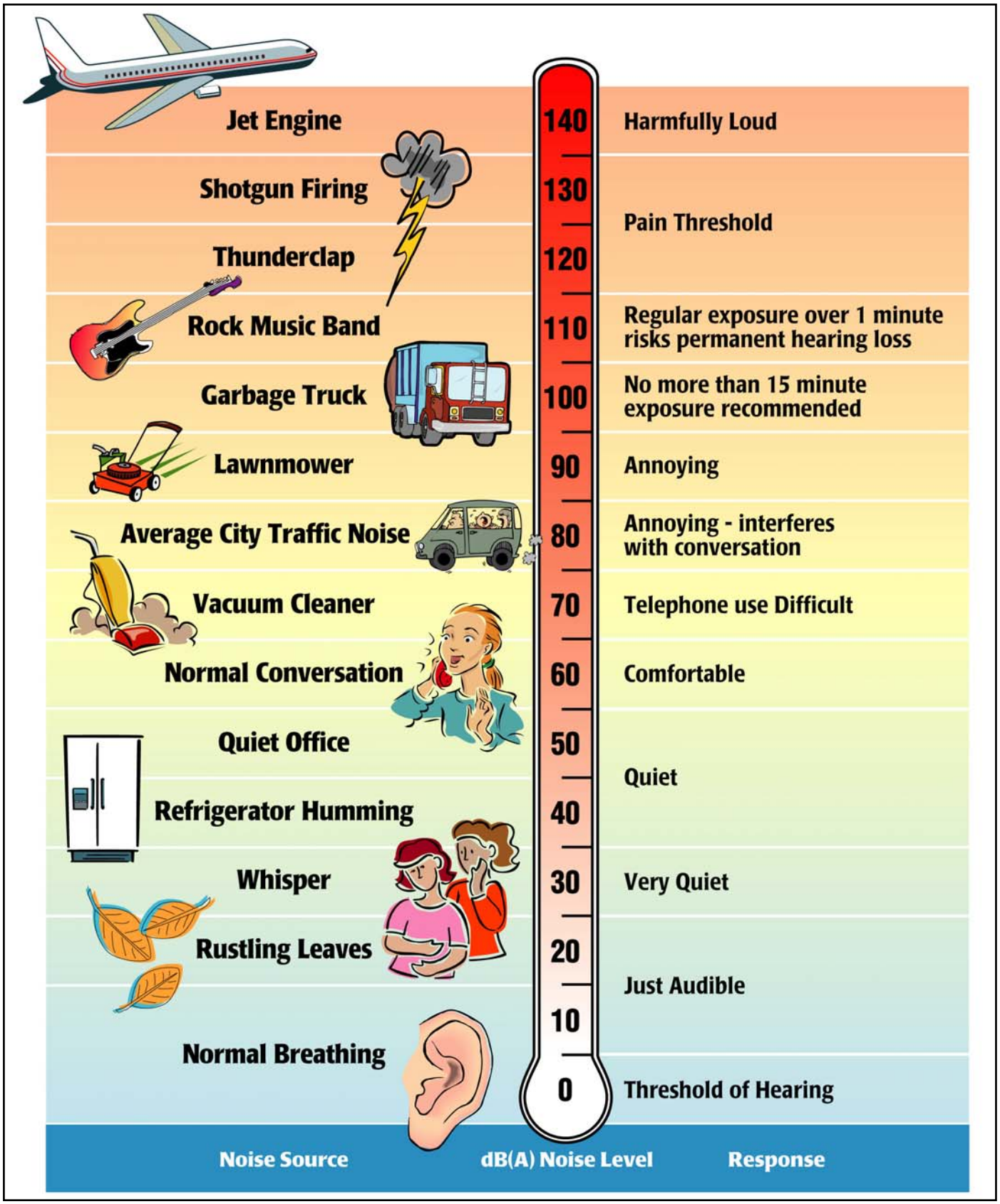
Term	Definition
Decibel (dB)	The unit for measuring the volume of sound equal to 10 times the logarithm (base 10) of the ratio of the pressure of a measured sound to a reference pressure (20 micropascals).
A-Weighted Decibel (dBA)	A sound measurement scale that adjusts the pressure of individual frequencies according to human sensitivities. The scale accounts for the fact that the region of highest sensitivity for the human ear is between 2,000 and 4,000 cycles per second (hertz).
Equivalent Sound Level (L_{eq})	The sound level containing the same total energy as a time varying signal over a given time period. The L_{eq} is the value that expresses the time averaged total energy of a fluctuating sound level.
Maximum Sound Level (L_{max})	The highest individual sound level (dBA) occurring over a given time period.
Minimum Sound Level (L_{min})	The lowest individual sound level (dBA) occurring over a given time period.
Community Noise Equivalent Level (CNEL)	A rating of community noise exposure to all sources of sound that differentiates between daytime, evening, and nighttime noise exposure. These adjustments are +5 dBA for the evening, 7:00 PM to 10:00 PM, and +10 dBA for the night, 10:00 PM to 7:00 AM.
Day/Night Average (L_{dn})	The L_{dn} is a measure of the 24-hour average noise level at a given location. It was adopted by the U.S. Environmental Protection Agency (EPA) for developing criteria for the evaluation of community noise exposure. It is based on a measure of the average noise level over a given time period called the L_{eq}. The L_{dn} is calculated by averaging the L_{eq}'s for each hour of the day at a given location after penalizing the "sleeping hours" (defined as 10:00 PM to 7:00 AM), by 10 dBA to account for the increased sensitivity of people to noises that occur at night.
Exceedance Level (L_n)	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% (L_{01}, L_{10}, L_{50}, L_{90}, respectively) of the time during the measurement period.

Source: Cyril M. Harris, *Handbook of Noise Control*, dated 1979.

The vibration velocity threshold for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration comes from sources within buildings, such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible groundborne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the groundborne vibration from traffic is barely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity, to 100 VdB, which is the general threshold at which minor damage can occur to fragile buildings.

HEALTH EFFECTS OF NOISE

In terms of human response to noise, a sound 10 dBA higher than another is judged to be twice as loud, and 20 dBA higher four times as loud, and so forth. Human response to sound is highly individualized. Annoyance is the most common issue regarding community noise. The percentage of people claiming to be annoyed by noise generally increases with the environmental sound level. However, many factors also influence people's response to noise. The factors can include the character of the noise, the variability of the sound level, the presence of tones or impulses, and the time of day of the occurrence. Additionally, non-acoustical factors, such as the person's opinion of the noise source, the ability to adapt to the noise, the attitude towards the source and those associated with it, and the predictability of the noise, all influence people's response. As such, response to noise varies widely from one person to another and with any particular noise, individual responses will range from "not annoyed" to "highly annoyed."



Source: Melville C. Branch and R. Dale Beland (1970), Environmental Protection Agency (1974), RBF Consulting (2012)

RBF A Baker Company

COMMON ENVIRONMENTAL NOISE LEVELS

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.11-4

When the noise level of an activity rises above 70 dBA, the chance of receiving a complaint is possible, and as the noise level rises, dissatisfaction among the public steadily increases. However, an individual's reaction to a particular noise depends on many factors such as the source of the sound, its loudness relative to the background noise, and the time of day. The reaction to noise can also be highly subjective; the perceived effect of a particular noise can vary widely among individuals in a community. The effects of noise are often only transitory, but adverse effects can be cumulative with prolonged or repeated exposure. The effects of noise on the community can be organized into six broad categories:

- Noise-Induced Hearing Loss
- Interference with Communication
- Effects of Noise on Sleep
- Effects on Performance and Behavior
- Extra-Auditory Health Effects
- Annoyance

Although it often causes discomfort and sometimes pain, noise-induced hearing loss usually takes years to develop. Noise-induced hearing loss can impair the quality of life through a reduction in the ability to hear important sounds and to communicate with family and friends. Hearing loss is one of the most obvious and easily quantified effects of excessive exposure to noise. While the loss may be temporary at first, it becomes permanent after continued exposure. When combined with hearing loss associated with aging, the amount of hearing loss directly caused by the environment is difficult to quantify. Although the major cause of noise-induced hearing loss is occupational, substantial damage can be caused by nonoccupational sources.

According to the U.S. Public Health Service, nearly ten million of the estimated 21 million Americans with hearing impairments owe their losses to noise exposure. Noise can mask important sounds and disrupt communication between individual in a variety of settings. This process can cause anything from a slight irritation to a serious safety hazard, depending on the circumstance. Noise can disrupt face-to-face communication and telephone communication, and the enjoyment of music and television in the home. It can also disrupt effective communication between teachers and pupils in schools, and can cause fatigue and vocal strain in those who need to communicate in spite of the noise.

Interference with communication has proved to be one of the most important components of noise-related annoyance. Noise-induced sleep interference is one of the critical components of community annoyance. Sound level, frequency distribution, duration, repetition and variability can make it difficult to fall asleep and may cause momentary shifts in the natural sleep pattern, or level of sleep. It can produce short-term adverse effects on mood changes and job performance, with the possibility of more serious effects on health if it continues over long periods. Noise can cause adverse effects on task performance and behavior at work, and nonoccupational and social settings. These effects are the subject of some controversy, since the presence and degree of effects depends on a variety of intervening variables. Most research in this area has focused mainly on occupational settings, where noise levels must be sufficiently high and the task sufficiently complex for effects on performance to occur.

Recent research implicates that more moderate noise levels can produce disruptive after-effects, commonly manifested as a reduced tolerance for frustration, increased anxiety, decreased incidence of "helping" behavior and increased incidence of "hostile" behavior. Noise has been implicated in the development or exacerbation of a variety of health problems, ranging from hypertension to psychosis. As with other categories, quantifying these effects is difficult due to the amount of variables that need to be considered in each situation. As a biological

stressor, noise can influence the entire physiological system. Most effects seem to be transitory, but with continued exposure some effects have been shown to be chronic in laboratory animals.

Annoyance can be viewed as the expression of negative feelings resulting from interference with activities, as well as the disruption of one's peace of mind and the enjoyment of one's environment. Field evaluations of community annoyance are useful for predicting the consequences of planned actions involving highways, airports, road traffic, railroads, or other noise sources. The consequences of noise-induced annoyance are privately held dissatisfaction, publicly expressed complaints to authorities, and potential adverse health effects, as discussed above. In a study conducted by the U.S. Department of Transportation, the effects of annoyance to the community were quantified. In areas where noise levels were consistently above 60 dBA CNEL, approximately nine percent of the community is highly annoyed. When levels exceed 65 dB CNEL, that percentage rises to 15 percent. Although evidence for the various effects of noise have differing levels of certainty, it is clear that noise can affect human health. Most of the effects are, to a varying degree, stress related. One can expect that the impacts of noise will increase over time, due to population growth, especially in urban areas, and the proliferation of noise sources, particularly those related to increased traffic.

NOISE SOURCES IN THE PROJECT AREA

As part of the project Noise Study, noise impacts were evaluated against the standards of the Town of Danville Noise Element and Noise Control Ordinance. Long-term noise measurements were taken at two locations over period of 48 hours. Location 1 was 1,450 feet from the centerline of the Interstate 680 (I-680) in front of the existing barn near the northerly portion of the site. Location 2 was 1,320 feet from the centerline of I-680 at the fence in the southerly portion of the site.

The results of the field survey found that noise levels at location 1 ranged from 49.0 to 57.6 dBA L_{eq} during the daytime and 46.6 to 57.4 dBA L_{eq} at night. Noise levels at location 2 ranged from 41.6 to 56.4 dBA L_{eq} during the daytime and 44.7 to 54.3 dBA L_{eq} at night.

Stationary Noise Sources

The primary sources of stationary noise in the project vicinity are residential activities (i.e., heating and cooling systems, pool and spa equipment, human voices and landscape maintenance equipment). The noise associated with these sources may represent a single-event noise occurrence, a short-term noise, or a long-term, continuous noise. There are no significant sources of industrial noise or stationary noise within the Town of Danville (Town).

Mobile Noise Sources

The major source of noise in the Town is vehicular traffic, including automobiles, trucks, buses and motorcycles. The level of vehicular noise generally varies with the volume of traffic, the number of trucks or buses, the speed of traffic and the distance from the roadway. Noise generated by vehicular traffic in the Town is greatest along I-680, which is the dominant noise source in the Town. Local roadways (San Ramon Valley Boulevard and Danville Boulevard) are also sources of traffic-generated noise. The project site is located adjacent to I-680 and San Ramon Valley Boulevard, which are sources of vehicular traffic noise.

Sensitive Receptors

Certain land uses are particularly sensitive to noise, including schools, hospitals, rest homes, long-term medical and mental care facilities, and parks and recreation areas. Residential areas are also considered noise sensitive, especially during the nighttime hours. The project site is immediately surrounded by open space to the west, and

residential land uses to the north, south, and east. Table 4.11-2 (Sensitive Receptors) describes the location of the sensitive receptors closest to the project site.

TABLE 4.11-2 SENSITIVE RECEPTORS

Type	Name	Distance from Project Site (feet)	Direction from Project Site
Residential	Residential Uses	160	North
		200	South
		120	East
Schools	John F. Baldwin Elementary School	2,900	Northeast
	Charlotte Wood Middle School	4,100	East
	Valley Parent Preschool	1,500	East
	KinderCare	1,500	East
	Rainbow Montessori School	4,400	North
Parks	Osage Park	4,100	East
Source: Google Earth, 2012.			

4.11.2 REGULATORY SETTING

It is difficult to specify noise levels that are generally acceptable to everyone; what is objectionable to one person may be unnoticed by another. Standards may be based on documented complaints in response to documented noise levels, or on studies of the ability of people to sleep, talk or work under various noise conditions. All such studies, however, acknowledge that individual responses vary considerably. Standards usually address the needs of most of the general population.

STATE FRAMEWORK

The State of California Office of Planning and Research (OPR) *Noise Element Guidelines* include recommended interior and exterior level standards for local jurisdictions to identify and prevent the creation of incompatible land uses due to noise. The *OPR Guidelines* describe the compatibility of various land uses with a range of environmental noise levels in terms of dBA CNEL.

A noise environment of 50 dBA CNEL to 60 dBA CNEL is considered to be "normally acceptable" for residential uses. The State indicates that locating residential units, parks, and institutions (such as churches, schools, libraries, and hospitals) in areas where exterior ambient noise levels exceed 65 dBA CNEL is undesirable. The OPR recommendations also note that, under certain conditions, more restrictive standards than the maximum levels cited may be appropriate. As an example, the standards for quiet suburban and rural communities may be reduced by 5 to 10 dB to reflect their lower existing outdoor noise levels in comparison with urban environments.

In addition, *Title 25, Section 1092* of the *California Code of Regulations*, sets forth requirements for the insulation of multiple-family residential dwelling units from excessive and potentially harmful noise. Whenever multiple-family residential dwelling units are proposed in areas with excessive noise exposure, the developer must incorporate construction features into the building's design that reduce interior noise levels to 45 dBA CNEL.

TOWN OF DANVILLE

Danville 2030 General Plan

The Town of Danville General Plan contains noise goals and policies that support the Town's goal of protecting existing and future residents from excessive noise.

The Noise Element of the *Danville 2030 General Plan (General Plan)* establishes residential, commercial, and industrial land use compatibility standards for noise measured at the property line of the receiving land use. The land use compatibility noise criteria provide the basis for decisions on location of land uses in relation to noise sources and for determining noise mitigation requirements. Table 4.11-3 (Town of Danville Land Use Compatibility Guidelines for Exterior Noise Levels) shows the noise standards for the Town. As indicated, the normally acceptable exterior noise level is 50 – 60 CNEL or less for noise-sensitive land uses such as Low Density Residential, and 70 dBA or less for parks, schools, commercial and office land uses. Noise levels up to 70 dBA are considered conditionally acceptable for most noise sensitive land uses.

TABLE 4.11-3 TOWN OF DANVILLE LAND USE COMPATIBILITY GUIDELINES FOR EXTERIOR NOISE LEVELS

Land Use Category	Exterior Noise Exposure (L_{dn} or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Unacceptable
Residential-Low Density, Single Family, Duplex, Mobile Homes	50 – 60	55 – 70	70 – 75	75 – 85
Residential – Multifamily	50 – 65	60 – 70	70 – 75	75 – 85
Transient Lodging – Motel, Hotels	50 – 65	60 – 70	70 – 80	80 – 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 – 70	70 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters, Sports Arenas, Outdoor Spectators Sports	NA	50 – 70	NA	65 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	NA	70 – 80	80 – 85
Office Buildings, Business Commercial and Professional	50 – 70	67.5 – 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agricultural	50 – 75	70 – 80	75 – 85	NA

Ldn = day/night average; CNEL = community noise equivalent level in A-weighted decibels (dBA); NA = not applicable.

NORMALLY ACCEPTABLE: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
CONDITIONALLY ACCEPTABLE: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features have been included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.
NORMALLY UNACCEPTABLE: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features must be included in the design.
UNACCEPTABLE: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise-insulation features must be included in the design.

Source: Town of Danville, *Danville 2030 General Plan*, 2013.

The Resource and Hazards chapter of the *General Plan* contains the following policies with respect to hazards and nuisances associated with excessive noise levels:

Goal 27 Protect existing and future residents of Danville from hazards and nuisance associated with excessive levels of noise by maintaining or reducing noise intrusion levels in all areas of the Town to acceptable levels.

Policy 27.01 Ensure that new residential development projects should meet acceptable noise level guidelines as shown in Figure 26 (in the *General Plan*).

Policy 27.02 Require acoustical studies for major residential and other development projects, as appropriate, and impose noise mitigation measures accordingly.

Policy 27.03 The noise environment in existing residential areas shall be protected. Where acceptable noise levels in residential (as shown on Figure 5 in the *General Plan*) would be exceeded or further impacted as a result of new development or transportation improvements, require the use of noise mitigating measures, such as wall barriers, berms, mufflers, sound traps, and baffles to reduce noise intrusion.

Policy 27.04 Encourage the location of noise sensitive land uses away from noise sources or require appropriate noise screening.

Policy 27.05 Open space should be used, wherever practical, to provide an adequate spatial separator between noise sources and sensitive land uses.

Policy 27.06 Review and update the existing Noise Ordinance to specify and regulate the noise levels for various equipment, activities, and land uses and to clarify enforcement procedures.

Policy 27.07 Protect parks and recreational areas from excessive noise to permit the enjoyment of sports and other leisure time activities.

Policy 27.08 Require noise monitoring as needed to determine changes in noise levels over time, measure the effectiveness of project conditions of approval, and to ensure that appropriate mitigation programs are developed.

Policy 27.09 Generally maintain exterior noise levels below 60 Ldn in areas where outdoor use is a major consideration, such as in residential backyards. Where the Town determines that this level cannot be achieved after reasonable mitigation has been applied, higher standards may be permitted at the discretion of the Town Council. In such cases, indoor noise levels should not exceed an Ldn of 45 dB.

Policy 27.10 Allow selected outdoor concerts and other community events that are sponsored or approved by the Town and take place at appropriate locations and at appropriate times, even though such events may exceed the noise compatibility guidelines for brief durations.

Policy 27.11 Ensure that the design of new development near major noise sources (such as Interstate 680) reduces the potential for future occupants to be exposed to high levels of noise. Development on such properties should incorporate appropriate noise mitigation measures.

Policy 27.12 Require the preparation of groundborne vibration studies by qualified professionals in accordance with industry-accepted methodology where heavy construction activities involving significant site grading, underground, or foundation work will occur within 50 feet of residential or other vibration sensitive uses.

Policy 27.13 Utilize noise reduction measures during all phases of construction activity to minimize the exposure of neighboring properties to excessive noise levels.

Town of Danville Municipal Code

The Town has adopted a Noise Control Ordinance in order to regulate certain noise levels that are detrimental to the health and welfare of the citizenry. The Town's Noise Control Ordinance (Municipal Code Section 4-2) does not specify noise level standards or guidelines, but it does provide restrictions on noise generating activities, including construction activities. According to the Noise Control Ordinance, construction or repair work (which

creates noise) is prohibited within or adjacent to a residential land use district except Monday through Friday (7:30 a.m. to 7:00 p.m.), and Saturdays, Sundays and holidays (9:00 a.m. to 7:00 p.m.).

4.11.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the CEQA Guidelines, the Podva Property Residential Development would have a significant impact regarding noise if it would result in:

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

POTENTIAL IMPACTS AND MITIGATION MEASURES

Noise Level Impacts

Impact 4.11-1: The proposed project could expose persons to or generate noise levels in excess of standards established in the general plan or noise ordinance, or applicable standards of other agencies.

Determination: Less Than Significant Impact with Mitigation Incorporation.

Construction activities associated with the proposed project would include grading and construction of buildings. Groundborne noise and other construction-related noise would typically occur during initial site preparation, which would create the highest levels of noise but would also generally be the shortest of all construction phases. High groundborne and miscellaneous noise levels would be created by the operation of heavy equipment such as trucks, backhoes, bulldozers, excavators, front-end loaders, compactors, and scrapers. Table 4.11-4 (Typical Construction Equipment Noise Levels) indicates anticipated equipment noise levels during project construction. However, equipment used in the field may vary slightly depending on the sizes of engines, the contractor and their sub-contractors, age of equipment, and the way equipment is utilized.

TABLE 4.11-4 TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVELS

Type of Equipment	Maximum Level (dBA at 50 Feet)
Paving Machine	89
Water Truck	84
Compactive Roller	85
Scraper	86
Grader	83
Wheel Loader	82
Backhoe	82
Bulldozer	85

TABLE 4.11-4, CONTINUED

Type of Equipment	Maximum Level (dBA at 50 Feet)
Haul Truck	84
Crane	82
Excavator	85
Air Compressor	90
Generator	81
Skid Steer	78
dBA = A-weighted decibel	
Source: Edward L. Pack Associates, Inc., *Noise Assessment Study for the Planned Single-Family Development, Podva Property, 250 Midland Way, Danville*, November 22, 2011.	

Typical operating cycles for these types of construction equipment are one or two minutes of full-power operation followed by three or four minutes at lower power settings. Other primary sources of acoustical disturbance would be random incidents, which would last less than one minute, such as dropping large pieces of equipment or the hydraulic movement of machinery lifts.

In addition to construction noise from the project site, construction periods would also cause increased noise along access routes due to the movement of equipment and workers to and from the site. Heavy construction equipment and vehicles are expected to be moved on-site during the initial construction period and would have a less than significant noise impact on nearby roadways. Daily transportation of construction workers is not expected to cause a significant effect because this traffic would not substantially increase current daily traffic volumes in the area. Construction operations would comply with the limits of the Town of Danville Noise Ordinance (Chapter 4-2.4[d]), and be limited to the hours of 7:30 a.m. to 7:00 p.m. Monday through Friday and 9:00 a.m. to 7:00 p.m. Saturday, Sunday, and holidays. Implementation of Mitigation Measures 4.11-1a (i.e., engine muffling, placement of construction equipment, and strategic stockpiling and staging of construction vehicles), as well as compliance with the Town's Municipal Code, would ensure that temporary impacts from construction noise would be less than significant.

MITIGATION MEASURES

4.11-1a Prior to the issuance of Grading Permits, the Construction Contractor shall demonstrate to the Planning and Building Safety Director, the following:

- Construction operations shall be limited to the hours of 7:30 a.m. to 7:00 p.m. Monday through Friday and 9:00 a.m. to 7:00 p.m. Saturday, Sunday, and holidays to comply with the limits of the Town of Danville Noise Ordinance, Chapter 4-2.4(d).

- Construction contracts must specify that all construction equipment, fixed or mobile, must be equipped with properly operating and maintained mufflers and other State required noise attenuation devices.

- Construction noise reduction methods such as shutting off idling equipment, maximizing the distance between construction equipment staging areas and nearby occupied uses, housing generators and compressors in acoustical enclosures, and use of electric air compressors and similar power tools, rather than diesel equipment, must be used where feasible.

- During construction, stationary construction equipment must be placed such that emitted noise is directed away from sensitive noise receptors.

- All construction entrances must clearly post construction hours, allowable workdays, and the phone number of the job superintendent. This will allow surrounding owners to contact the job superintendent with concerns. If the contractor receives a noise-related complaint, appropriate corrective actions must be implemented and a report taken indicating the action with a copy of the report provided to the reporting party upon request.

Groundborne Vibration Impacts

Impact 4.11-2: The proposed project could expose persons to or generate excessive groundborne vibration or groundborne noise levels.

Determination: Less Than Significant Impact.

Project construction can generate varying degrees of groundborne vibration, depending on the construction procedure and the construction equipment used. Operation of construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Ground-borne vibrations from construction activities rarely reach levels that damage structures.

The Federal Transit Administration (FTA) has published standard vibration velocities for construction equipment operations. In general, the FTA architectural damage criterion for continuous vibrations (i.e., 0.2 inch/second) appears to be conservative even for sustained pile driving. Pile driving levels often exceed 0.2 inch/second at distances of 50 feet, and 0.5 inch/ second at 25 feet without any apparent damage to buildings. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience any cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on the soil composition and underground geological layer between vibration source and receiver. In addition, not all buildings respond similarly to vibration generated by construction equipment. The typical vibration produced by construction equipment is illustrated in Table 4.11-5 (Typical Vibration Levels for Construction Equipment).

TABLE 4.11-5 TYPICAL VIBRATION LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Reference peak particle velocity at 25 feet (inches/second)[1]	Approximate peak particle velocity at 120 feet (inches/second)[2]
Large bulldozer	0.089	0.008
Loaded trucks	0.076	0.007
Small bulldozer	0.003	0.0003
Jackhammer	0.035	0.003
Vibratory compactor/roller	0.210	0.020

Notes:
1 – Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006. Table 12-2.
2 – Calculated using the following formula:

$$PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$$

where: PPV (equip) = the peak particle velocity in in/sec of the equipment adjusted for the distance
PPV (ref) = the reference vibration level in in/sec from Table 12-2 of the FTA *Transit Noise and Vibration Impact Assessment Guidelines*
D = the distance from the equipment to the receiver

As indicated in Table 4.11-5, based on the FTA data, vibration velocities from typical heavy construction equipment that would be used during project construction range from 0.003 to 0.210 inch-per-second peak

particle velocity (PPV) at 25 feet from the source of activity. With regard to the proposed project, ground-borne vibration would be generated during site clearing and grading activities on-site facilitated by implementation of the project. The nearest structures (residences) are located approximately 120 feet to the east of the construction area. As demonstrated in Table 4.11-5, vibration levels at 120 feet would range from 0.0003 to 0.020 PPV and the anticipated vibration levels would not exceed the 0.2 inch-per-second PPV significance threshold during construction operations at the nearest receptors. It should be noted that 0.2 inch-per-second PPV is a conservative threshold, as that is the construction vibration damage criteria for non-engineered timber and masonry buildings.[1] Buildings within the project area would be better represented by the 0.5 inch-per-second PPV significance threshold (construction vibration damage criteria for a reinforced concrete, steel or timber buildings).[2] Therefore, vibration impacts associated with construction are anticipated to be less than significant.

MITIGATION MEASURES

Mitigation is not required.

Permanent Ambient Noise Impacts

Impact 4.11-3: The proposed project could substantially permanently increase ambient noise levels in the project vicinity above levels existing without the project.

Determination: Less Than Significant Impact.

Long-Term Stationary Noise Impacts

The proposed project would develop residential uses within the project site. Noise that is typical of residential areas includes children playing, pets, amplified music, mechanical equipment, car repair, and home repair. Noise from residential stationary sources would primarily occur during the "daytime" activity hours. Perception of noise levels at receptors in the vicinity of rural residences would be below those of residences in a typical neighborhood setting due to the increased distances between the noise source and the receptor. Noise impacts from the proposed residential uses to surrounding uses are anticipated to be less than significant.

Off-Site Mobile Noise Impacts

Future development generated by the proposed project would result in additional traffic on adjacent roadways, thereby increasing vehicular noise in the vicinity of existing and proposed land uses. Based on the *Podva Property Residential Development Transportation Impact Analysis* prepared by Hexagon Transportation Consultants (dated January 19, 2012), 204 new daily trips would be associated with the proposed project. Based on the noise measurements taken during the project field survey, existing noise levels range from 41.6 to 57.6 dBA L_{eq} during the day and from 44.7 to 57.3 dBA L_{eq} at night. As the new daily trips associated with the proposed project would be distributed throughout the day, the proposed project (20 single family dwelling units) would not create a noticeable change in ambient traffic noise levels. Impacts would be less than significant in this regard.

On-Site Noise Impacts

The noise assessment findings were evaluated against the standards of the Town of Danville Noise Element which utilize the Day-Night Level (L_{dn}) noise descriptor. The Noise Element specifies a limit of 60 dBA L_{dn} for

[1] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Guidelines*, May 2006. Table 12-3.
[2] Ibid.

single-family exterior areas and a limit of 45 dBA L_{dn} for interior living spaces. The exterior noise standard is applied for exterior living spaces, such as rear and side yards.

Based on the modeling performed in the Noise Study prepared by Edward L. Pack Associates, exterior and interior noise exposure would be in compliance with the Town of Danville Noise Element standards. The existing exterior noise level is 59 dBA L_{dn} on the project site. Under future traffic conditions, the noise exposure expected to increase to 60 dBA L_{dn}. Future noise exposures on the project site were estimated based on historical traffic volumes provided by the California Department of Transportation (Caltrans) and annual growth projections; refer to Appendix G (Noise Assessment). Thus, exterior noise exposures would be within the limit of the Town of Danville Noise Element standards.

To evaluate the interior noise exposures in project living spaces, a 25 dB reduction was applied to the exterior noise exposures to represent the attenuation provided by the building shells under a closed window condition. The 2010 Mechanical Code requires full time ventilation that allows windows and doors to be maintained closed at all time for noise control. The interior noise exposure would be up to 34 dB L_{dn} under existing conditions and 35 dB L_{dn} under future traffic conditions. Thus, the interior noise exposures would be within the 45 dBA L_{dn} limit of the Town of Danville Noise Element. Impacts would be less than significant.

MITIGATION MEASURES

Mitigation is not required.

Temporary Ambient Noise Impacts

Impact 4.11-4: The proposed project could create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

Determination: Less than Significant Impact with Mitigation Incorporation.

Refer to impact statements 4.11-1, 4.11-2, and 4.11-3, above.

MITIGATION MEASURES

4.11-4 Refer to Mitigation Measure 4.11-1a.

4.11.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.11-5: Implementation of the proposed project could permanently increase ambient noise levels in the project vicinity.

Determination: Less than Significant Impact with Mitigation Incorporation.

CUMULATIVE SHORT-TERM CONSTRUCTION IMPACTS

Construction activity would occur throughout the project area, concurrently with other construction throughout the region. Short-term construction noise is a localized activity and would affect only land uses that are immediately adjacent to a specific project site. With implementation of Mitigation Measure 4.11-1a construction

related noise impacts associated with future development under the proposed project would be reduced to less than significant levels.

The Elworthy Ranch project is located approximately 1,000 feet to the south of the project site and is currently under construction. Average construction noise levels would be 84 dBA at 50 feet from the source. Based on the inverse square law, at 1,000 feet, these noise levels would be approximately 58 dBA, which is below the Town's noise standards. It should be noted that 1,000 feet represents the distance from the closest portion of the Elworthy Ranch project to the project boundary. Construction activities would be dispersed throughout the project site and would not occur on a constant basis at the project boundary. It is likely that other construction projects would also have to comply with the local noise ordinance, as well as mitigation measures that may be prescribed pursuant to CEQA provisions that require significant impacts to be reduced to the extent feasible. In addition, it is unlikely that all construction activities would occur simultaneously within the Town. Thus, a less than significant impact would occur.

CUMULATIVE LONG-TERM OPERATIONAL IMPACTS

Mobile Sources

Implementation of the project would result in potential cumulative noise level increases along major roadways. Each of these noise impacts would be dealt with separately when new noise sensitive or noise generating developments are proposed. Project implementation would not create a noticeable change in ambient traffic noise levels. As a result, the proposed project would not create cumulatively considerable noise impact due to the relatively low trip generation. Therefore, the project would result in less than significant cumulative noise impacts.

Stationary Sources

Cumulative stationary noise impacts associated with a project's on-site operations are site-specific, and unless a cumulative project development is proposed in the immediate area, cumulative noise impacts from stationary sources are unlikely. The proposed project would result in less than significant stationary source impacts. All future development within the project area and surrounding region would be subject to comply with Town, State, and Federal guidelines regarding noise abatement and insulation standards. Cumulative stationary source impacts are anticipated to be less than significant.

MITIGATION MEASURES

4.11-5 Refer to Mitigation Measure 4.11-1a.

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4.12 POPULATION AND HOUSING

This section describes the existing population and housing conditions in the Town of Danville (Town) and the Danville Planning Area (Planning Area), and evaluates potential impacts that could result from the future development of a proposed 20 unit subdivision on local and regional housing needs. This evaluation is based on the following documentation:

- Association of Bay Area Governments, Building Momentum: Projections and Priorities 2009, August 2009.
- California Employment Development Department, Monthly Labor Force Data for Cities and Census Designated Places, 2012
- Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (California Code of Regulations, Title 5, Division 3, Sections 56000 et. Seq.).
- State of California, Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011 and 2012, with 2010 Benchmark*. Sacramento, California, May 2012.
- Town of Danville, Town of Danville 2030 General Plan (2030 General Plan) Housing Element (adopted March 19, 2013).
- Town of Danville, Town of Danville 2030 General Plan (2030 General Plan) (adopted March 19, 2013).

4.12.1 ENVIRONMENTAL SETTING

POPULATION

Danville began as a small rural village formed during the 1850s to serve the commercial and cultural needs of the surrounding agricultural areas. The first noteworthy growth in the area occurred after the construction of the Bay Bridge in 1936 and the Caldecott Tunnel in 1937, which made central Contra Costa County accessible to the large and growing employment centers in San Francisco and other parts of the Bay Area. The first large residential subdivisions in Danville occurred during the late 1940s and Danville continued to experience steady residential growth during the 1950s and 1960s. However, the completion of the I-680 freeway in 1968 greatly improved access to the area and led to increased amounts of residential development activity throughout the San Ramon Valley during the 1970s, which ultimately lead to the Town's incorporation in 1982. Since its incorporation, Danville continued to grow during the 1980s and 1990s, particularly on the east side of the I-680 freeway.

According to the most current California Department of Finance estimates (2012)[1], the population of the Town of Danville is 42,450 with an average of 2.734 persons per household. However, population projections provided in the 2030 General Plan cover the Danville Planning Area, which is a larger geographic area than was covered by the 2010 General Plan. It encompasses a total area of 13,950 acres (21.8 square miles) including the Town of Danville and the unincorporated area east of Danville. This additional area was added to the Planning Area due to the buildout of existing subdivisions along Camino Tassajara, which were previously approved by Contra Costa County (such as Alamo Creek). These areas are addressed in the General Plan because their development will have a bearing on land use, transportation, community services, and other planning issues within Danville. About 60 percent of the 2010-2030 household increase is associated with land within the Town limits, and about 40 percent is associated with land in the unincorporated Planning Area on the east side of Danville.

[1] State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011 and 2012, with 2010 Benchmark. Sacramento, California, May 2012

The population of the Planning Area was 47,130 in 2010. According to projections provided in the 2030 General Plan, the population of the Planning Area is projected to increase from a total of 47,130 in 2010 to 52,000 residents in 2030 (a 10.3 percent increase), with a total of 18,900 households and 17,210 jobs by the year 2030.[2]

HOUSING

According to the most current California Department of Finance estimates, Danville has a total of 15,950 housing units. Of these, 15,436 are occupied, which equates to a vacancy rate of 3.22 percent. The forecasts for the Town represent an average annualized household growth rate of 0.357 percent and an average annualized job growth rate of 0.64 percent. The forecast also translates to approximately 55 new housing units a year[3].

Table 4.12-1 (Town of Danville Housing Stock) summarizes the Town's housing stock, the majority of which (76 percent) consists of single-family detached houses.

TABLE 4.12-1 TOWN OF DANVILLE HOUSING STOCK

Unit Type	Number	Percent of Total
Single Family Detached	12,081	76
Single-Family Attached	2,902	18
Multi-Family (two to four units)	153	<1
Multi-Family (five plus units)	797	5
Mobile Homes	17	<1
Total	**15,950**	**100**

4.12.2 REGULATORY SETTING

STATE OF CALIFORNIA

Department of Finance

The State of California Department of Finance is responsible for developing the total statewide new housing demand projection. With the State Department of Housing and Community Development, this demand is apportioned to each of the State's regions.

Cortese-Knox Hertzberg Local Government Reorganization Act of 2000

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (CKH Act) establishes procedures for local government changes of organization, including city incorporations, annexations to a city or special district, and city and special district consolidations.

Local agency formation commissions (LAFCOs) have numerous powers under the CKH Act, but those of primary concern are the power to act on local agency boundary changes and to adopt spheres of influence for

[2] Danville 2030 General Plan, Chapter 3, pg. 3-21, Figure 4.
[3] Danville 2030 General Plan, Chapter 3, pg. 3-20.

local agencies. Among the purposes of LAFCOs are the discouragement of urban sprawl and the encouragement of the orderly formation and development of local agencies.

Germaine to the evaluation of the project's impacts on population and housing is CKH Act section 5668(l), which requires LAFCOs (in their review of annexations) to consider the extent to which a project would affect a city or cities and the county in achieving their respective fair shares of the regional housing needs as determined by the appropriate council of governments. While not a mandatory requirement, CKH Act section 56668.5, permits, but does not require LAFCOs in their review of annexation proposals, to "consider the regional growth goals and policies established by a collaboration of elected officials only, formally representing their local jurisdictions in an official capacity on a regional or subregional basis. This section does not grant any new powers or authority to the commission or any other body to establish regional growth goals and policies independent of the powers granted by other laws." Other factors the Contra Costa County LAFCO is required to consider in its review of the proposed annexations are addressed elsewhere in this Draft EIR (i.e., CKH Act section 56668(g) requires LAFCOs to consider a project's consistency with either city or county general and specific plans; project consistency with the 2030 General Plan is addressed in Section 4.1 (Land Use and Planning) of this Draft EIR.).

REGIONAL FRAMEWORK

One Bay Area

One Bay Area is a joint initiative that is comprised of four of the San Francisco Bay Area's regional government agencies – the Association of Bay Area Governments (ABAG), the Bay Area Air Quality Management District (BAAQMD), the Bay Conservation and Development Commission (BCDC), and the Metropolitan Transportation Commission (MTC). These agencies work in partnership with cities, counties, business groups, community-based organizations and other stakeholders to coordinate efforts on regional transportation and land use planning.

Plan Bay Area

Plan Bay Area is an integrated long-range transportation and land-use/housing plan for the San Francisco Bay Area. It includes the Bay Area's Regional Transportation Plan, which the MTC updates every four years, and ABAG's demographic and economic forecast, which is updated every two years. All regions in California must complete such plans under Senate Bill 375 (The California Sustainable Communities and Climate Protection Act of 2008). The law calls upon California's 18 metro areas to plan jointly for transportation, land-use, and housing as part of a "Sustainable Communities Strategy," with the ultimate goal of reducing greenhouse gas emissions for cars and light-duty trucks. Plan Bay Area also addresses the challenge of accommodating the Bay Area's future growth. The final Plan Bay Area was adopted on July 18, 2013. The plan's final Environmental Impact Report (EIR) was certified simultaneously.

Plan Bay Area must project the region's growth in terms of jobs and population and identify geographic areas sufficient to house that growth. Once the Bay Area's housing need is projected, a housing plan is developed to allocate voluntary housing unit targets to each local jurisdiction. The housing plan within Plan Bay Area must be consistent with a development pattern that promotes reductions in greenhouse gases. State law requires an emphasis on compact, mixed-use commercial and residential development with access to public transit. Plans for housing must also include sufficient affordable units so that people don't have to commute from outside the Bay Area to jobs within the region.

Association of Bay Area Governments

The Association of Bay Area Governments (ABAG) is responsible for allocating the region's projected new housing demand in each of its member jurisdictions through the Regional Housing Needs Allocation (RHNA) process. The allocation takes into account factors such as market demand for housing, employment opportunities, the availability of suitable sites and public facilities, commuting patterns, type and tenure of housing need, etc. The timeframe for the most recent ABAG RHNA process is 2007 through 2014.

It should be noted that the RHNA process was conducted strictly for the Town of Danville and not the Danville Planning Area. Through this process, Danville made a commitment to the State Department of Housing and Community Development (HCD) to update the Danville 2010 General Plan, with a requisite change to the Land Use Map, to designate at least 9.6 additional acres of land for higher density housing than provided for under the 2010 Plan[4].

Table 4.12-2 (ABAG RHNA for Danville) presents ABAG's Regional Housing Needs Allocation for Danville.

TABLE 4.12-2 ABAG RHNA FOR DANVILLE

Extremely Low	Very Low	Low	Moderate	Above Moderate	Total Projected Need
92	104	130	146	111	583

Source: Town of Danville 2010 General Plan Housing Element (adopted December 15, 2009).

Table 4.12-3 (Remaining Housing Needs) compares the number of residential units constructed, under construction, in the planning process or proposed in Danville with ABAG's RHNA for the Town.

TABLE 4.12-3 REMAINING HOUSING NEEDS

Income Group	RHNA	Current Units*	Remaining Need**
Extremely Low	92	0	92
Very Low	104	9	95
Low	130	92	38
Moderate	146	96	50
Above Moderate	111	482	(371)
TOTAL	583	679	N/A

* Current Units = Constructed, under construction, in the planning process or proposed
** Prior to 12/31/14
Source: Town of Danville

[4] Town of Danville General Plan 2030 EIR, Population and Housing section, p. 4.12-2.

LOCAL FRAMEWORK

Town of Danville

2030 General Plan

Housing Goals and Policies

Goal 5 Protect the quality and character of Danville's residential neighborhoods while providing opportunities for new housing that meets community needs.

Policy 5.04 Through the development and implementation of various housing programs, enable promote the development of affordable housing at a wide range of densities in a variety of locations.

Policy 5.05 Work with local financial institutions and builders to promote home ownership opportunities for first time buyers.

Policy 5.08 Support the development of affordable housing through intergovernmental coordination.

Growth Management Goals and Policies

Goal 6 Ensure that new development occurs in a logical, orderly manner linked to the provision of needed services, mobility improvements, natural resource protection, and minimization of public infrastructure costs.

Policy 6.02 Give priority to developing vacant or underused land within the Town limits prior to extending development outside, unless the needs for housing and economic vitality require development that is difficult to achieve on an infill basis.

Policy 6.03 Allow new development based on the project's demonstration of a plan for full public services (such as roads, parks, schools, fire, police, sanitary sewer facilities, water, and flood control) to which all providers are committed and where service can be assured in a timely manner.

Policy 6.07 Pursuant to County Measure J-2004, continue to implement a development mitigation program which ensures that development projects pay the costs necessary to mitigate impacts on the regional transportation system. The Town shall require traffic impact analysis, mitigation, and findings of consistency as appropriate for new development projects in accordance with this program.

Policy 6.08 Continue to implement a development mitigation program which ensures that development projects pay their share of the costs of services (such as roads, parks, fire, police, sanitary sewer, water, and flood control facilities) associated with that development. New development projects may only be approved where the Town finds that adopted minimum performance standards will be observed.

Housing Element

The Town of Danville Housing Element (adopted December 15, 2009) includes goals and policies to protect the quality of the Town's residential neighborhoods while providing opportunities for new housing that meets community needs. The Housing Element contains the following goals and policies that will provide for housing

development to achieve the City's share of the regional housing need as identified in the RHNA prepared by ABAG:

Policy 1.1 Develop a comprehensive strategy to facilitate infill residential development that provides affordable housing and/or housing for special needs populations.

Policy 1.3 Consistent with the 2002 amendment to the California Government Code Section 65852.s and Danville's Second Dwelling Unit Ordinance, facilitate the development of second units as an affordable housing alternative.

Policy 2.8 Increase the number of low income and moderate income households that own their homes though partnership in various County-administered first-time home buyer programs.

Goal 5 Mitigate governmental constraints to housing development and affordability.

Policy 5.2 Continue to encourage use of the Planned Unit Development (P-1) process to allow more creative and flexible design for residential developments.

4.12.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the State CEQA Guidelines, the proposed project would have a significant impact on population and housing if it would:

- 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).
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Population Growth

Impact 4.12-1: The proposed project would directly induce population growth in the Town through the construction of 20 single-family homes.

Determination: Less than Significant Impact.

The Plan Bay Area is an integrated long-range transportation and land-use/housing plan for the San Francisco Bay Area. The Plan Bay Area evaluates regional growth based on the growth projections developed by the State Department of Finance and ABAG.

The project proposes the construction of a 20 unit single-family residential subdivision. Implementation of the project would directly induce population in the Town through the construction of the proposed subdivision. Assuming 100 percent occupancy, 2.734 persons per household (State Department of Finance, 2012), and 20 residential units, the project would add approximately 55 people to the Planning Area. This population growth

represents a less than one percent increase over the General Plan's 2010 population estimate for the Planning Area of 47,130, and a less than one percent increase over the General Plan's 2030 population estimate for the Planning Area of. 52,000.

The Danville 2030 General Plan estimates the Planning Area's population will grow by 4,870 residents between 2013 and 2030. As such, the estimated 55 residents the proposed project would add to the Planning Area constitutes approximately 1.1 percent of the growth between 2013 and 2030. This additional growth would be within the growth estimates anticipated by the Planning Area, and represents minimal advancement towards the Planning Area's projected 2030 population growth. Because the housing opportunities and associated population growth fostered by the proposed project would be within the range of growth anticipated by the Planning Area, population and housing growth impacts would be less than significant.

Additionally, the proposed project would be subject to compliance with the General Plan growth management goals and policies outlined above, in order to ensure a development process wherein the:

- Rate of growth does not outpace the Planning Area's and other agencies' ability to provide necessary infrastructure and services;
- Demands created by the new growth do not exceed resource and system capacity constraints;
- Growth is directed first to areas where municipal services are available and capacity exists;
- Incremental public service costs generated by new growth are paid for by new growth; and,
- Resulting pattern of development is compact, efficient, and contiguous.

Therefore, project implementation would not induce substantial population growth with respect to regional forecasts, and a less than significant impact would occur in this regard.

MITIGATION MEASURES

Mitigation is not required.

Housing and Population Displacement

Impact 4.12-2: Project implementation would not displace existing housing or substantial numbers of people, necessitating the construction of replacement housing elsewhere.

Determination: No Impact.

The project proposes the construction of 20 single-family homes on an approximately 110-acre parcel. Development would be confined to ten acres of the lower, flatter portion of the site and the remaining 100 acres would be dedicated to permanent open space. The site consists of rangelands, primarily vacant, rolling, grass covered hills, currently used for grazing cattle. The property has been used primarily as a cattle ranch since the late 1800s. The proposed project would not displace any houses or people; the only existing structures located within the project boundary are a wooden barn and steel outbuilding which would be demolished prior to construction. Therefore, no impact would occur.

MITIGATION MEASURES

Mitigation is not required

4.12.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.12-3: **The proposed project would directly induce population growth in the Town though the construction of new housing that would not be cumulatively considerable.**

Determination: **Less than Significant Impact**

The proposed project, in combination with other approved, pending, and reasonably foreseeable future projects, would directly induce population growth. As described above, the project would increase the population of the Planning Area by approximately 55 people. This represents approximately 1.1 percent of the Planning Area's anticipated growth between 2013 and 2030. This additional growth would be within the growth estimates anticipated by the Planning Area, and represents minimal advancement towards the City's projected 2030 population growth. Population growth from the proposed project and other cumulative projects in the Planning Area would result in an incremental increase in population over time that would not be cumulatively considerable.

MITIGATION MEASURES

Mitigation is not required.

4.13 PUBLIC SERVICES AND UTILITIES

This section evaluates potential project impacts on public services such as fire protection, law enforcement, water services, emergency services, and other utilities including electricity and gas. Potential impacts associated with wildland fires are discussed in Section 4.8 (Hazards and Hazardous Materials) and potential impacts associated with stormwater runoff and potential violations of the applicable Regional Water Quality Control Board (RWQCB) water quality standards are discussed in Section 4.9 (Hydrology and Drainage). Information for this section was obtained from the following:

- San Ramon Valley Fire Protection District Website: http://www.firedepartment.org/, (accessed December 6, 2012).
- San Ramon Valley Fire Protection District, *Comprehensive Annual Financial Report For the Fiscal Year Ended June 30, 2011*.
- San Ramon Valley Fire Protection District, *Standards of Cover, (Resource deployment planning and risk analysis for the communities of Alamo, Blackhawk, the Town of Danville, Diablo, the City of San Ramon, the southern area of Morgan Territory and the Tassajara Valley),* August 2010.
- Town of Danville Website: http://www.ci.danville.ca.us/Police/, (accessed December 6, 2012).
- Town of Danville, *Police Department Annual Report 2011*, March 2012.

4.13.1 ENVIRONMENTAL SETTING

FIRE PROTECTION AND EMERGENCY SERVICES

Overview/Staff/Equipment

The San Ramon Valley Fire Protection District (SRVFPD) provides all-risk fire, rescue, and emergency medical services to the communities of Alamo, Blackhawk, the Town of Danville, Diablo, the City of San Ramon, the southern area of Morgan Territory, and the Tassajara Valley, all located in Contra Costa County. The District's service area encompasses approximately 155 square miles and serves a population of 169,900.

The SRVFPD has 190 paid personnel and approximately 50 volunteers for four separate volunteer programs. There are also approximately 11 reserve firefighters. There are 15 companies within the SRVFPD including structure and wildland engines, ladder trucks, ALS ambulances and specialized support units, including Hazardous Materials, Rescue, and Communications. The eight engine companies are staffed on a daily basis with a minimum staffing of three firefighters. The three ladder trucks have the same staffing requirements as the engine companies. The daily minimum shift staffing count is 43 firefighters plus one battalion chief. Normally, 15 firefighters plus a command chief are required for a typical room and contents fire in a home in a suburban area per National Fire Protection Association (NFPA) 1710 staffing guidelines; one company for most medical emergencies. According to the SRVFPD, its daily staffing depth is adequate to handle two simultaneous fires and two to three medical emergencies before relying on mutual aid.

SRVFPD facilities include ten fire stations, a 911 dispatch center, an administrative office building, a tactical training site, and various ancillary facilities including an essential services warehouse, a communications annex building, and several radio towers. Of the ten fire stations, nine stations house paid firefighters and one remote station is staffed by 15 volunteer personnel. Station 31 located at 800 San Ramon Valley Boulevard in Danville would serve the project site. The minimum daily staffing at Station 31 is eight personnel on-duty at all times. Station 31 is located approximately one mile from the project site. District apparatus resources include engines,

trucks, ambulances, water tenders, and other specialized equipment for rescue, hazmat, communications and support functions.

Performance Goals

On December 17, 2009, the SRVFPD Board of Directors adopted fire deployment measures for different service areas based on population density per square mile and its risk assessment data consistent with national best practices from the Commission on Fire Accreditation International (CFAI) Standards of Response Cover 5th Edition, National Fire Protection Association (NFPA) Standard on Career Fire Service Deployment 1710, NFPA 1720, and desired SRVFPD service delivery outcome goals.

The SRVFPD revised its fire unit deployment performance measures based on population density area to direct fire station location and crew size planning. The measures take into account a one minute dispatch time, a crew turnout time of two minutes, and are designed to deliver outcomes that will save patients medically treatable upon arrival; and to keep small, and serious fires from becoming greater alarm fires.

In urban areas, the first-due unit should arrive within seven minutes total response time, 90 percent of the time from the receipt of the call in fire dispatch. In suburban areas, the first-due fire unit should arrive within eight minutes total response time, 90 percent of the time. In rural areas, the first-due fire unit should arrive within 15 minutes total response time, 90 percent of the time.

Response Times

SRVFPD average response times are 7:34 minutes to urban, 8:12 minutes to suburban, and 12:35 minutes to rural incidents 90 percent of the time.

Insurance Services Office Rating

The Insurance Services Office (ISO) is an independent organization that analyzes approximately 46,000 fire districts/departments in the U.S. and assigns a number from one to 10 to each station based on the station's fire protection capabilities. In this classification system, Public Protection Classification Class 1 represents exemplary fire protection, and Class 10 indicates that the area's fire suppression program does not meet ISO's minimum criteria. SRVFPD has an ISO rating of Class 2.

POLICE PROTECTION

Danville's Police Service delivery is accomplished through a combination of contract personnel provided through the Contra Costa County Office of the Sheriff and Town resources (General Plan 2030 EIR). The Danville Police Department has 39 employees who provide police protection services for the residents of Danville. There are 31 officers, and eight civilian support personnel. In addition there are eight reserve officers and 19 volunteers in policing that help the department deliver services to the Town's residents. The department is organized into the following specialized units and teams, staffed by both sworn and civilian personnel: Administration, Patrol, Investigations, Traffic, School Resource, and Community Services.

Patrol is the largest unit within the Police Department. Fifteen officers and five sergeants were assigned to patrol the Town's streets during 2011. The Town is divided into three beats, each staffed by an officer. Beats are the geographical areas that patrol officers are responsible for. Beats are established primarily on statistical data reflecting workload combined with landmark and/or natural boundary characteristics, such as major roadways. In late 2011, the department reconfigured its beat structure to improve response times, especially in the western part of the Town. The project site is within Beat 2.

The Police Department handled 29,900 calls for service in 2011. The department divides calls for service into three categories:

- Priority 1 – Emergency calls such as an armed robbery or burglary in progress.
- Priority 2 – Urgent calls, such as a disturbance or a non-injury traffic collision.
- Priority 3 – Non-urgent calls involving incidents that have occurred with no suspects, and no urgent need for an officer. An example is a vandalism that occurred the day before (many Priority 3 calls are handled via telephone).

In 2011, the Police Department's average response time to Priority 1 was 5 minutes, 42 seconds and 6 minutes, 37 seconds to Priority 2 calls. Table 4.13-1 identifies the top ten calls for service in the Town from January 2011 through December 2011.

TABLE 4.13-1 TOWN OF DANVILLE TOP TEN CALLS FOR SERVICE - JANUARY 1, 2011 – DECEMBER 31, 2011

Type of Call	Quantity
False Alarms	2,115
Suspicious Circumstances	1,212
Disturbances	865
911 Hang-ups	819
Juvenile Disturbances	349
Civil Calls	346
Traffic Collisions	327
Suspicious Vehicle Stops	308
Suspicious Person Stops	237
Reckless Driving	228
Source: Town of Danville Police Department Annual Report 2011, March 2012.	

WASTEWATER AND WATER SERVICE

Wastewater Facilities and Service

The Central Contra Costa Sanitation District (CCCSD) is responsible for the collection and treatment of wastewater for approximately 462,000 residents and businesses in central Contra Costa County. The project site is located within CCCSD's sphere of influence; however the site will need to be annexed into the District's service area prior to the provision of services. According to CCCSD's 2010 Collection System Master Plan Update (as "2010 Master Plan"), the District provides wastewater collection, transport, and treatment services to the cities/towns of Danville, Lafayette, Moraga, Orinda, Pleasant Hill, and Walnut Creek. In addition, the District also serves portions of the cities of Martinez and San Ramon and unincorporated portions of Contra Costa

County including the communities of Alamo and Pacheco. The District also provides wastewater treatment for the City of Concord and Town of Clayton.

The CCCSD wastewater collection system includes 1,500 miles of 4- through 102-inch diameter sewers and an estimated 130,000 private service laterals. The system also includes 18 sewage pumping stations and associated force mains. The system conveys wastewater generated in the service area to the District's Wastewater Treatment Plant (WWTP), which is located in Martinez. The WWTP has a design capacity of 53.8 million gallons per day (MGD); average treatment is currently 33.5 MGD. The majority of the wastewater receives secondary treatment and is discharged into Suisun Bay. The remainder is directed to the District's Water Reclamation Facility adjacent to the plant for further treatment so that it can be used for landscape irrigation and other recycled water uses.

Water Facilities and Service

The extension of water supply infrastructure to the project site is necessary in order to serve the proposed residential subdivision. These improvements include the construction of new water distribution mains that would connect into existing EBMUD infrastructure on Westridge Avenue. These mains would be extended through the project site within the roadway alignment for the proposed new internal roadway network.

An annexation of the project site into the EBMUD's current service area would be required for water service. However, the project site is located within the ultimate service boundary, and has been accounted for in the District's water supply planning. Similar to providing wastewater service to the project site, the annexation of the project site into EBMUD's service area will require the approval of the Contra Costa County LAFCO. Additionally, changes to EBMUD's water supply commitments, such a supplying water to lands outside EBMUD's existing customer service area, requires EBMUD to obtain approval from the U.S. Bureau of Reclamation (USBR), with whom EBMUD has a contract for supplemental water supply in dry years.

Water Supply

The Town of Danville is located within the service area of the EBMUD, which is responsible for supplying water to portions of Alameda and Contra Costa counties. The project site, although located within EBMUD's Ultimate Service Boundary, is located outside of EBMUD's current service area. As a result, the project site will need to be annexed into EBMUD's service area prior to any future water deliveries.[1] The EBMUD's water supply service area is approximately 332- square miles and includes incorporated and unincorporated areas of Alameda and Contra Costa counties (Figure 4.13-1). According to EBMUD's 2010 Urban Water Management Plan ("2010 UWMP"), the EBMUD provides water supply services to approximately 1.34 million persons. The EBMUD's water supply service area extends from Crockett in the north to the San Lorenzo area in the south and extends east towards Walnut Creek, Danville, and San Ramon.

Water Supply Sources

The EBMUD's water supply is distributed through a collection system consisting of aqueducts, reservoirs, and other various components. The primary source of water supply for EBMUD is the Mokelumne River; according to the 2010 UWMP, the Mokelumne River watershed accounts for 90 percent of EBMUD's water supply. EBMUD's existing water rights allow the delivery of up to a maximum of 325 million gallons per day (MGD) or approximately 364,046 acre-feet per year (AFY) of water from the Mokelumne River. The EBMUD's water right is, however, subject to variability, particularly during dry and multiple-dry years. Specifically, the availability of Mokelumne River runoff is subject to the senior water rights of other users, downstream fishery flow requirements, and other Mokelumne River water uses. The amount of Mokelumne River water available to EBMUD during dry and multiple-dry years is subject to variability; the EBMUD has identified that supplemental water supply sources are necessary to meet future water demand during extended periods of drought.

EBMUD's secondary source of water supply is obtained from localized runoff from the various watersheds in the East Bay. Runoff from these areas is detained in terminal reservoirs located through EBMUD's service area boundaries. The availability of water from this secondary source of supply is, however, dependent on two factors: hydrologic conditions, and storage availability. According to the 2010 UWMP, hydrologic conditions influence the availability of secondary supply, particularly in dry-years where evaporation can exceed runoff thereby resulting in no net local supply. Additionally, the existing storage capacity to capture run-off is limited. Grant funding has been obtained to expand storage capacity, but the existing terminal reservoirs are also used to regulate EBMUD's Mokelumne River supply and provide emergency storage. As a result, limited capacity is available. Local runoff provides an average of 15 to 25 MGD during normal hydrologic conditions; this supply is not considered reliable during drought conditions.

Supplemental Water Supply Sources

In addition to the two existing sources of water supply discussed above, EBMUD continues to secure additional sources of supply in order to ensure the reliability of supply and provide a diversified water portfolio. The 2010 UWMP identified several supplemental water supply sources, as well as potential short-term and long-term supplemental supply projects. The potential long-term supplemental supply projects are identified for the planning horizon beyond the year 2030. These potential sources are included in the UWMP for the purposes of identifying potential future sources of supply. According to the 2010 UWMP, two sources of supplemental water supplies have been developed to provide augmented supply during dry, multiple-dry, and drought years. These supplemental sources include the Freeport Regional Water Facility and Bayside Groundwater Facility. These projects, as well as potential short-term and long-term supply projects, which are described in detail in the 2010 UWMP, are briefly discussed below.

Freeport Regional Water Facility. This facility is a regional water supply project that was undertaken by the Freeport Regional Water Authority, which was created under a joint powers agreement between EBMUD and the Sacramento County Water Agency. This facility was constructed and became operational in February 2011. This facility, which includes a 185 MGD water intake, pumping plant, and associated distribution infrastructure, provides supplemental water supply to EBMUD users during dry-years. Supplemental water supply generated through this facility will be used during dry-years in combination with aggressive water conservation, water recycling, and water rationing. Water delivery from this facility is based on EBMUD's Long Term Renewal Contract (LTRC) with the U.S. Bureau of Reclamation, which provides for up to 133,000 AFY in a single dry-year, with a not to exceed total of 165,000 AFY in three consecutive dry-years.

Bayside Groundwater Facility. This facility was constructed to enable EBMUD to inject potable drinking water into the deep aquifer of the South East Bay Plain Groundwater Basin (herein referred to as "Basin") during wet years in order to store excess water. This water would be accessed during dry, multiple-dry, and drought years to provide additional sources of supply to augment reduced supplies from EBMUD's existing sources. This facility became operational in 2010 and consists of a new water treatment facility, associated pipelines, subsidence monitoring system, and a network of groundwater monitoring wells. This facility, which would only be used to provide supplemental supply during dry, multiple-dry, and drought years, would produce an average annual production of approximately 1,120 AFY.

Short-Term Supplemental Water Supply Sources

The following short-term supplemental water supply projects are necessary in order to ensure that EBMUD has sufficient supplies to accommodate projected future demands during dry, multiple-dry, and drought years through the year 2030. (For more information, please refer to the 2010 UWMP.)

Northern California Water Transfer. EBMUD is exploring a water transfer program to secure up to an additional 13 MGD of dry-year water supply through voluntary water transfers. This is considered a potential short-term supplemental water supply source for the purposes of water supply reliability. According to the 2010 UWMP, water transfers could provide an additional 15,000 AFY of water during dry, multiple dry, and drought years. At this time, EBMUD is only exploring this option and existing supplies are considered sufficient in the near-term. According to the 2010 UWMP, these potential partnerships will continue to be explored as part of a long-term or permanent water transfer arrangement. In the future, EBMUD may also pursue short-term transfer arrangements, as needed, to help meet dry-year water supply needs.

Bayside Groundwater Project Expansion. EBMUD has identified this project as a potential future source of supply. This project is conceptual at this time; however, EBMUD is exploring options for potential future expansion of this facility. Based on initial estimates, the 2010 UWMP identified that Phase 2 of the Bayside Groundwater Facility would expand annual capacity at the facility to an average of roughly 2 to 9 MGD. The final design and capacity of Phase 2 is contingent upon operational data obtained from the Bayside Groundwater Facility, which was constructed in 2010. The 2010 UWMP estimates that this project would provide an additional 10,000 AFY of water during dry, multiple dry, and drought years.

Long-term Supplemental Water Supply Sources (2030 and beyond)

The following long-term supplemental water supply sources are necessary to ensure a long-term supply beyond 2030. These projects were included as part of the 2010 UWMP for informational purposes to identify that future water supply sources would need to be secured beyond the 20 year planning horizon mandated by the Urban Water Management Planning Act. These projects are conceptual at this time; future water supply planning conducted as part of the next update to the UWMP will be required to provide more information concerning these projects in order to provide documentation supporting the reliability of EBMUD's water supply.

Bay Area Regional Desalination Project. EBMUD, in collaboration with the Contra Costa Water District, San Francisco Public Utilities Commission, Santa Clara Valley Water District, and the Alameda County Flood Control and Water Conservation District, are exploring the development of a regional desalination facility. This project, as currently contemplated, would consist of one or more facilities with an estimated treatment capacity between 10 and 50 MGD; this project would provide a maximum 22,400 AFY of ocean/bay/brackish water to EBMUD for municipal use. A feasibility study was completed in 2007 and a six month pilot test was completed in 2009. Implementation of this project would require a detailed assessment of potential environmental affects and would be subject to an extensive and complex regulatory review process.

Inter-Regional Groundwater Banking/Exchange. EBMUD is exploring options for combined use of groundwater and surface water sources beyond the East Bay Service area. Currently, groundwater storage options in Sacramento and San Joaquin Counties are being explored. Groundwater would be stored in either of these areas and would be utilized during dry-years.

Inter-Regional Conjunctive Use Project. This project envisions conjunctive use on a regional scale for users of Mokelumne River water. This project is intended to provide water supply and environmental benefits to a broad range of Mokelumne River basin stakeholders. These benefits include storage and supplies for drought protection, long-term drought protection for areas served by EBMUD, groundwater recharge and prevention of saline intrusion, and other benefits. This project, as currently envisioned, includes the capture of excess surface water flows during wet years and the diversion of water to groundwater storage/recharge facilities. It is anticipated that these excess surface flows would subsequently be accessed during dry-years to supplement surface water supplies. Conveyance would be accommodated through existing and new facilities to EBMUD users.

Expansion of Surface Water Storage. In order to improve the reliability of supply during drought years, EBMUD intends to expand surface water storage facilities to meet future needs. This is considered a long-term water supply project that is currently considered conceptual. This project may include participation in the Los Vaqueros Expansion project; participation is contingent upon project feasibility and other factors and would presumably be considered in the 2015 UWMP. Enlargement of other EBMUD facilities on the Mokelumne River may also be pursued in the long-term to provide reliable storage during dry-years. Any future project along the Mokelumne River would be pursued on a regional basis in collaboration with other

Mokelumne users. If pursued, these actions would be subject to additional negotiation efforts among Mokelumne users, as well as the planning, design, and environmental review of any future project.

Water Demand

Water demand projections for future build-out within EBMUD's service area were estimated using a land-use based approach method. This method projects average annual water demands out to the year 2040. The information contained in the 2010 UWMP is based on EBMUD's *2040 Demand Study,* which was completed in 2009. This methodology relies on existing land uses and existing water consumption data for the study area. This information was utilized to calculate Land use Unit Demand (LUDs), which are a measurement of water consumption on a per acre basis for each type of land use category. For more information concerning demand forecasting, please refer to the *2040 Demand Study*. Demand projections were made for the years 2010, 2015, 2020, 2025, 2030, and 2040.

The *2040 Demand Study* relied on the adopted general plans of the cities and counties within EBMUD's service area, as well as information provided by local planning agencies regarding anticipated future development. The information contained in this analysis is considered conservative since the district-wide land use analysis was conducted at a time of continued economic growth and expansion. Despite the recession and change in economic conditions, the *2040 Demand Study* projections are consistent with current planning forecasts and are therefore considered reliable for the purposes of water supply planning. Table 4.13-2 identifies projected future water demand according to use. These projections and total anticipated water use take into consideration water use savings associated with increased conservation and the use of recycled water.

Water Supply Reliability

The 2010 UWMP identified several factors that influence the reliability of EBMUD's existing water supply. These variables include droughts and climatic variations, system failure due to levee collapse, water quality issues, power outages, and shortfalls in distribution system capacity, among other factors. EBMUD has identified a number of system upgrades and infrastructure improvements in order to improve the existing water supply and ensure system reliability; please refer to the 2010 UWMP for a detailed discussion of applicable projects. The primary factor influencing the reliability of supply is related to variations in hydrological conditions, which affects the amount of surface water available to EBMUD users from the Mokelumne River. As a result, supplemental supplies are necessary to ensure a reliable source of supply during dry, multiple dry, and drought years.

TABLE 4.13-2 WATER DEMAND PROJECTIONS BY SECTOR - AVERAGE ANNUAL DEMAND (MGD)[1]

Use	Calendar Year						
	2010[2]	2015[3]	2020	2025	2030	2035[4]	2040
Single Family	120	121	118	117	117	117	117
Multi-Family	31	36	41	47	53	54	54
Commercial	26	26	26	26	26	26	27
Industrial	22	23	20	19	18	18	18
Institutional	8	8	8	7	7	7	7
Irrigation	9	9	8	8	8	7	7
Total:[5]	**216**	**223**	**221**	**224**	**229**	**229**	**230**

Notes:
Source: East Bay Municipal Utility District, 2010 Urban Water Management Plan; Table 4-1

1. Demand represents the Planning Level of Demand
2. 2010 demands are based on projections, which differ from actual water consumption.
3. 2015 demands are based on projections and do not reflect the demand during the recovery period. The slight increase in total demand as compared to 2010 and 2020 is due to implementing conservation and recycled water projects later than anticipated as the customer demand recovers in the post-drought and from the economic downturn.
4. 2035 values are interpolated from 2030 and 2040 demand projections.
5. Adjusted for water conservation and recycled water use.

Table 4.13-3 identifies projected available supply and need for supplemental supply for normal, single-dry, multiple-dry, and three-year drought periods. As demonstrated in Table 4.13-3 additional supplemental supply will be necessary to accommodate future demand during dry, multiple-dry, and three year drought conditions. Under normal climatic conditions, EBMUD has sufficient existing supplies, when accounting for increased use of recycled water and water conservation measures, to accommodate project development.

TABLE 4.13-3 PROJECTED DEMAND VS. AVAILABLE SUPPLY - AVERAGE ANNUAL DEMAND (MGD)[1]

Use	Calendar Year						
	2010	2015	2020	2025	2030	2035	2040
Project Demand (MGD)							
Customer Demand[2]	251	266	280	291	304	308	312
Adjusted for Conservation	(26)	(32)	(43)	(49)	(56)	(59)	(62)
Adjust for Recycled Water	(9)	(11)	(16)	(18)	(19)	(20)	(20)
Projected Demand[3]	216	223	221	224	229	229	230
Projected Available Supply (MGD)[4]							
Single-Dry Year (Multiple Dry Years – Year 1)							
Available Supply	211	217	215	218	223	222	222
Supplemental Supply Needed	5	6	6	7	7	8	8
Multiple Dry Years – Year 3							
Available Supply	183	189	188	190	183	164	44
Supplemental Supply Needed	21	21	21	21	23	53	57
Three Year Drought							
Supplemental Supply Needed (TAF)	53	54	54	55	58	93	115

Notes:
Source: East Bay Municipal Utility District, 2010 Urban Water Management Plan; Table 4-3

1. Projected demand is interpolated.
2. These values are unadjusted for conservation and non-potable water. Estimates derived from 2040 Demand Study.
3. Demand represents the Planning Level of Demand.
4. Projected available supply data includes dry year supply deliveries from the Freeport Regional Water Project and Bayside Groundwater Project, Phase 1. Also, assumes that rationing reductions goals will be met based on the Long-Term Drought Management Program guidelines with rationing accounting for 15 percent in multiple-dry years.

According to the 2010 UWMP, EBMUD can meet customer demands through the year 2040 during normal year conditions. As a result, the available supply is considered reliable under normal conditions. The availability of supply during dry, multiple-dry, and three year drought conditions is, however, considered deficient; additional supplemental supplies beyond those provided by the Freeport Regional Water Facility and Bayside Groundwater Facility would be needed to meet projected demands.

In order to reduce the extent of demand during periods of dry, multiple-dry, and periods of extended drought, EBMUD implements a Drought Management Program, which consists of a series of actions for periods of moderate, severe, and critical shortages. The Drought Management Program is estimated to reduce demand by 10 to 15 percent depending on the severity of the drought. This program includes voluntary and mandatory measures, including water rationing. While the Drought Management Program would reduce water demand, additional supplemental supplies would still be needed to ensure the reliability of supply through 2030.

According to the information contained in Table 4.13-2, as derived from the 2010 UWMP, additional supplemental supplies would be necessary to ensure the reliability of supply through 2030. During extended periods of drought, the Mokelumne River cannot meet EBMUD's projected demand even with water rationing and supplemental dry-year supplies. Approximately 58,000 AF would be needed over multiple dry years to accommodate demands during a three year drought period. The 2010 UWMP identifies several short-term supplemental supply measures in order to ensure the adequacy of supply during dry, multiple-dry, and drought years. EDMUD will ensure the reliability of supply by implementing short-term supplemental supply sources that include the Northern California Water Transfers and the Bayside Groundwater Project Expansion, as described above. These projects would provide approximately 15,000 AFY and 10,000 AFY, respectfully. Over a three year period these projects would provide up to 75,000 AF of supplemental supply. Beyond the required 20-year planning horizon (i.e., beyond 2030) additional long-term conceptual supplemental sources would be necessary.

Water Distribution System

The EBMUD water supply system consists of a network of reservoirs, aqueducts, treatment facilities, pumping plants, and other distribution facilities that convey Mokelumne River from Pardee Reservoir. There are two primary dams and reservoirs that serve the EBMUD's system: the Pardee Dam and Reservoir and the Camanche Dam and Reservoir. The Pardee Dam and Reservoir are located approximately 38 miles northeast of Stockton; the Camanche Dam and Reservoir is located approximately 10 miles downstream from the Pardee Dam. These facilities provide approximately 197,950 AF and 417,120 AF of storage, respectfully. In addition, both facilities also generate hydroelectric power.

Water is subsequently conveyed from the Pardee Dam and Reservoir and the Camanche Dam and Reservoir through a system of aqueducts. The approximately 91 mile Mokelumne Aqueduct System transports water to EBMUD's water treatment facilities and terminal reservoirs. Water is initially conveyed through the 2.2 mile long Pardee Tunnel and into the Mokelumne Aqueduct System, which consists of three 82 mile long pipelines. The Mokelumne Aqueducts terminate in Walnut Creek where it is subsequently transported directly to EBMUD's three in-line filtration water treatment plants or to one or more of EBMUD's terminal reservoirs. EBMUD operates five terminal reservoirs: Briones, Chabot, Lafayette, San Pablo, and Upper San Leandro reservoirs. The total maximum capacity of these facilities is 151,670 AF. Water is subsequently distributed throughout EBMUD's service area, which consists of more than 120 pressure zones. The water distribution network includes 4,100 miles of pipeline, 140 pumping stations and 170 neighborhood reservoirs (tanks storing treated drinking water) having a total capacity of 830 million gallons.

As discussed previously, the 2010 UWMP identified that there are several variables affecting water supply and system reliability. These variables include droughts and climatic variations, system failure due to levee collapse, water quality issues, power outages, and shortfalls in distribution system capacity, among other factors. Potential

issues associated with the reliability of water supply were addressed previously. In order to address potential concerns related to the reliability of the system EBMUD has identified a number of system upgrades and infrastructure improvements as well as public-safety programs. These programs include seismic retrofits, transmission and water treatment improvements, dam safety programs, improved security, and similar projects and are intended to address existing system deficiencies and ensure the reliability of the distribution system.

Solid Waste Service

Solid waste and residential recycling service would be provided from the Central Contra Costa Solid Waste Authority (CCCSWA). Solid waste collection and recycling services are provided through franchise agreements with waste collection services. Allied Waste Services is responsible for the collection, transfer, and disposal of residential and commercial solid waste; Valley Waste Management is responsible for the collection and marketing of residential recycling, green waste and food scraps. CCCSWA's service area includes the Town of Danville, City of Lafayette, Town of Moraga, City of Orinda, and City of Walnut Creek, in addition to areas located in the unincorporated area of Contra Costa County. The project site is currently within the CCCSWA Service Area, and would not require an annexation for service.

Solid waste generated within CCCSWA's service area is eventually disposed of at the Keller Canyon Landfill Facility, which is owned and operated by Keller Canyon Landfill Company, a wholly-owned subsidiary of Allied Waste Industries. This facility is approximately 2,600 acres in size with a permitted disposal area of 244 acres. The site currently handles approximately 2,500 tons of solid waste per day and has a permitted daily capacity of 3,500 tons of waste per day.

4.13.2 REGULATORY SETTING

FEDERAL/STATE FRAMEWORK

There are no mandatory federal or State regulations directing the level of fire or police service response times and outcomes. The body of regulations on the fire service provides that if fire services are provided at all, they must be done so with the safety of the firefighters and citizens in mind.

The NFPA Standard on Career Fire Service Deployment was issued in 2005. While advisory to local governments, as it starts to become locally adopted and used, it develops momentum, forcing adoption by neighboring communities. NFPA 1710 calls for four-person fire crew staffing, arriving on one or two apparatus as a "company." The initial attack crew should arrive at the emergency within four minutes travel time, 90 percent of the time, and the total effective response force (first alarm assignment) shall arrive within eight minutes travel time, 90 percent of the time.

The ISO Fire Department Grading Schedule would like to see fire stations spaced 1.5 miles apart, which given travel speeds on surface streets, is a three- to four-minute travel time. The newer NFPA 1710 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments on fire services deployment, suggests a four-minute travel time for the initial fire apparatus response and eight minutes maximum for the follow-on units.

2010 California Fire Code

The California Uniform Fire Code addresses general and specialized fire safety requirements for buildings. Topics addressed in the code include, but are not limited to, fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, and industrial processes.

Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Section 10631) requires every urban water supplier that provides water to 3,000 or more customers or provides over 3,000 acre-feet of water annually to prepare and adopt an urban water management plan (UWMP) (updated every 5 years) for the purpose of "actively pursu[ing] the efficient use of available supply." In preparing the UWMP, the urban water supplier is required to coordinate with other appropriate agencies, including other water suppliers that share a common source, water management agencies, and relevant public agencies. When a city or county proposes to adopt or substantially amend a general plan, the water agency is required to provide the planning agency with the current version of the adopted UWMP, the current version of the water agency's capital improvement program or plan, and other information about the system's sources of water supply. The Urban Water Management Planning Act also requires urban water suppliers, as part of their long-range planning activities, to make every effort to ensure the appropriate level of reliability in their water service sufficient to meet the needs of their various categories of customers during normal, dry, and multiple dry water years.

EBMUD Water Supply Management Program 2040

The Water Supply Management Program (WSMP) 2040 is a program-level effort that estimates EBMUD's water supply needs over a thirty-year planning horizon and proposes a diverse portfolio of policy initiatives and potential projects to ensure that those needs can be met in dry years. On October 13, 2009, the EBMUD Board of Directors approved the WSMP 2040. The CEQA analysis was challenged in court, and in a ruling issued on April 11, 2011 EBMUD was directed to analyze certain plan components in more detail. On May 24, 2011 EBMUD's Board of Directors set aside the certification of the WSMP 2040 Program Environmental Impact Report (PEIR), and directed staff to revise the program. That revision effort has since been completed, and on April 24, 2012 EBMUD's Board of Directors certified the Revised PEIR and adopted the Revised WSMP 2040 Final Plan. The WSMP 2040 Portfolio includes various rationing, conservation, and recycled water goals that helps EBMUD meet projected growth in customer demands through aggressive water conservation and recycled water development, and lowers customer rationing burdens during an extended drought from the District's current policies through development of new supplemental water supply initiatives.

TOWN OF DANVILLE

2030 General Plan

The Danville 2030 General Plan (General Plan) contains the following policies regarding public services and utilities that are relevant to the proposed project:

Policy 6.08 Continue to implement a development mitigation program which ensures that development projects pay their share of the costs of services (such as parks, fire, police, sanitary sewer, water, and flood control facilities) associated with that development. New development projects may only be approved where the Town finds that adopted minimum performance standards will be observed.

Policy 25.01 Require safe roofing and other fire prevention standards for development in high fire hazard areas by maintaining a Fire Safe Roofing Ordinance, in coordination with the San Ramon Valley Fire Protection District.

Policy 25.05 Prior to project approval, require written verification from the San Ramon Valley Fire Protection District on the anticipated response time to the project and the distance from existing stations.

Goal 20: Ensure that local water supply, storm drainage, sewerage, streets, and similar facilities are well maintained; improvements meet existing and future needs; and land use decisions are contingent on the adequacy and maintenance of such facilities.

Policy 20.02 Coordinate development approvals with the appropriate agencies to ensure that adequate water quantity, quality, and distribution; adequate sewage collection and wastewater treatment capacity; and other utilities can be provided to serve proposed development projects without adverse community impacts.

Policy 20.03 Ensure that all water and sewer infrastructure is designed to meet the respective standards established by the East Bay Municipal Utility District and the Central Contra Costa Sanitary District.

Policy 20.04 Prior to approving new development, require verification from the East Bay Municipal Utility District and the Central Contra Costa Sanitary District that there will be sufficient water and sewer collection, distribution, and treatment capacity to serve that development. In the event that individual wells are to be used, the County Health Department shall confirm that adequate water quality and quantity will be available.

Policy 20.06 Ensure that the costs of upgrading and constructing public facilities needed to serve new development shall be the responsibility of the developers and not existing residents.

Note: The above policy would not apply to systemwide improvements and/or upgrades that are necessitated by factors other than growth and new development.

Policy 20.07 Discourage private infrastructure improvements such as private roads and private storm drainage systems.

4.13.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the State CEQA Guidelines, the Podva Property Residential Development would have a significant impact on public services or utilities if it would:

- Result in substantial adverse physical impacts associated with the provision of, or the 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 the following public services: fire protection and/or police protection.
- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the providers existing commitments;

- Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed;
- Be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs;
- Fail to comply with federal, state, and local statutes and regulations related to solid waste.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Fire Protection and Emergency Services

Impact 4.13-1: The proposed project could result in a substantial adverse effect on fire protection and emergency services.

Determination: Less than Significant Impact.

Implementation of the proposed project would increase demands for fire protection services due to the introduction of new urban uses on a site historically used for ranching/agricultural purposes. Fire protection services are currently provided to the project site, although the introduction of new urban uses and the corresponding increase in residential population would increase demands for these services beyond historical levels. Increased demands would be associated with a variety of issues, including, but not limited to, structural fires, medical emergencies, and wildland fire hazards due to the project's proximity to undeveloped open space, which is recognized by the Town of Danville 2030 General Plan as being subject to wildland fire hazards (refer to Section 4.8 [Hazards and Hazardous Materials] for a discussion of the project's wildland fire impacts).

The nearest fire station is approximately one mile from the project site. The SRVFPD would be capable of providing fire service to the project site within its goal of seven minutes total response time, 90 percent of the time from the receipt of the call in fire dispatch. As such, the proposed project would not affect SRVFPD's ability to serve other areas within its service boundaries. Moreover, as part of the Town's approval process, the development proposed by the project would be reviewed by both the Planning Division and the SRVFPD to ensure that it would meet federal, State, and local standards for fire safety, including the specifications of the latest adopted Uniform Fire and Building Codes. These requirements include, but are not limited to:

- Acceptable construction materials
- Adequate fire sprinklers
- Adequate hydrant fire flow
- Number, type and location of hydrants
- Sufficient emergency vehicle access

Therefore, the proposed project would not result in potentially significant impacts on fire protection and emergency services.

MITIGATION MEASURES

Mitigation is not required.

Police Protection

Impact 4.13-2: The proposed project could result in a substantial adverse effect on police protection services.

Determination: Less than Significant Impact.

Development of the proposed project would incrementally increase demands for police protection services associated with the introduction of new residential units on a previously undeveloped site. This could increase the number of police services calls associated with disturbances, property crimes, traffic, and misdemeanors among other types of crime.

The 20-unit subdivision proposed by the project would increase the number of units in Beat 2 by approximately 0.27 percent; there are approximately 7,335 existing units in Beat 2. The Town of Danville Police Department has identified that the project would result in approximately 40.2 new calls for service per year. This would represent a 0.12 percent increase in calls for services as compared to existing levels. In addition, the projected number of residents created by the project would not change the current ratio of officers to residents (0.7 officers per 1,000 residents). The Town of Danville Police Department has indicated that the proposed project would not adversely impact existing response times or require additional staff. As a result, the project would not require the construction of new and/or expanded facilities that would potentially result in an adverse environmental effect. The project would be served by existing facilities and no new facilities would need to be constructed.

MITIGATION MEASURES

Mitigation is not required.

Wastewater and Stormwater Service

Impact 4.13-3: The proposed project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Determination: Less than Significant Impact.

Wastewater from the project site would be treated at the Central Contra Costa Sanitary District Treatment Plant at 5019 Imhoff Place in Martinez, California before being discharged into Suisun Bay. The amount and quality of the water discharged is regulated by the San Francisco Bay Water Quality Control Board. The Board's purpose is to protect beneficial uses of the San Francisco Bay in compliance with the California Water Code and the Federal Clean Water Act. The Project does not propose to use any onsite septic systems and would not treat any wastewater onsite. Therefore, the Project would have a less than significant impact on treating wastewater to the Regional Water Quality Control Board treatment standards.

MITIGATION MEASURES

Mitigation is not required.

Impact 4.13-4: The proposed project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Determination: Less than Significant Impact.

Water

The proposed project area is primarily vacant and the addition of residential development would require the construction of new water lines at the site. Upon extension of the water lines, the proposed development would be served by EBMUD's San Ramon Pressure Zone with a service elevation between 450 and 650 feet. The nearest water main in the San Ramon Pressure Zone is located on Westridge Avenue, approximately 300 feet south of Midland Way.

The proposed project is located inside EBMUD's Ultimate Service Boundary but is outside its current service area. Annexation into EBMUD's service area would be required before receiving water service from EBMUD. The proposed service area boundary to be included in the annexation is shown in Figure 4.13-1. Changes to EBMUD's water supply commitments, such as supplying water to lands outside EBMUD's existing customer service area, requires EBMUD to seek and obtain approval from the U.S. Bureau of Reclamation (USBR), with whom EBMUD has a contract for supplemental water supply in dry years. To support the approval of any expansion of EBMUD's customer service area, USBR requires environmental documentation that extends beyond what is typically needed to meet the CEQA requirements.

The proposed project would not intensify and/or otherwise increase on-site water demand beyond the initial estimates considered in the 2010 UWMP and the 2040 Demand Study. The 2030 Danville General Plan designates the project site as Rural-Residential, which can accommodate a density of one single family unit per five or more acres of land. The project site encompasses approximately 109 acres of Rural-Residential land, therefore the build-out of this area would be expected to result in approximately 22 single-family units. Since the proposed development proposes only 20 single family units on 109 acres, the development would be consistent with the water demand expected in the 2030 Danville General Plan.

The UWMP anticipated buildout of the project-site based on the site's existing General Plan land use designations. Project development would not exceed the land use and/or development assumptions contained in the 2040 Demand Study or 2010 UWMP such that the project's projected water demand was not previously considered and/or included in future demand accounting. Therefore, the construction of new off-site water treatment facilities would not be needed in order for EBMUD to serve the project site. These conclusions were confirmed by personal communication with David Rehnstrom at EBMUD on May 14, 2013.

Wastewater

The project site is inside of the CCCSD Sphere of Influence and outside of the service area. An annexation to extend the Sphere of Influence boundary and service area boundary will be required before the project can receive service from CCCSD. The proposed service boundary is shown for the project on Figure 4.13-2. Development of the proposed project, based on the residential demand factors utilized by the CCCSD, would generate approximately 3,900 GPD of wastewater. Table 4.13-4 identifies the proposed wastewater generation estimates and residential demand rates utilized by CCCSD. All project generated wastewater would be treated at the District's Wastewater Treatment Plant, which has a treatment capacity 53.8 MGD. The proposed project would represent a significant environmental effect under CEQA if the project, due to increased wastewater generation, would necessitate the construction and/or expansion of new or existing wastewater treatment facilities.

TABLE 4.13-4 WASTEWATER GENERATION ESTIMATE

Use	Dwelling Units	Daily Rate (GPD/Unit)[1]	Generation (GPD)	Generation (MGD)
Proposed				
Single-Family Residential	20	195	3,900	.003

Source Estimates:
1. Central Contra Costa Sanitation District, Wastewater Collection System Master Plan Update, 2010; project correspondence Russell Leavitt (May 16, 2013).

The Treatment Facility currently has a treatment capacity of 53.8 MGD with current flows that average 33.5 MGD. The proposed project would incrementally increase, albeit insignificantly, wastewater flows to the Treatment Facility. Projected wastewater flows associated with the project would account for a 0.01% increase of wastewater volumes being treated at this existing treatment facility. The Treatment Facility has sufficient existing and planned capacity to accommodate increased demands generated from the proposed project and no new treatment facilities or expansion to the existing facility would be necessary.

While the existing infrastructure serving the project area has sufficient capacity to accommodate project generated demands, the CCCSD has identified that future build-out within CCCSD's service area would result in a number of potential infrastructure deficiencies. These deficiencies are primarily related to inadequate trunk and interceptor system capacity to accommodate flow conditions (build-out) analyzed in the 2010 Collection System Master Plan Update; specific improvement projects are described in CCCSD's Capital Improvement Plan (CIP), which identifies anticipated project costs, priority projects, and guidelines for implementing the CIP. The CCCSD has established a number of impacts fees that represent a flow-based capacity charge that fund CIP projects. These fees are used for the maintenance, rehabilitation, and operation of CCCSD's facilities. The project will be required to pay all applicable CCCSD fees, as determined necessary by CCCSD.

The proposed project would not result in and/or otherwise require the construction of new or expanded infrastructure such that an adverse environmental effect would occur. The proposed project would result in the installation of project-specific infrastructure; these improvements would not result in any new physical environmental effects beyond those identified in this EIR. In addition, the CCCSD has sufficient treatment capacity to serve the project. While CCCSD has identified future capacity concerns associated with full-buildout, CCCSD has a fee collection program that goes towards identified CIP projects. The payment of sewer connection fees is considered adequate mitigation for the purposes of CEQA. The proposed project site would be required to be annexed into CCCSD's service area, but annexation would not result in any new impacts beyond those identified in this EIR. This represents a less than significant impact to wastewater treatment facilities.

MITIGATION MEASURES

Mitigation is not required.

Figure 4.13-1 EBMUD Service Area Boundary

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Figure 4.13-2, CCCSD Proposed Service Area Boundary

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Impact 4.13-5: The proposed project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

Determination: Less than Significant Impact.

Onsite stormwater drains would be constructed as a part of the project, to extend the existing stormwater drains to the project site. Based on the Preliminary Stormwater Control Plan prepared by Balance Hydrologics, Inc in September 2013, the project would not increase runoff rates. Further evaluation of the storm drain capacity is included in Section 4.9 Hydrology and Water Quality.

The project would include bio retention areas that would allow for more surface water to infiltrate into the ground, which results in less water entering the storm drain system. The project would not require an expansion or replacement of any offsite storm drain facilities, and as such, the project's potential impacts are considered less than significant.

MITIGATION MEASURES

Mitigation is not required.

Impact 4.14-6: The proposed project would result in a determination by the wastewater treatment provider, which serves or may serve the Project that it has adequate capacity to serve the Project's projected demand in addition to the providers existing commitments.

Determination: Less than Significant Impact.

The CCCSD provides wastewater collection and treatment services for the Town of Danville and would serve the proposed project upon approval of LAFCO to allow the annexation of the project site into the CCCSD service area. The treatment plant has capacity to treat 54 million gallons per day (MGD) and currently treats approximately 33.5 MGD. The proposed project would incrementally increase demand for wastewater treatment.

However, the 0.01% incremental increase in demand generated by the 20-unit development (refer to Table 4.13-4) is not expected to interfere with the ability of the wastewater treatment plant to serve the provider's existing commitments in addition to the project's projected demand. These conclusions were confirmed by Russell Leavitt at CCCSD on May 14, 2013. Therefore, less than significant impacts to wastewater service capacity would occur.

MITIGATION MEASURES

Mitigation is not required.

Water Service

Impact 4.13-7: The proposed project would incrementally increase potable water demand within the service area. However, there are sufficient water supplies available to serve the project from existing entitlements and resources.

Determination: Less than Significant Impact.

The East Bay Municipal Utilities District provides water supply to the Town of Danville and would provide water to the project site upon approval of the U.S. Bureau of Reclamation to allow the annexation of the project site into the EBMUD service area (personal communication, David Rehnstrom, EBMUD, May 15, 2013). The 2030 Danville General Plan designates the project site as Rural-Residential, which can accommodate a density of one single family unit per five or more acres of land. The project site encompasses approximately 109 acres of Rural-Residential land, therefore the build-out of this area would be expected to result in approximately 22 single-family units. Since the proposed development proposes only 20 single family units on 109 acres, the development would be consistent with the water demand expected in the 2030 Danville General Plan.

The UWMP anticipated build-out of the project-site is based on the site's existing General Plan land use designations. Project development would not exceed the land use and/or development assumptions contained in the 2040 Demand Study or 2010 UWMP such that the project's projected water demand was not previously considered and/or included in future demand accounting. According to the District's Urban Water Management Plan 2010 (UWMP), EBMUD can meet customer demands through the year 2040 during normal year conditions and has supplemental water supplies of up to 112,000 acre-ft per year (or up to 165,000 acre-ft over three years) during dry years from the Freeport Regional Water Facility and 1,120 acre-ft per year from the Bayside Groundwater Facility. Thus, it is anticipated that EBMUD would be able to serve the water needs of the proposed 20 unit development. Less than significant impacts would occur.

MITIGATION MEASURES

Mitigation is not required.

Solid Waste

Impact 4.13-8: Be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs.

Determination: Less than Significant Impact.

The project would generate additional solid waste related to the operation and construction of the proposed project. Allied Waste Services deposits the solid waste it collects from the Town of Danville at the Keller Canyon Landfill, which is a Class II Landfill. The landfill currently handles 2,500 tons of waste per day, although the permit allows up to 3,500 tons of waste per day to be managed at the facility. Table 4.13-5 identifies projected solid waste estimates associated with the proposed project.

TABLE 4.13-5 SOLID WASTE GENERATION ESTIMATE

Use	Dwelling Units/Units	Daily Rate (lbs/day)[1]	Generation (lbs/day)	Annual Solid Waste (tons/year)
Proposed Project				
Single-Family Residential	20	7.8	156	28.47

Source Estimates:
1. California Integrated Waste Management Board Estimated Solid Waste Generation Rates for Residential and Commercial Establishments; see also CIWMB Statewide Waste Characterization Study (2004), and CIWMB Waste Disposal and Diversion Findings for Selected Industry Groups (2006).

As shown above, the project is expected to generate approximately 156 lbs/day of solid waste. The Town of Danville has historically exceeded the State's mandated 50% waste diversion requirements; assuming an existing waste diversion rate of 50%, the project would generate 78 lbs/day of solid waste that would be disposed of at the Keller Canyon Landfill. The project would represent a negligible increase in the amount of solid waste disposed of at the Keller Canyon Landfill; there is sufficient existing capacity to accommodate solid waste generated by the project. The proposed project would therefore not require the expansion or construction of new solid waste facilities to accommodate project demands. The project would result in a less than significant impact on solid waste services.

MITIGATION MEASURES

Mitigation is not required.

Impact 4.13-9: The proposed project would comply with federal, state, and local statutes and regulations regarding solid waste.

Determination: Less than Significant Impact.

The Central Contra Costa Solid Waste Authority provides solid waste and residential recycling services for Contra Costa County, including the Town of Danville. CCCSWA holds franchise agreements with Allied Waste Services for the collection, transfer and disposal of residential and commercial solid waste, and with Valley Waste Management for the collection and marketing of residential recycling, green waste and food scraps.

The proposed 20-unit development is not anticipated to generate substantial amounts of solid waste (refer to Table 4.13-5) and would be served by a landfill with sufficient permitted capacity. The proposed project would comply with local statues and regulations regarding solid waste, resulting in less than significant solid waste impacts.

MITIGATION MEASURES

Mitigation is not required.

4.13.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.13-10: The proposed project in conjunction with other cumulative projects would increase the demand for fire protection and emergency services and police protection services.

Determination: Less than Significant Impact.

The proposed project would have less than significant impacts on the provision of fire protection and emergency services and police protection services. Future development within the project vicinity would be guided by the Town's General Plan and associated planning and environmental documents. Each project would be subject to the Town's planning process. As part of this planning process, the payment of appropriate fees by all development projects would be required to mitigate any effects on public services and minimize cumulative impacts on a project-by-project basis. Additionally, the project, in conjunction with reasonably foreseeable future projects, would bring additional annual revenue to the Town in the form of increased local property taxes assessed on the new residential development that would offset the increased demand for police and fire services. Furthermore, the SRVFPD and the Danville Police Department would be involved in the development review

process for all projects in the Town, and would continue to provide input into the review of new projects. Therefore, the incremental impact associated with the proposed project would not contribute to cumulative long-term impacts on public services and, therefore, would not be cumulatively considerable.

MITIGATION MEASURES

Mitigation is not required.

Impact 4.13-11: The proposed project in conjunction with other cumulative projects would not have an impact on water, wastewater, or solid waste services.

Determination: Less than Significant Impact.

All proposed development plans will be reviewed and evaluated to coordinate community growth in a manner that adheres to the goals of the General Plan and does not significantly affect the levels of service of existing utilities and service systems. The Town's development review process guides community development in a manner that achieves its goal of maintaining balanced growth and providing adequate services and infrastructure. The adherence of development projects within the City to the land use guidelines and objectives of the General Plan will ensure that potential cumulative effects on public services, utilities, and service systems would be less than significant. The Project's demand on public services, utilities, and service systems would result in a less than cumulatively considerable contribution to this less than significant cumulative impact.

MITIGATION MEASURES

Mitigation is not required.

4.14 TRANSPORTATION/TRAFFIC

This section evaluates existing and future traffic for the proposed project and assesses potential traffic impacts in the vicinity of the project site. The evaluation is based on the following documentation:

- Town of Danville 2010 General Plan (General Plan)
- Hexagon Transportation Consultants, Inc., *Podva Property Residential Development Transportation Impact Analysis*. January 19, 2012.

4.14.1 ENVIRONMENTAL SETTING

EXISTING ROADWAY NETWORK

The roadway network in the project area is presented in Figure 4.14-1 (Roadway Network) and summarized below. Regional access to the project site is provided via I-680. Local access to the site is provided via San Ramon Valley Boulevard, Sycamore Valley Road, Ocho Rios Drive, Podva Road, and Midland Way. These roadways are described below.

I-680 is an eight lane north/south freeway, with three mixed-flow lanes and one HOV lane in each direction within the vicinity of the project site. I-680 extends north through Contra Costa County and south to Santa Clara County. The HOV lanes run north and south from central Contra Costa County to San Ramon. Access to the project study area is provided via its interchanges with Sycamore Valley Road and Crow Canyon Road.

San Ramon Valley Boulevard is a north-south, two to four-lane, arterial roadway that extends south from Hartz Avenue to I-680 where it becomes Foothill Road. San Ramon Valley Boulevard is located east of the project site and provides access to residential and commercial areas. San Ramon Valley Boulevard is a route of regional significance.

Sycamore Valley Road is an east-west four lane roadway that extends east from San Ramon Valley Boulevard to Camino Tassajara. Sycamore Valley Road is located northeast of the project site and provides access to I-680 and residential areas. Sycamore Valley Road is a route of regional significance.

Ocho Rios Drive is a two-lane, north-south, roadway that extends south from Podva Road to Wembly Drive. Ocho Rios Drive is located east of the project site and provides access to residential areas.

Podva Road is a two-lane, north-south and east-west, roadway that extends south from San Ramon Valley Boulevard to Ocho Rios Drive where it turns east and extends to San Ramon Valley Boulevard. Podva Road is located northeast of the project site and provides access to residential and commercial retail areas.

Midland Way is a two-lane, east-west, roadway that extends west from San Ramon Valley Boulevard to its termination at the project site. Midland Way would provide direct access to the project site.

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Bicycle facilities are divided into three classes. Class I bikeways are bike paths that are physically separated from motor vehicles and offer two-way bicycle travel on a separate path. Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Class III bikeways are bike routes and only have signs to help guide bicyclists on recommended routes to certain locations.

The *Contra Costa Countywide Bicycle and Pedestrian Plan,* from 2009, describes the existing bicycle network in the Town of Danville, as follows:

- San Ramon Valley Boulevard – existing Class II bicycle lanes from Hartz Avenue in the north to Foothill Road in the south.
- Sycamore Valley Road – existing Class II bicycle lanes from San Ramon Valley Boulevard in the west to Camino Tassajara.
- Camino Ramon – existing Class III bicycle lanes from Sycamore Valley Road in the north to Crow Canyon Road.
- Greenbrook Drive – existing Class III bicycle route from Camino Tassajara in the north to Camino Ramon.

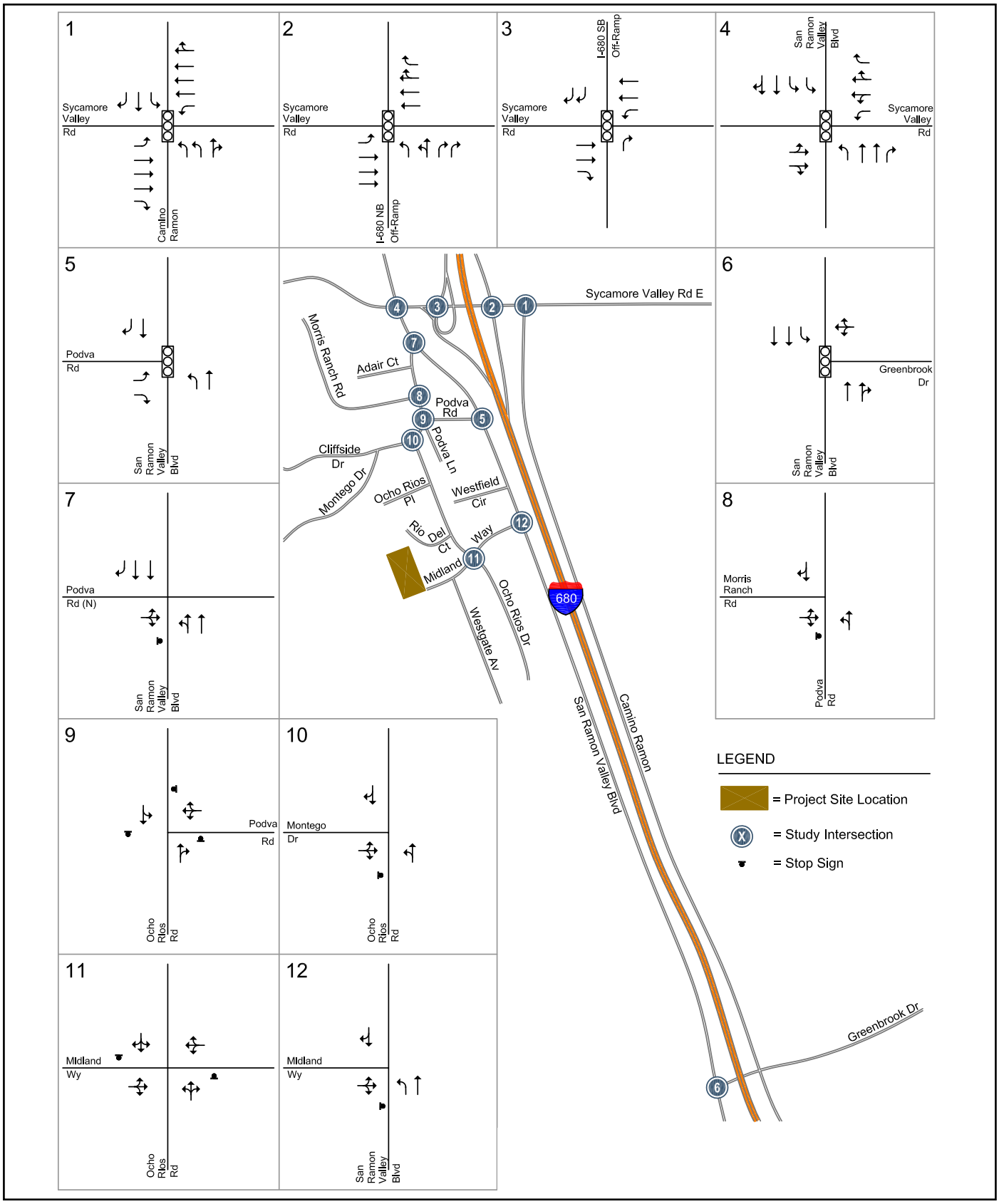
Pedestrian facilities in the project area consist primarily of sidewalks along the streets near the project site. Within the project vicinity, there are no sidewalks along Ocho Rios Drive and most of Midland Way. However, there are sidewalks along both sides of Midland Way from San Ramon Valley Boulevard west for approximately 300 feet. Sidewalks also are present along both sides of Podva Road, San Ramon Valley Boulevard, and the north side of Sycamore Valley Road across I-680. Crosswalks are present at all signalized intersections in the study area.

EXISTING TRANSIT SERVICE

Existing transit service in Danville is provided by the Central Contra Costa Transit Authority (CCCTA). The closest transit service provided is described below.

- The *21 line* provides service between the Walnut Creek Bay Area Rapid Transit (BART) station and the San Ramon Transit Center via San Ramon Valley Boulevard, Sycamore Valley Road, and Camino Ramon, with 30-minute commute hour headways.
- The *92x line* (ACE Express) provides service between the Mitchell Drive Park and Ride and the Pleasanton Train station via I-680 and Sycamore Valley Road, with 60-minute headways from 6:00 to 7:00 AM and 5:00 to 7:00 PM.
- The *95x line* provides service between the Walnut Creek BART station and the San Ramon Transit Center via I-680 and Sycamore Valley Road, with 40-minute commute hour headways.
- The *321 line* provides weekend service between the Walnut Creek BART station and the San Ramon Transit Center via San Ramon Valley Boulevard, Sycamore Valley Road, and Camino Ramon, with 120-minute headways.
- The *623 line* provides school day only service between Danville Boulevard/Alamo Plaza and Annabel Lane via San Ramon Valley Boulevard and Sycamore Valley Road. The line operates between 3:00 PM and 4:15 PM.

The closest access to the BART system, which provides service to San Francisco and many locations in the East Bay, is at the Walnut Creek and Dublin-Pleasanton stations, which are located approximately 9 and 8 miles away, respectively. The closest access to the Altamont Commuter Express, with service to San Jose and Stockton, is at the Pleasanton Station, 12 miles south of the project site.



Source: Hexagon Transportation Consultants, Inc. (2012)

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ROADWAY NETWORK

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

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FIGURE 4.14-1

EXISTING INTERSECTION LANE CONFIGURATIONS & TRAFFIC VOLUMES

The existing lane configurations at the study intersections were determined by observations in the field and confirmed with Town staff.

Daily traffic counts were collected in November/December 2011 on San Ramon Valley Boulevard and Midland Way in the vicinity of the project site. These data included the volume and direction of vehicles over a 48-hour time period. There are approximately 12,000 daily trips (both directions) on San Ramon Valley Boulevard, north of Midland Way, during a typical weekday. A further breakdown shows there are approximately 515 northbound trips and 343 southbound trips during the AM peak hour, approximately 518 northbound trips and 567 southbound trips during the school PM peak hour, and approximately 897 northbound trips and 490 southbound trips during the PM peak hour on a typical weekday. There are approximately 575 daily trips (both directions) on Midland Way, between San Ramon Valley Boulevard and Ocho Rios Drive, during a typical weekday. A further breakdown shows there are approximately 12 westbound trips and 29 eastbound trips during the AM peak hour, approximately 39 westbound trips and 28 eastbound trips during the school PM peak hour, and approximately 37 westbound trips and 16 eastbound trips during the PM peak hour on a typical weekday.

Existing peak hour traffic volumes were obtained from new AM, school PM, and PM manual turning-movement counts (in December 2011) at the study intersections.

EXISTING INTERSECTION LEVELS OF SERVICE

The results of the level of service (LOS) analysis under existing conditions show that all of the signalized study intersections currently operate at acceptable levels of service (LOS D or better) during the AM, school PM, and PM peak hours of traffic; refer to Table 4.14-1 (Existing Intersection Levels of Service-HCM Methodology). The level of service calculation sheets are included in Appendix B of the Traffic Impact Analysis, located in Appendix F of this Draft EIR.

OBSERVED EXISTING TRAFFIC CONDITIONS

Traffic conditions in the field were observed by Hexagon Transportation Consultants Inc. in order to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the LOS calculation does not accurately reflect level of service in the field.

Overall, most of the study intersections operate adequately during the weekday AM, school PM, and PM peak hours, and the level of service analysis appears to accurately reflect actual existing traffic conditions. However, field observations showed that some operational and queuing problems currently occur at the following locations:

Camino Ramon and Sycamore Valley Road

During the AM peak hour, the westbound shared right/through lane and adjacent through lane were occasionally blocked from entering the intersection due to heavy queuing related to westbound right turn vehicles attempting to access the I-680 northbound on-ramp immediately west of the Camino Ramon/Sycamore Valley Road intersection. However, the vehicles typically clear the intersection in one signal cycle.

TABLE 4.14-1 EXISTING INTERSECTION LEVELS OF SERVICE-HCM METHODOLOGY

Intersection	Traffic Control	Peak Hour	Count Date	Average Delay	Existing LOS	Critical V/C
Camino Ramon and Sycamore Valley Road	Signalized	AM	12/1/2011	22.7	C	0.473
		School PM	12/1/2011	21.3	C	0.525
		PM	12/1/2011	21.6	C	0.498
I-680 North Bound Ramps and Sycamore Valley Road	Signalized	AM	12/1/2011	14.6	B	0.582
		School PM	12/1/2011	19.7	B	0.585
		PM	12/1/2011	19.6	B	0.523
I-680 South Bound Ramps and Sycamore Valley Road	Signalized	AM	12/1/2011	19.7	B	0.514
		School PM	12/1/2011	19.7	B	0.585
		PM	12/1/2011	18.3	B	0.512
Ramon Valley Boulevard and Sycamore Valley Road	Signalized	AM	12/1/2011	35.3	D	0.525
		School PM	12/1/2011	41.3	D	0.749
		PM	12/1/2011	39.8	D	0.715
Ramon Valley Boulevard and Podva Road (south)	Signalized	AM	12/1/2011	6.1	A	0.321
		School PM	12/1/2011	7.9	A	0.481
		PM	12/1/2011	9.4	A	0.585
Ramon Valley Boulevard and Greenbrook Drive	Signalized	AM	12/1/2011	18.8	B	0.429
		School PM	12/1/2011	16.6	B	0.413
		PM	12/1/2011	13.8	B	0.579

Note: LOS reported using HCM methodology.
Source: *Podva Property Residential Development Transportation Impact Analysis*, Hexagon Transportation Consultants, Inc., January 19, 2012.

During the school PM and commute PM peak hours, there is intermittent heavy eastbound queuing that spills back through the intersection of I-680 NB ramps/Sycamore Valley Road. However, the vehicle queues typically clear in one signal cycle.

I-680 Northbound Ramps and Sycamore Valley Road

During the AM peak hour, the westbound right turn lane and shared right/through lane occasionally spill back through the Camino Ramon/Sycamore Valley Road intersection. However, the vehicles typically clear the intersection in one signal cycle.

During the school PM and commute PM peak hours, there is intermittent heavy eastbound queuing that spills back through the intersection of I-680 SB ramps/Sycamore Valley Road. However, the vehicle queues typically clear in one signal cycle.

I-680 Southbound Ramps and Sycamore Valley Road

During the AM peak hour, there is intermittent heavy eastbound queuing that spills back to the intersection of San Ramon Valley Boulevard/Sycamore Valley Road. However, the vehicle queues typically clear in one signal cycle.

During the commute PM peak hour, the westbound through lanes were occasionally blocked from entering the intersection due to heavy queuing related to westbound right turn vehicles at the intersection of San Ramon Valley Boulevard/Sycamore Valley Road spilling back through the intersection. However, the vehicles typically clear the intersection in one signal cycle.

San Ramon Valley Boulevard and Sycamore Valley Road

During the commute PM peak hour, the westbound right turn lane and shared right/through lane occasionally spill back through the I-680 SB Ramps/Sycamore Valley Road intersection. However, the vehicles typically clear the intersection in one signal cycle.

4.14.2 REGULATORY SETTING

STATE FRAMEWORK

California Department of Transportation (Caltrans)

The California Department of Transportation (Caltrans) is responsible for the planning, design, construction, and maintenance of interstate freeways and state highways. Within the project study area, I-680 and I-580 are within Caltrans' jurisdiction. Caltrans' Guide for the Preparation of Traffic Impact Studies (December, 2002) identifies Caltrans requirements for evaluating the effect of local development and land use changes on state highway facilities.

REGIONAL FRAMEWORK

Metropolitan Transportation Commission (MTC)

The MTC is the transportation planning, coordinating, and financing agency for the San Francisco Bay Area. The MTC functions as both the state-mandated regional transportation planning agency and the federally-mandated metropolitan planning organization for the region. As such, it is responsible for regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of transportation facilities within the region. The MTC also screens requests from local agencies for state and federal grants for transportation projects to determine their compatibility with the plan. Transportation 2035, the most recent version of the long-range plan, was adopted on April 22, 2009. MTC is also responsible for updating and prioritizing projects within the Regional Transportation Improvement Program.

Contra Costa Transportation Authority (CCTA)

The CCTA was originally formed in 1988 to manage the funds generated by the transportation sales tax established by Measure C and later renewed by Measure J in 2004. As Contra Costa's transportation sales tax agency, the CCTA oversees the design and construction of the transportation projects contained in the Measure C and J expenditure plans, carries out the programs included in the expenditure plans, and provides the financial structure that ensures the optimum use of the sales tax dollars.

In 1990 the CCTA took on the role of Contra Costa County's Congestion Management Agency (CMA). In that capacity, the CCTA is the primary transportation planning agency for Contra Costa County. As the CMA, the CCTA prepares the county's Congestion Management Program, monitors levels of service on the county's roadways and works with other CMAs and agencies to address regional issues. The level of service standard for intersections along Routes of Regional Significance[1] is LOS E or better, with a volume-to-capacity ratio of 0.90 to 0.91 depending on the intersection. The only project study intersection located along a Route of Regional Significance is the intersection of Camino Tassajara/Blackhawk Road.

[1] Routes of regional significance are chosen by the individual regional transportation planning committees based on the CCTA's Implementation Guide criteria.

Tri-Valley Transportation Council (TVTC)

The TVTC includes the Cities of San Ramon, Dublin, Pleasanton, Livermore, the Town of Danville, and unincorporated areas of Alameda and Contra Costa Counties. The TVTC develops and implements the Tri-Valley Transportation Plan/Action Plan for Routes of Regional Significance. As described above, the level of service standard for intersections along Routes of Regional Significance is LOS E or better, with a volume-to-capacity ratio of 0.90 to 0.91 depending on the intersection. This plan also establishes shared traffic service objectives and presents a list of 11 high-priority transportation improvement projects to ease regional traffic congestion. The Tri-Valley Transportation Development Fee on new developments was developed to fund these transportation improvements. The most recent Tri-Valley Transportation Plan/Action Plan was updated in July of 2008.

TOWN OF DANVILLE

Town of Danville 2010 General Plan

The Town of Danville's General Plan outlines transportation goals that include providing an efficient, safe, and environmentally sustainable transportation system; increasing transit usage; and improving the pedestrian environment. The General Plan establishes minimum performance standards at signalized intersections for Basic Routes and Routes of Regional Significance. All of the project study intersections, except the intersection of Camino Tassajara/Blackhawk Road, are located along Basic Routes. The acceptable service level for signalized intersections may be no worse than mid-range LOS D.

4.14.3 ENVIRONMENTAL ANALYSIS

THRESHOLDS OF SIGNIFICANCE

According to the Appendix G of the State CEQA Guidelines, the Podva Property Residential Development would have a significant impact on traffic and circulation if it would:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion/management agency for designated roads or highways;
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or,
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

In applying the above State CEQA Guideline thresholds, the following specific significance criteria were used to evaluate the significance of traffic impacts resulting from the project.

1. In the context of the first bulleted CEQA criterion listed above, the following quantitative thresholds were applied based on the policies in the General Plan and/or the current Town standards:

- Cause a signalized intersection on a Basic Route to fall from mid-range LOS D (or better) to LOS E (or worse); or
- Cause an increase in the volume-to-capacity ratio (v/c) of 0.05 or more at a signalized or unsignalized intersection that is currently, and projected to continue to, operate at LOS E (or worse).

The Danville General Plan establishes a LOS standard of mid-range D for signalized intersections on Basic Routes. While the Danville General Plan does not establish a level of service standard for unsignalized intersections, it is the Town's practice to include these intersections as a part of the operational traffic analysis in an effort to fully understand the potential traffic impacts from the project.

If an intersection is already operating at an unsatisfactory level of service (LOS E or F), an increase of five percent (addition of 0.05) to the v/c ratio would constitute a significant project impact. Based on the judgment of the Town's traffic consultants and traffic engineering staff, and historic variations in daily traffic volume, it has been determined that an increase of 0.05 in the v/c ratio (or a five percent threshold increase) is a conservative, appropriate measurement of an adverse change to an intersection.[3] This threshold applies to existing or projected conditions that are already unacceptable or are projected to be unacceptable under cumulative conditions even without the project. In order to provide a consistent methodology, this significance criteria is applied to both signalized and unsignalized intersections.

2. In the context of the second bulleted CEQA criterion listed above, the following quantitative thresholds were applied to reflect the established standards in the Tri-Valley Transportation Action Plan (TVTC, 2008):
   - Cause an intersection along a Route of Regional Significance to exceed the LOS E standard established by the Tri-Valley Transportation Plan/Action Plan for Routes of Regional Significance.

Mitigation is required for any intersection or roadway segment where project traffic causes the intersection to deteriorate from satisfactory or unsatisfactory levels.

ANALYSIS METHODOLOGIES AND LEVEL OF SERVICE STANDARDS

Signalized Intersections

By request of the Town of Danville, the LOS for signalized intersections was analyzed using two methodologies: (1) the *Contra Costa Transportation Authority (CCTALOS)* method and (2) the *2000 Highway Capacity Manual* (2000 HCM) method. The software called TRAFFIX was used to apply the CCTALOS and 2000 HCM operations methods for evaluation of conditions at signalized intersections.

CCTALOS is a rudimentary method that expresses level of service conditions in terms of total volume-to-capacity (V/C) ratios. It does not take into account signal timing, queue lengths, delay and storage capacity. CCTALOS methodology is a minimum requirement of the CCTA, and its calculations are included in the appendix for CCTA reporting purposes.

The Town of Danville uses the 2000 HCM method, which evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. *Control delay* is the amount of delay that is attributed to the particular traffic control device at the intersection and includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. As such, and per the Town of Danville, the level of service in the Traffic Impact Analysis was reported using the 2000 HCM methodolgy because it provides a more accurate indication and represents a more conservative expression of intersection operation in the Town. Refer to Table 4.14-2 (Signalized Level of Service Definitions Based on Average Delay).

TABLE 4.14-2 SIGNALIZED LEVEL OF SERVICE DEFINITIONS BASED ON AVERAGE DELAY

Level of Service	Description	Average Total Per Vehicle (Seconds)
A	Signalized progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) rations. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be a major contributing cause of such delay levels.	Greater than 80

Source: *Podva Property Residential Development Transportation Impact Analysis*, Hexagon Transportation Consultants, Inc., January 19, 2012.

Unsignalized Intersections

Level of service at unsignalized intersections in the Town of Danville and Contra Costa County is based on the 2000 Highway Capacity Manual (2000 HCM) method. TRAFFIX software was used to apply the 2000 HCM operations method for evaluation of conditions at unsignalized intersections. This method is applicable for both two-way and all-way stop-controlled intersections. The delay and corresponding level of service at unsignalized, stop-controlled intersections is presented in Table 4.14-3 (Unsignalized Level of Service Definitions Based on Average Delay). For two-way and four-way stop controlled intersections, the reported LOS represents the average delay of all intersection movements. The significance criteria used to establish what constitutes an impact for unsignalized intersections is the same criteria used for signalized intersections.

TABLE 4.14-3 UNSIGNALIZED LEVEL OF SERVICE DEFINITIONS BASED ON AVERAGE DELAY

Level of Service	Description of Operations	Average Total Per Vehicle (Seconds)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	Greater than 50.0

Source: *Podva Property Residential Development Transportation Impact Analysis*, Hexagon Transportation Consultants, Inc., January 19, 2012.

Signal Warrant Methodology

The level of service analysis at unsignalized intersections is supplemented with an assessment of the need for signalization of the intersections. For the proposed project, the need for signalization is assessed on the basis of the operating conditions at the intersections (i.e., level of service) and on the peak-hour volume signal warrant (warrant #3) described in the *2010 California Manual on Uniform Traffic Control Devices* (MUTCD). This method provides an indication of whether traffic conditions and peak-hour traffic levels are, or would be, sufficient to justify installation of a traffic signal.

POTENTIAL IMPACTS AND MITIGATION MEASURES

Project Trip Generation

Impact 4.14-1: **The proposed project would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system and 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.**

Determination: **Less than Significant Impact.**

The estimated traffic generated by a project and the locations where that traffic will occur are based on the following: 1) trip generation, 2) trip distribution, and 3) trip assignment. To determine trip generation for the proposed project, the amount of traffic entering and exiting the site was estimated for the AM, school PM, and PM peak hours. To determine project trip distribution, an estimate was made of the directions to and from which the project trips would travel. For the trip assignment, the project trips were assigned to specific streets and intersections.

Most communities utilize standard trip generation rates published in the Institute of Transportation Engineers (ITE) manual entitled Trip Generation, Eighth Edition (2008). These rates are derived from data collected through national empirical research and correlated to common land uses that produce traffic. For most common land uses, standard trip generation rates are provided by the ITE to predict future traffic increases from new development. The magnitude of traffic added to the roadway system by a particular development is estimated by applying the appropriate trip generation rate to the proposed development. The ITE rate for Single-Family Detached Housing is presented in Table 4.14-4 (Residential Trip Rate Comparisons).

TABLE 4.14-4 RESIDENTIAL TRIP RATE COMPARISONS

Sources	Daily	Peak Hour		
		AM	School PM	PM
ITE Rates[1]	9.57	0.75	N/A	1.01
Danville Rates[2]	10.20	1.06	N/A	1.02

TABLE 4.14-4, CONTINUED

Note: Development sizes provided by Town staff.
1. Source: Single-Family Detached Housing (210), ITE Trip Generation, Eighth Edition, 2008, average rates.
2. Source: Town of Danville observed local residential trip rates for the daily, AM, and PM peak hours.

Consistent with direction from the Town of Danville to conduct a traffic analysis using the most conservative assumptions, this report applies the "Danville Rate)" to the project's daily, AM, school PM, and PM peak hours as shown in Table 4.12-5 (Project Trip Generation Estimates). Based on these more conservative rates, the 20 dwelling units would generate 204 daily trips, including 21 AM peak hour trips, 16 school PM peak hour trips, and 20 PM peak hour trips (see Table 4.14-5).

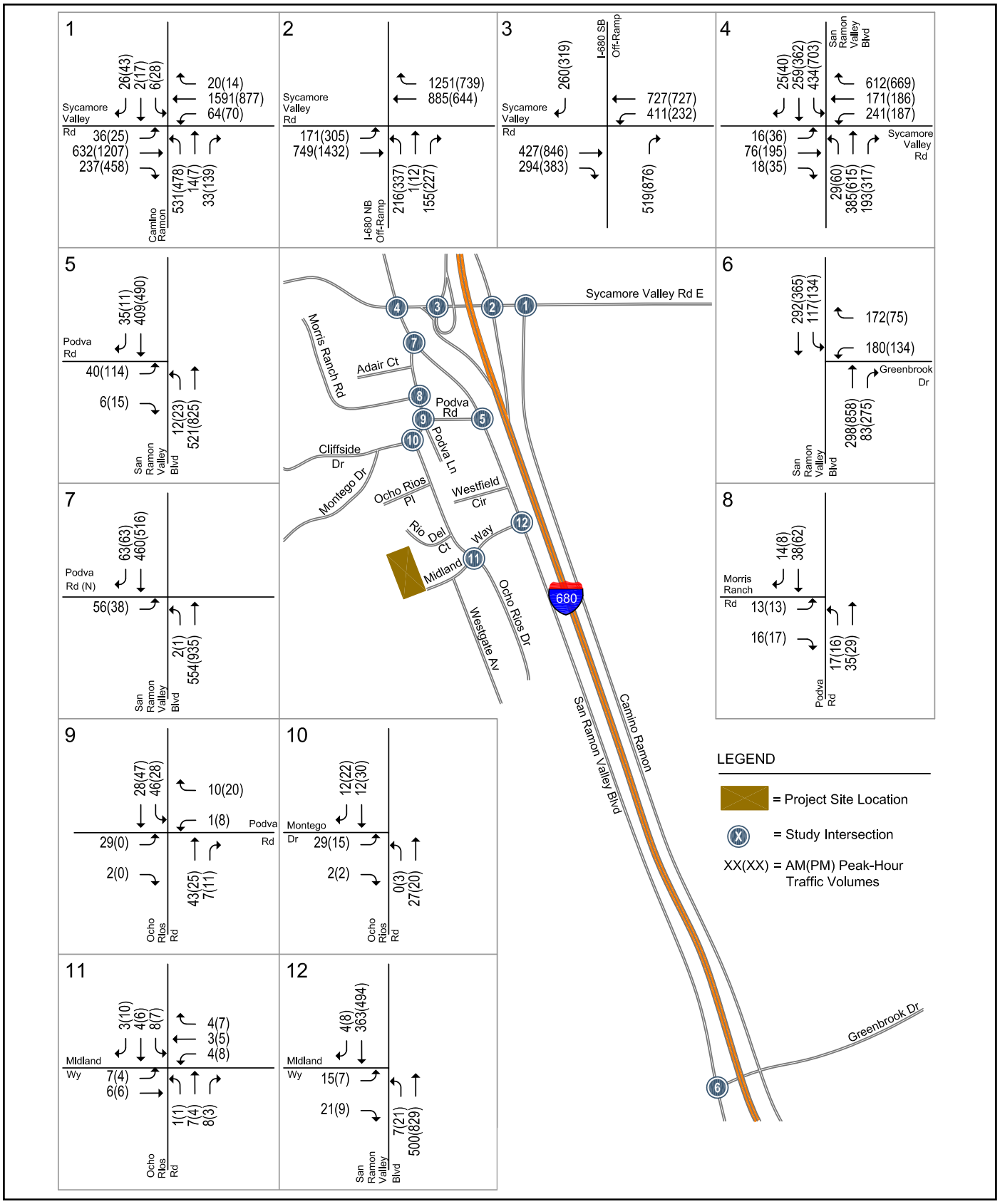
TABLE 4.14-5 PROJECT TRIP GENERATION ESTIMATES

		Daily		AM Peak Hour				School PM Peak Hour				PM Peak Hour			
Land Use	Size	Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total	Rate	In	Out	Total
Single-Family Homes	20 units	10.20	204	106	5	16	21	0.81	9	7	16	1.02	13	7	20

1. Source: Town of Danville observed local residential trip rates and ITE in/out splits for the AM and PM peak hours.

The proposed project would not significantly increase traffic levels and would not decrease intersection levels of service. The directional distribution of site-generated traffic to and from the project area was developed based on existing travel patterns on the surrounding roadway system, the locations of complementary land uses and previous traffic analyses. Existing traffic volumes are shown on Figure 4.14-2 (Existing AM & PM Peak Hour Traffic Volumes) and Figure 4.14-3 (Existing School PM Peak Hour Traffic Volumes), while existing traffic volumes plus project traffic volumes are shown on Figure 4.14-4 (Existing Plus Project AM & PM Peak Hour Traffic Volumes) and Figure 4.14-5 (Existing Plus School PM Peak Hour Traffic Volume). Based on traffic survey rates, the 20 dwelling units of the proposed project would generate 204 daily trips, including 21 AM peak hour trips, 16 school PM peak hour trips, and 20 PM peak hour trips.

Existing level of service analysis is shown in Table 4.14-1 (Existing Intersection Levels of Service-HCM Methodology) while Table 4.14-6 (Existing Plus Project Intersection Levels of Service-HCM Methodology) summarizes the results of the intersection level of service analysis for existing plus project conditions. The Town of Danville's level of service standard for intersections along Basic Routes is mid-range LOS D or better.



Source: Hexagon Transportation Consultants, Inc. (2012)

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EXISTING AM & PM PEAK HOUR TRAFFIC VOLUMES

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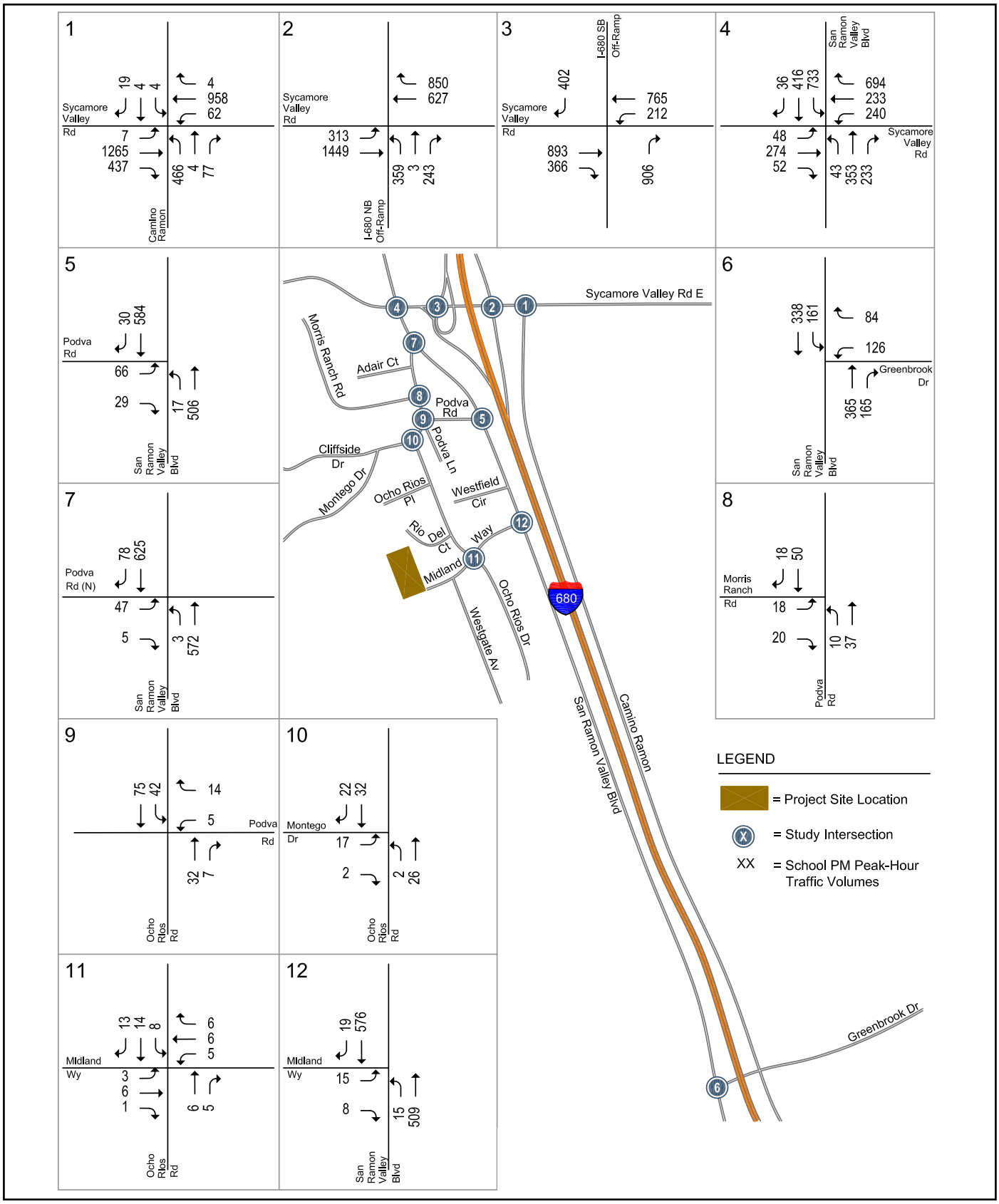
FIGURE 4.14-2



Source: Hexagon Transportation Consultants, Inc. (2012)

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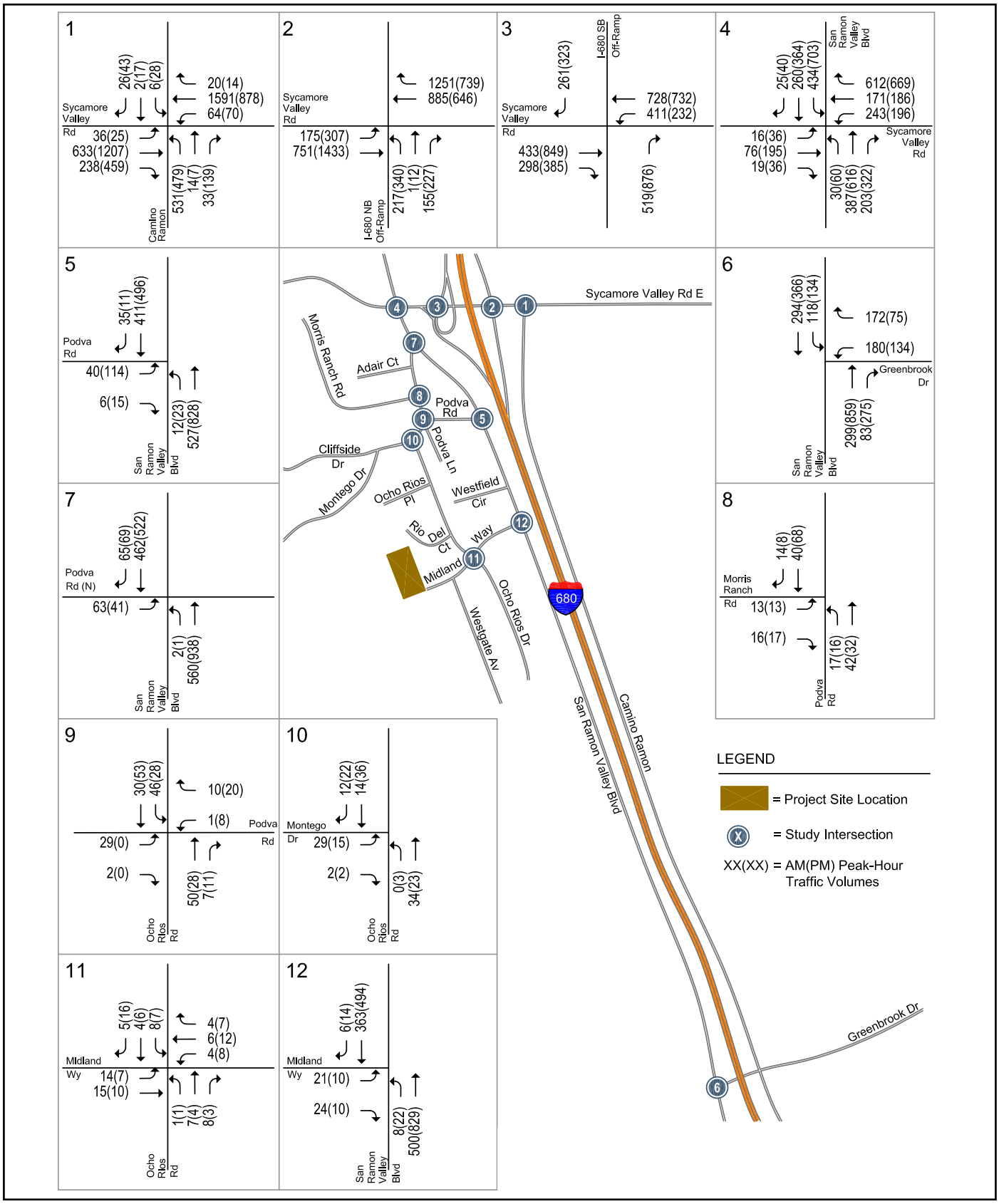
EXISTING SCHOOL PM PEAK HOUR TRAFFIC VOLUMES

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.14-3



Source: Hexagon Transportation Consultants, Inc. (2012)

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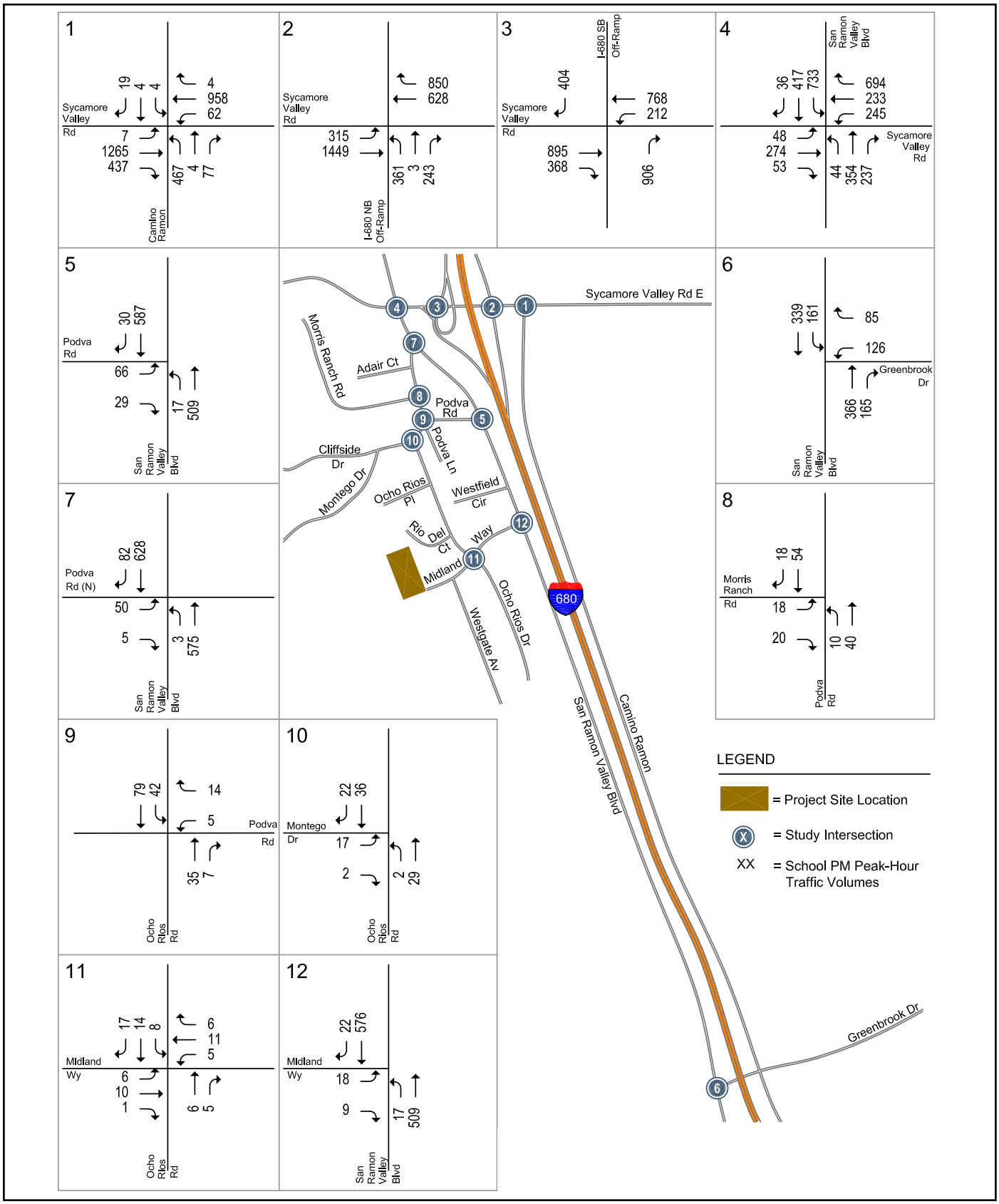
EXISTING PLUS PROJECT AM & PM PEAK HOUR TRAFFIC VOLUMES

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.14-4



Source: Hexagon Transportation Consultants, Inc. (2012)

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EXISTING PLUS SCHOOL PM PEAK HOUR TRAFFIC VOLUME

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

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FIGURE 4.14-5

TABLE 4.14-6 EXISTING PLUS PROJECT INTERSECTION LEVELS OF SERVICE-HCM METHODOLOGY

Intersection	Peak Hour	Existing Average Delay	Existing LOS	Existing Critical V/C	Existing Plus Project Average Delay	Existing Plus Project LOS	Existing Plus Project Critical V/C
Camino Ramon and Sycamore Valley Road	AM	22.7	C	0.473	22.7	C	0.473
	School PM	21.3	C	0.525	21.3	C	0.525
	PM	21.6	C	0.498	21.6	C	0.498
I-680 North Bound Ramps and Sycamore Valley Road	AM	14.6	B	0.582	14.8	B	0.585
	School PM	19.7	B	0.585	19.7	B	0.587
	PM	19.6	B	0.523	19.6	B	0.526
I-680 South Bound Ramps and Sycamore Valley Road	AM	19.7	B	0.514	19.7	B	0.516
	School PM	19.7	B	0.585	19.7	B	0.586
	PM	18.3	B	0.512	18.4	B	0.514
Ramon Valley Boulevard and Sycamore Valley Road	AM	35.3	D	0.525	35.2	D	0.526
	School PM	41.3	D	0.749	41.3	D	0.749
	PM	39.8	D	0.715	39.7	D	0.715
Ramon Valley Boulevard and Podva Road (south)	AM	6.1	A	0.321	6.1	A	0.322
	School PM	7.9	A	0.481	7.9	A	0.483
	PM	9.4	A	0.585	9.4	A	0.587
Ramon Valley Boulevard and Greenbrook Drive	AM	18.8	B	0.429	18.8	B	0.430
	School PM	16.6	B	0.413	16.7	B	0.414
	PM	13.8	B	0.579	13.8	B	0.579

Note: LOS reported using HCM methodology.
Source: *Podva Property Residential Development Transportation Impact Analysis*, Hexagon Transportation Consultants, Inc., January 19, 2012.

Conflict with Congestion Management Plan

Impact 4.14-3: The proposed project would not conflict with the applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads and highways).

Determination: Less Than Significant Impact.

The proposed project would not affect the performance of a congestion management program and would not decrease intersection levels of service. Refer to Impact 4.14-1 above. Impacts would be less than significant in this regard.

MITIGATION MEASURES

Mitigation is not required.

Design Hazards, Site Access, and/or Incompatible Uses

Impact 4.14-4: The proposed project would not create substantial increases in hazards due to a design feature.

Determination: Less than Significant Impact.

Generally, the proposed site plan would provide adequate circulation through the project site. Street A is a U-shaped roadway with two 18 foot lanes and provides direct access to the residential units. Street A provides traditional cul-de-sacs, with 70 foot diameters to allow for vehicle turn arounds. The proposed site plan also includes the installation of various traffic calming measures that would reduce traffic hazards and allow for safer access to the site. The proposed traffic calming measures include the installation a mini traffic circle at the intersection of Midland Way and Street A, a sidewalk along Midland Way at the entry of the site, a raised median at the entry of the site, on-street parking bays along Street A and centerline raised pavement markers around the curve of Street A near Parcel 11. Refer to Figure 3-4 (Grading and Utility Plan) for the location and detail of the proposed traffic calming measures.

An analysis using truck turning templates was conducted to determine the adequacy of on-site circulation for the truck category SU 30, which includes small buses, garbage trucks and other single unit trucks. Based on the analysis, the intersections and private streets would be sufficiently wide to serve these types of trucks. The analysis also showed that the trucks would be able to turn around in the court locations. However, if parking is allowed at the end of the courts this could present a challenge for large trucks during activities such as garbage collection. In addition, large vehicles may have some off tracking into oncoming travel lanes. However, traffic volumes on site are expected to be relatively low, and encroachment of heavy vehicles on opposing traffic lanes would not create operational problems.

Moreover, as described under Impact 4.14-1, the project would not have an adverse effect on traffic. Furthermore, it does not propose a site plan that introduces features that would substantially increase traffic hazards in the area (e.g., dangerous intersections or sharp curves), nor would it introduce uses that are incompatible with existing roadway conditions (e.g., farm equipment) as per the CEQA thresholds.

MITIGATION MEASURES

Mitigation is not required

Inadequate Emergency Access

Impact 4.14-5: The proposed project would not result in inadequate emergency access.

Determination: Less than Significant Impact.

Emergency access to the project site would be provided by the proposed extension of Midland Way into the site. The project does not propose any physical changes to the roadway system that would affect emergency response times, nor would it add traffic to intersections already operating at a poor LOS. All of the signals within the Town of Danville are equipped with preemption devices which allow emergency vehicles to avoid long delays through intersections. Emergency vehicles are somewhat affected by traffic congestion, but typically use lights and sirens to clear a path. Nearly all the streets in the vicinity are sufficiently wide to accommodate traffic and emergency vehicles assuming that drivers stop and pull over for sirens, as required. Therefore, the project would not introduce any impacts on emergency access.

MITIGATION MEASURES

Mitigation is not required.

4.14.4 CUMULATIVE IMPACTS AND MITIGATION MEASURES

Impact 4.14-6: The proposed would not cumulatively impact transportation/traffic.

Determination: Less than Significant Impact.

Cumulative Transportation Network and Traffic Volumes

Cumulative no project traffic volumes were estimated based on traffic forecasts produced by the Contra Costa Transportation Authority's (CCTA) TransCAD travel forecasting model and approved/pending developments in the area. According to the CCTA model, peak hour traffic in the project vicinity is projected to increase by approximately 1.5 percent per year between the years 2005 and 2030. Cumulative no project traffic volumes were estimated by applying to existing traffic volumes an annual growth factor of 1.5 percent over a period between the date of the existing traffic counts and year 2030, then adding the peak hour traffic volumes generated by the approved Elworthy Ranch EIR, dated November 2007. The Elworthy Ranch project would be located on the west side of I-680 on San Ramon Valley Boulevard, approximately one mile south of the intersection of San Ramon Valley Boulevard/Sycamore Valley Road. It would consist of 84 single-family homes and 12 apartment units. The project trip assignment is shown in Appendix F. These traffic volumes are hereafter referred to as "2030 cumulative no project traffic volumes". Cumulative traffic volumes *with* the proposed project were estimated by adding the traffic generated by the proposed project to the 2030 cumulative no project traffic volumes. The cumulative no project and cumulative with project traffic volumes are shown on Figures 4.14-6 thru 4.14-9, respectively.

The transportation network under cumulative conditions would include improvements at the west approach leg of San Ramon Valley Boulevard/Sycamore Valley Road. The improvements consist of adding a new eastbound left turn pocket and converting the existing shared through/left turn lane to a through lane only. Except where previously noted, it is assumed in this analysis that the remaining transportation network under cumulative conditions would be the same as described under existing conditions.

Cumulative Conditions - No Project

Under cumulative no project conditions, the results show that the signalized study intersection of San Ramon Valley Boulevard/Sycamore Valley Road would operate at an unacceptable LOS E with a V/C of 0.974 during the school PM peak hour and an unacceptable LOS D with a V/C of 0.936 during the PM peak hour. All other study intersections would operate at an acceptable LOS D or better under cumulative no project conditions during the AM, school PM, and PM peak hours. Refer to Table 4.14-7 (Cumulative Intersection Levels of Service).

Cumulative Conditions - With Project

Under cumulative with project conditions, the results show that the signalized study intersection of San Ramon Valley Boulevard/Sycamore Valley Road would continue to operate at an unacceptable LOS E with a during the school PM peak hour and an unacceptable LOS D during the PM peak hour. At the intersection of San Ramon Valley Boulevard and Sycamore Valley Road, the project would add 17 trips during the AM peak hour, 13 trips during the school PM peak hour, and 18 trips during the PM peak hour. However, the project trips added would not increase the V/C by 0.05 or more at the intersection. Therefore, the project trips added to the intersection would not constitute a significant impact and no mitigation is required from the project. Refer to Table 4.14-7 (Cumulative Intersection Levels of Service).

TABLE 4.14-7 CUMULATIVE INTERSECTION LEVELS OF SERVICE

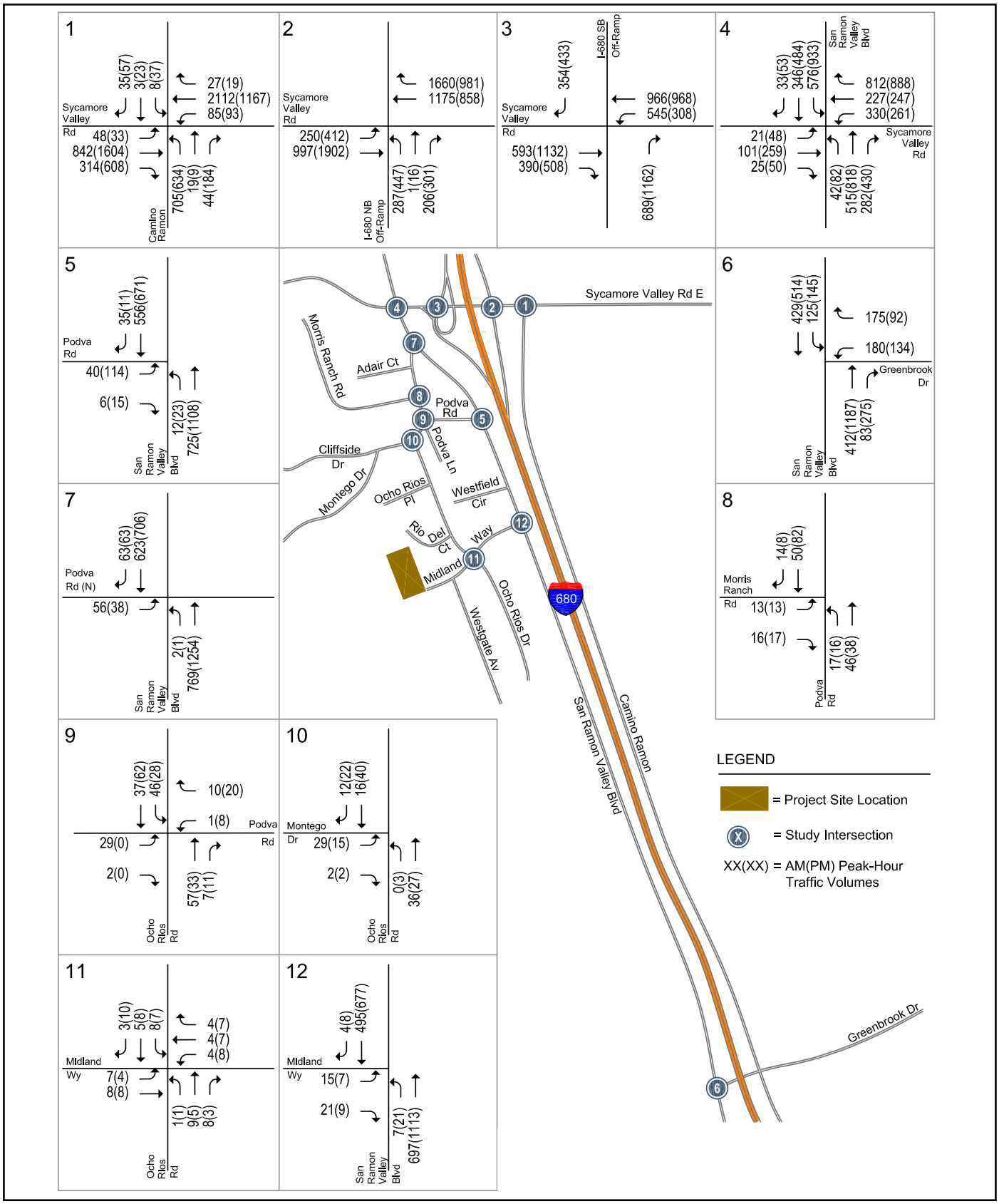
		2030 Cumulative					
		No Project			With Project		
Intersection	Peak Hour	Average Delay	LOS	Critical V/C	Average Delay	LOS	Critical V/C
Camino Ramon and Sycamore Valley Road	AM	24.9	C	0.628	24.9	C	0.628
	School PM	23.9	C	0.697	24.0	C	0.697
	PM	23.4	C	0.661	23.5	C	0.661
I-680 North Bound Ramps and Sycamore Valley Road	AM	18.2	B	0.787	18.4	B	0.790
	School PM	22.6	C	0.779	22.7	C	0.781
	PM	21.8	C	0.699	21.9	C	0.701
I-680 South Bound Ramps and Sycamore Valley Road	AM	22.3	C	0.684	22.4	C	0.687
	School PM	23.5	C	0.781	23.6	C	0.783
	PM	20.9	C	0.686	20.9	C	0.688
Ramon Valley Boulevard and Sycamore Valley Road	AM	37.6	D	0.692	37.6	D	0.693
	School PM	**55.3**	**E**	**0.974**	**55.3**	**E**	**0.974**
	PM	**50.2**	**D**	**0.936**	**50.2**	**D**	**0.936**
Ramon Valley Boulevard and Podva Road (south)	AM	8.1	A	0.532	8.2	A	0.536
	School PM	9.9	A	0.631	10.0	B	0.633
	PM	11.7	B	0.761	11.7	B	0.763
Ramon Valley Boulevard and Greenbrook Drive	AM	18.4	B	0.473	18.4	B	0.474
	School PM	15.7	B	0.479	15.7	B	0.480
	PM	14.3	B	0.701	14.3	B	0.701

Notes: LOS reported using HCM methodology.
Box denotes poor intersection LOS.
2030 Cumulative No Project and With Project conditions include intersection improvements at SRVB/Sycamore.
Source: *Podva Property Residential Development Transportation Impact Analysis*, Hexagon Transportation Consultants, Inc., January 19, 2012.

All other study intersections would operate at an acceptable LOS D or better under cumulative with project conditions during the AM, school PM, and PM peak hours.

MITIGATION MEASURES

No mitigation is necessary.



Source: Hexagon Transportation Consultants, Inc. (2012)

RBF A Baker Company

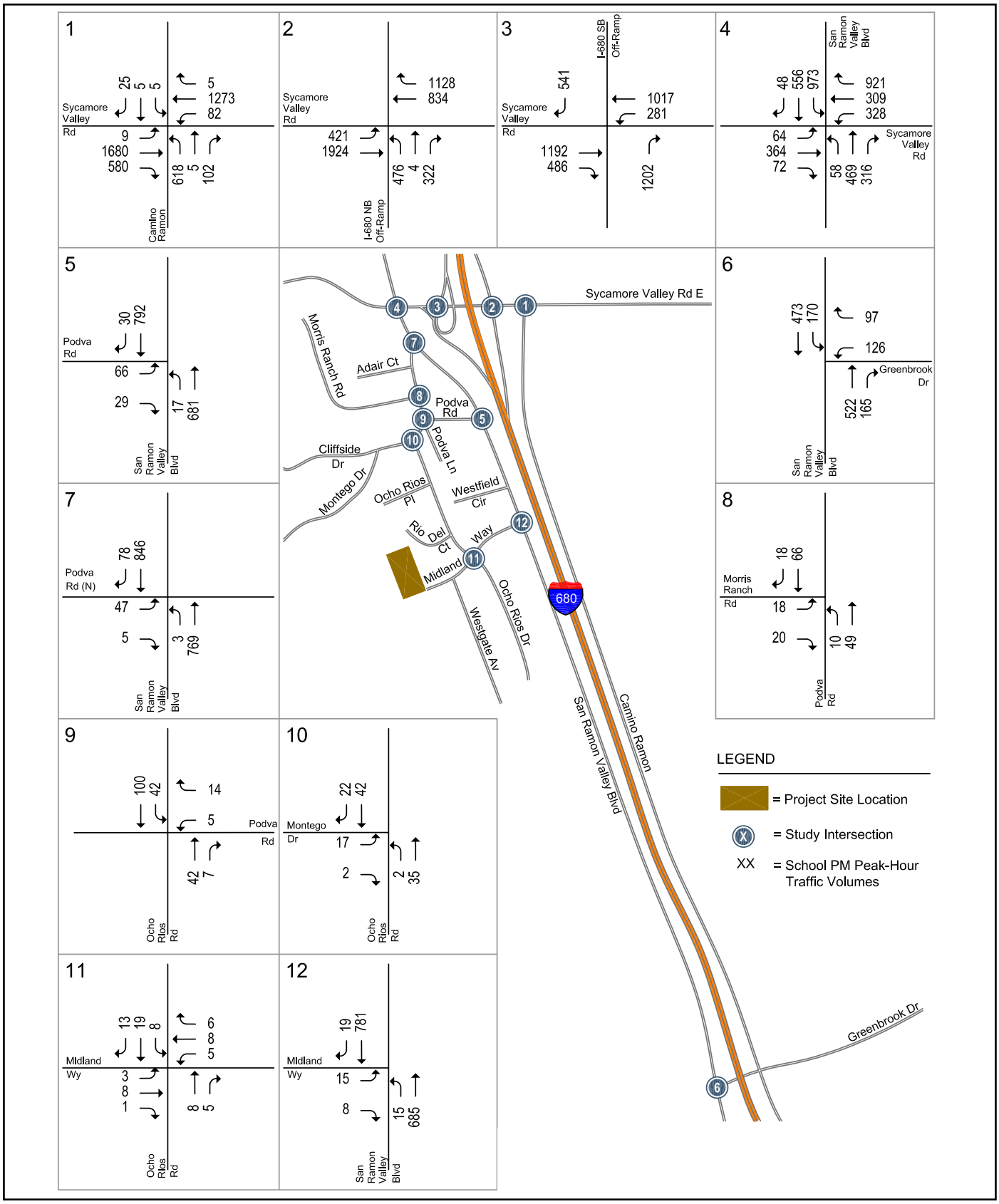
North

CUMULATIVE NO PROJECT AM & PM PEAK HOUR TRAFFIC VOLUMES

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.14-6



Source: Hexagon Transportation Consultants, Inc. (2012)

RBF A Baker Company

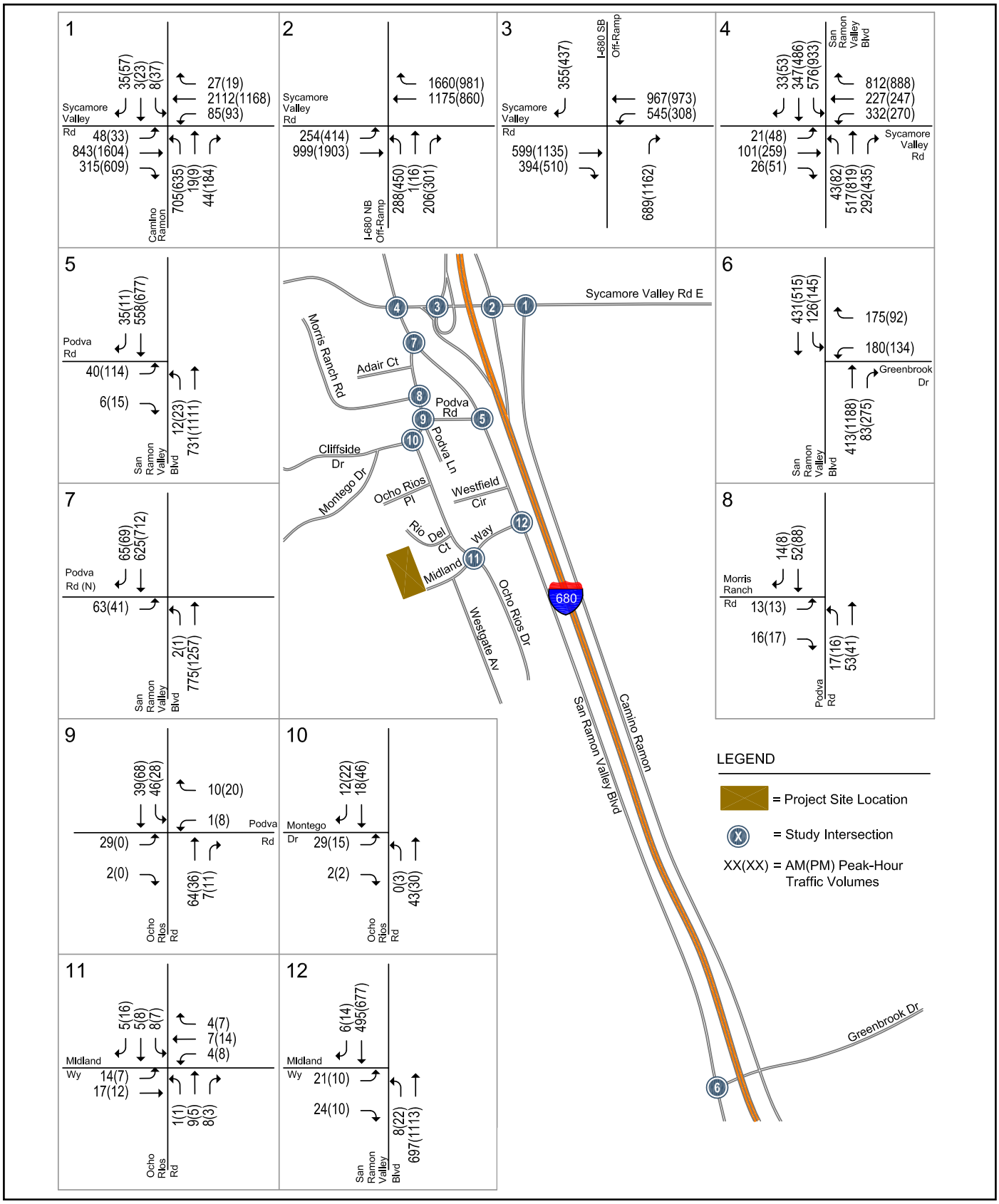
North

CUMULATIVE NO PROJECT SCHOOL PM PEAK HOUR TRAFFIC VOLUMES

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.14-7



Source: Hexagon Transportation Consultants, Inc. (2012)

RBF A Baker Company

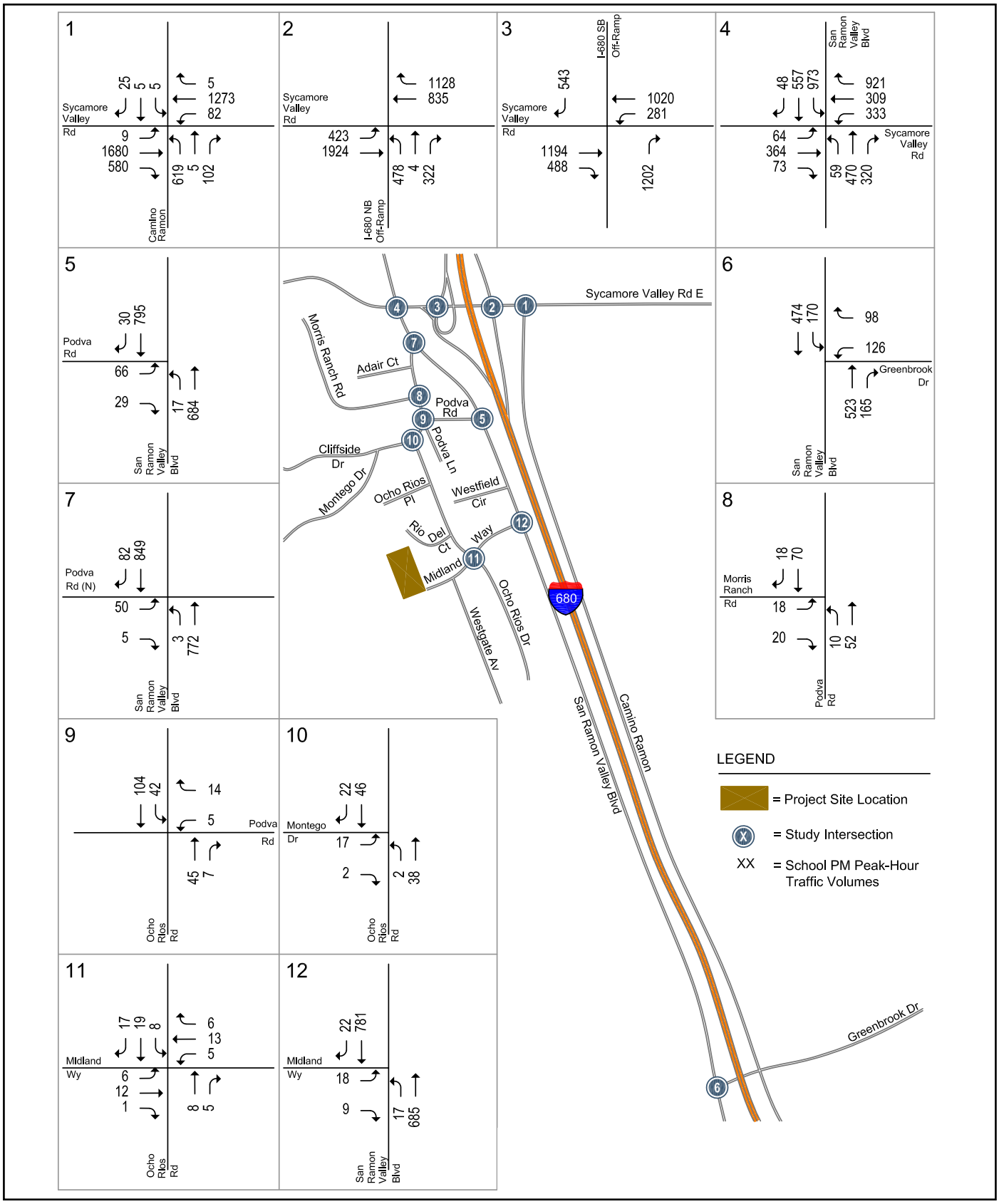
North

CUMULATIVE WITH PROJECT AM & PM PEAK HOUR TRAFFIC VOLUMES

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.14-8



Source: Hexagon Transportation Consultants, Inc. (2012)

RBF A Baker Company

North

CUMULATIVE WITH PROJECT SCHOOL PM PEAK HOUR TRAFFIC VOLUMES

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

01/2013 JN 40-100432

FIGURE 4.14-9

5 OTHER CEQA REQUIRED TOPICS

The California Environmental Quality Act (CEQA) Guidelines Section 15126 requires an Environmental Impact Report (EIR) to describe the broader effects of a project in relationship to the surrounding environment, in addition to detailed technical analysis of a project's impacts on the environment. The topics covered in this chapter address this requirement and identify significant and unavoidable project impacts, growth inducement associated with the project, and significant irreversible changes associated with the project. In addition, this Chapter addresses Appendix F of the CEQA Guidelines and provides a discussion of the potentially significant energy implications of the proposed project. A more detailed analysis of the effects the proposed project would have on the environment is provided in Chapter 4: Environmental Analysis.

5.1 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Section 15162(b) of the State CEQA Guidelines requires an EIR to discuss the significant environmental effects of a proposed project that cannot be avoided if the proposed project is implemented, including those which can be mitigated, but not reduced to a less than significant level. These impacts are referred to as "significant and unavoidable impacts" of the project. As identified throughout the content of this Draft EIR, the analysis herein as concluded that the proposed project would result in no significant and unavoidable impacts.

5.2 GROWTH INDUCING IMPACTS

CEQA requires that an EIR evaluate the "growth-inducing" effects of a proposed project. According to Section 15126.2(d) of the State CEQA Guidelines, growth-inducing effects include:

- Fostering economic or population growth, or the construction of additional housing;
- Removing obstacles to population growth;
- Taxing existing community services or facilities, requiring the construction of new facilities that could cause significant environmental effects; and,
- Encouraging and facilitating other activities that could significantly affect the environment, either individually or cumulatively.

A project can directly or indirectly induce growth. Construction of new housing would directly induce growth. However, if a project creates substantial new permanent employment opportunities, it could indirectly induce growth by stimulating the need for additional housing and services to support the new employment demand. It could also indirectly induce growth by removing infrastructure limitations or regulatory constraints on a required public service, such as roads or water service.

Section 15126.2(d) also states that it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment. However, it should be noted that growth can be detrimental if it is not consistent with land use plans and growth management policies established to ensure orderly growth and development that is supported by adequate public services. Should a proposed project induce growth beyond planned levels or rates or exceed reliable population projections, it could indirectly cause additional adverse impacts on the environment and public services beyond those identified, mitigated, or acknowledged in local planning documents. Therefore, this growth inducement analysis evaluates the consistency of the growth caused or induced by the proposed project with the growth envisioned for the Town of Danville (Town) in the Town of Danville 2030 General Plan (General Plan).

5.2.1 FOSTER ECONOMIC GROWTH

The proposed construction of 20 single-family homes would generate short-term, temporary employment opportunities that would cease after construction. The jobs generated by the proposed project would not foster significant economic growth within the Town.

5.2.2 POPULATION AND HOUSING GROWTH

According to the most current California Department of Finance estimates (2012), the population of the Town of Danville is 42,450 with an average of 2.734 persons per household. However, population projections provided in the 2030 General Plan cover the Danville Planning Area, which is a larger geographic area than was covered by the 2010 General Plan. It encompasses a total area of 13,950 acres (21.8 square miles) including the Town of Danville and the unincorporated area east of Danville. This additional area was added to the Planning Area due to the buildout of existing subdivisions along Camino Tassajara, which were previously approved by Contra Costa County (such as Alamo Creek). These areas are addressed in the General Plan because their development will have a bearing on land use, transportation, community services, and other planning issues within Danville. About 60 percent of the 2010-2030 household increase is associated with land within the Town limits, and about 40 percent is associated with land in the unincorporated Planning Area on the east side of Danville.

The project proposes the construction of 20 residential units within the Town. With an average of 2.734 persons per household, the addition of 20 residential units could add up to 55 people to the Town. The population of the Planning Area was 47,130 in 2010. According to projections provided in the 2030 General Plan, the population of the Planning Area is projected to increase from a total of 47,130 in 2010 to 52,000 residents in 2030 (a 10.3 percent increase), with a total of 18,900 households and 17,210 jobs by the year 2030. Because the housing opportunities and associated population growth fostered by the proposed project would be within the range of growth anticipated by the Town, population and housing growth impacts would be less than significant.

5.2.3 REMOVE OBSTACLES TO GROWTH

The proposed project would require the extension of infrastructure (water and sewer) to connect the site to the surrounding infrastructure network. In addition, a new access road that would terminate in two cul-de-sacs would extend from the terminus of Midland Way into the project site and additional electrical service would be provided. Since the infrastructure extension would be required as part of the proposed project, the obstacle to growth would be removed on this project site. However, the infrastructure services would not extend beyond the boundaries of the project site, and would not result in the delivery of these services to other areas that were previously un-served or under-served by these services. Additionally, the project would dedicate approximately 99 acres of open space area which would limit the development potential of the property and additional infrastructure in this area would not be required. Therefore, the proposed project would not remove obstacles for growth on any adjacent sites. Moreover, the proposed project would not encourage growth in an adjacent undeveloped area, as the undeveloped land to the south of the project site received approval in 2008 for a Planned Unit Development District and associated subdivision and the open space to the west consists of the Las Trampas Regional Wilderness.

5.2.4 TAX EXISTING COMMUNITY SERVICES OR FACILITIES

Substantial increases in population growth may tax existing community services and facilities, thus requiring the construction of new facilities that could cause significant environmental effects. The construction of new facilities may also result in the need to expand service capacity, which would then allow for future population growth. The increased service and infrastructure needs of the proposed 20 single-family homes would be minimal as described

in Section 4.13 (Public Services) of this Draft EIR and the Initial Study prepared for the project, and would not be expected to tax existing community services or facilities, nor would its development require the construction of new offsite facilities.

5.3 ENERGY CONSERVATION

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Appendix F requires a description (where relevant) of the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, the California State Legislature adopted Assembly Bill 1575 (AB 1575) in response to the oil crisis of the 1970s. Appendix F of the CEQA Guidelines provides guidance for assessing potential impacts that a project could have on energy supplies, focusing on the goal of conserving energy by ensuring that projects use energy wisely and efficiently. Because Appendix F does not include specific significance criteria, this threshold is based the goal of Appendix F. Therefore, an energy impact is considered significant if the proposed project would:

- Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation.

5.3.1 PROJECT ENERGY CONSUMPTION

TRANSPORTATION ENERGY DEMAND

Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NHTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon (mpg). Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States.

The project proposes 20 single-family homes and would generate a nominal amount of vehicular trips; please see traffic analysis in Section 4.14 of this EIR.. Operation of the proposed project is not projected to consume a significant amount of fuel beyond what is expected for residential land uses. The proposed project would involve operations typical of residential communities, requiring primarily passenger vehicle trips to and from work, school, recreational activities, and typical errands. Fuel consumption associated with vehicle trips generated by the proposed project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar residential developments in the region.

OTHER NON-MOTORIZED TRANSPORTATION OPTIONS

The project vicinity is currently served by the Contra Costa County Connection and other regional transit providers such as the Altamont Commuter Express (ACE) train, Bay Area Rapid Transit (BART), and a network of associated shuttles. Additionally, bicycle lanes are located along San Ramon Valley Boulevard and other nearby arterial roads, and the project is proposed in the vicinity of multiple trails and pedestrian corridors. The proximity of the project site to other uses and alternative modes of transportation would reduce the number of trips associated with the project. The proposed project would not result in the inefficient, wasteful, or unnecessary consumption of transportation energy.

BUILDING ENERGY DEMAND

The proposed project would involve operations typical for residential uses, requiring electricity and natural gas for typical lighting, climate control, and day-to-day activities. Additionally, as stated in Section 4.7, *Greenhouse Gas Emissions*, the proposed project would incorporate and would be consistent with the Land Use and Community Design Goals of the Town's Climate Action Plan. Therefore, the proposed project would not be considered inefficient, wasteful, or unnecessary in comparison to other similar residential developments in the region.

ENERGY EFFICIENCY MEASURES

Title 24, California's Energy Efficiency Standards for Residential and Non-residential Buildings, was established by the 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 non-residential buildings. In 2010, the CEC updated Title 24 standards with more stringent requirements. The 2010 Standards are expected to substantially reduce the growth in electricity and natural gas use. Additional savings result from the application of the Standards on building alterations. For example, requirements for cool roofs, lighting, and air distribution ducts are expected to save additional of electricity. These savings are cumulative, doubling as years go by.

In addition to energy efficiency measures required by Title 24, the proposed project would comply with the 2010 California Green Building Code (effective January 1, 2011), which would ensure that future buildings are energy efficient. The proposed project would adhere to all Federal, State, and local requirements for energy efficiency, including the Title 24 standards and 2010 California Green Building Code requirements. The proposed project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

5.4 SIGNIFICANT AND IRREVERSIBLE CHANGES

Section 15126.2(c) of the State CEQA Guidelines requires an EIR to discuss the significant irreversible environmental changes that would result from implementation of a proposed project. Examples include: primary or secondary impacts of the project that would generally commit future generations to similar uses (e.g., highway improvements that would provide access to a previously inaccessible area); uses of nonrenewable resources during the initial and continued phases of the project (because a large commitment of such resources make removal or nonuse thereafter unlikely); and/or, irreversible damage that could result from any potential environmental accidents associated with the project.

5.4.1 CHANGES IN LAND USE WHICH COMMIT FUTURE GENERATIONS

Implementation of the proposed project would result in the conversion of approximately ten acres of open space/agricultural land to residential uses and the permanent dedication of approximately 100 acres to open space. Development of the proposed project would constitute a long-term commitment to residential use and open space, given that in terms of the residential development, it is unlikely circumstances would arise that would justify the return of the land to its original condition.

5.4.2 CONSUMPTION OF NON-RENEWABLE RESOURCES

A variety of resources, including land, energy, water, construction materials, and human resources would be irretrievably committed for the project's initial construction, infrastructure installation and connection to existing utilities, and its continued maintenance. Construction of the proposed project would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing maintenance and life of the proposed project. An increase in the public use of land use on the site would result in an increase in area traffic over existing conditions. Fossil fuels are the principal source of energy and the proposed project would increase consumption of available supplies, including gasoline. These energy resource demands relate to initial project construction, project operation, and on-going maintenance, as well as the transport of people and goods to and from the project site.

5.4.3 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

No explosives or other hazardous materials would be used within the project site. Accidental spills of fuel, paints, or other construction-related materials might occur during construction. However, these types of accidents would be limited because site development would be implemented and overseen by experienced construction workers. Such potential spills would not result in irreversible environmental changes.

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6 ALTERNATIVES

6.1 INTRODUCTION

Section 15126.6 of the California Environmental Quality Act Guidelines (CEQA Guidelines) requires an Environmental Impact Report (EIR) to describe and evaluate a reasonable range of alternatives to a proposed project. The purpose of the evaluation is to identify ways to mitigate or avoid the significant effects that a project may have on the environment. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to select and evaluate only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). An EIR does not need to consider every conceivable alternative to a proposed project, nor is it required that an EIR consider alternatives that are infeasible. Rather, it must consider alternatives that could feasibly attain most of the project's basic objectives, while avoiding or substantially lessening any significant adverse environmental effects of the project. The EIR must evaluate the comparative merits of the alternatives and provide sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project to foster informed decision-making and public participation. In addition, State CEQA Guidelines Section 15126.6(e) requires that an EIR specifically evaluate the impacts associated with the alternative of "no project" to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project.

This chapter provides a brief description of the proposed project, project goals and objectives, and potentially significant project impacts, followed by a description and evaluation of each alternative selected for inclusion in the EIR. Finally, this chapter concludes with a comparison of the alternatives and identification of the environmentally superior alternative.

6.2 PROJECT SUMMARY

6.2.1 PROJECT CHARACTERISTICS

The Podva Property Residential Development project (project) proposes the construction of 20 single-family homes on approximately ten acres and the dedication of approximately 99 acres as permanent open space in the Town of Danville (Town). The existing barn and steel outbuilding would be demolished. In addition, a variety of tree removals would be required. The following entitlements would be required to facilitate the project:

- Preliminary Development Plan – Rezoning (to rezone the project site from A-2; General Agricultural District to P-1; Planned Unit Development District);
- Final Development Plan – Major Subdivision (to subdivide the approximately 109-acre site to create up to 20 single-family homes); and,
- A Tree Removal permit.

6.2.2 PROJECT OBJECTIVES

The project sponsor has the following objectives:

- Construct a high quality residential infill project of market rate single-family estate homes, as well as affordable accessory units

- Maximize the provision of housing on the project site per the General Plan designation, while remaining compatible with the surrounding residential neighborhood
- Restrict development to the lower, flatter, portion of the site to avoid development of the ridge top and steep slopes, thereby maintaining the open space character of the western portion of the site
- Retain a substantial portion of the property as open space to avoid and limit development of the most visually prominent parts of the site
- Cluster the proposed development on the flatter portions of the site closest to San Ramon Valley Boulevard and the Ocho Rios and Morris Ranch/Podva/Town & Country areas to the north to minimize potential impacts
- Provide passive recreational opportunities for Danville's west side by preserving open space and habitat areas and providing public trails to the adjoining open space, including Las Trampas Regional Wilderness
- Preserve wildlife corridors and avoid sensitive plant and wildlife habitat
- Construct debris benches, perform landslide repair, and stabilize areas of geologic instability in connection with grading and the creation project lots to ensure future protection of adjacent homeowners and project homeowners
- Improve drainage conditions and limit future flood damage to downhill properties by constructing an onsite stormwater collection system that would divert stormwater runoff generated onsite to onsite detention and retention areas

6.2.3 POTENTIALLY SIGNIFICANT PROJECT IMPACTS

Chapter 4 (Environmental Analysis) of this EIR describes the potential impacts of the proposed project. As identified in that chapter, the project would result in a number of potentially significant environmental impacts that could be mitigated to a less than significant level. The following summarizes the proposed project's potentially significant impacts *prior* to implementation of mitigation measures:

- Aesthetics – Project implementation would significantly alter the rural visual character of approximately ten acres of the lower, flatter, eastern portion of the approximately 109-acre project site that are located adjacent to existing residential development on Midland Way through the demolition of the existing wooden barn, steel outbuilding, and old corral area; removal of 21 trees, including 13 Town-protected tress (Municipal Code 32-79); site grading; and, replacement of the existing grass-covered rangeland (grassland) with the proposed 20-lot subdivision, including residential buildings, storm drainage infrastructure (detention basin and bio-retention facility) hardscapes, landscapes, and roadways (i.e. extension of Midland Way into the site and access roads).
- Agricultural Resources – No potentially significant agricultural resource impacts were identified.
- Air Quality – Project construction would result in the short-term emission of air pollutants that could exceed established thresholds.
- Biological Resources – Implementation of the proposed project would result in the loss of habitat for the following special status animal species: California red-legged frog, western pond turtle, Alameda whipsnake, burrowing owl, and American badger and could result in the mortality of individuals of these species. In addition, construction activities could result in the abandonment of active nests or direct mortality of nesting raptors and/or migratory birds. Approximately 300 linear feet and 0.03 acres of jurisdictional waters would be filled as a result of proposed project activities. Twenty-one trees (Municipal

Code 32-79), including 13 Town-protected trees, would be removed to accommodate the proposed improvements.

- Cultural Resources – Project construction activities could damage or destroy potentially significant unknown cultural resources, including historic, archaeological, or paleontological resources, and/or human remains.
- Geology and Soils – The proposed 20-lot subdivision could experience structural damage from seismic-related ground shaking and secondary events, such as landslides and pose a threat to the safety of people present within the area at the time. In addition, construction activities have the potential to increase soil erosion. Fill and cut slopes required for the project could become unstable and result in slope failure or, fills derived from cuts in slopes west of the proposed development footprint may contain moderately to highly expansive clay. Moreover existing fills and surficial soils at the project site may be compressible due to past disking efforts. These conditions could create structural damage and pose safety concerns.
- Greenhouse Gas Emissions – No potentially significant greenhouse gas emission impacts were identified.
- Hazards and Hazardous Materials – Soil could potentially be contaminated beneath remnant farm equipment and other similar materials stored on the project site and due to its age, the wooden barn may contain lead based paint (LBP), asbestos containing materials (ACMs), or other contaminants. These materials could accidentally be released during site preparation, building demolition, and other construction activities and come into contact with construction personnel and the public. In addition, woodlands and grasslands located on and adjacent to the project site create a potential wildfire hazard during the summer and fall dry seasons.
- Hydrology and Water Quality – Project construction activities could contaminate surface waters with sediment or accidentally spilled chemicals or fuels. During the life of the project, the impervious surface area would increase, which would increase the amount of storm water runoff and potentially introduce more pollutants into storm water system than existing conditions. In addition, the increase in impervious surface area would also increase the rate at which storm water flows, which in turn could potentially result in hydromodification and the erosion or degradation of downstream channels, alteration of sediment transport characteristics, and changes in flood frequency among other issues. Project implementation would also alter existing drainage patterns, which has the potential to increase erosion and/or siltation.
- Land Use and Planning – No potentially significant land use and planning impacts were identified.
- Noise – During project construction, noise levels and vibration would temporarily increase at the project site and along access routes to the project site.
- Population and Housing – No potentially significant population and housing impacts were identified.
- Public Services – No potentially significant public service impacts were identified.
- Transportation/Traffic – No potentially significant transportation or traffic impacts were identified.

6.3 PROJECT ALTERNATIVES

6.3.1 SELECTION OF ALTERNATIVES

In accordance with CEQA, appropriate project alternatives are those that meet most of the project's basic objectives and avoid or substantially lessen the significant environmental impacts of the proposed project. The alternatives analyzed in this chapter were selected for their potential to eliminate or reduce project impacts, or for their potential to generate fewer impacts, or require lesser levels of mitigation. These alternatives include:

- Alternative 1: No Project/No Build (Status Quo)
- Alternative 2: Development Consistent with Existing A-2 (General Agricultural) District
- Alternative 3: More Clustered Development/Reduced Lot Size

The Draft EIR does not analyze an alternative site for the proposed project because:

- it fails to meet basic objectives of the project as stated above and in Chapter 3 (Project Description);
- there is no other site within the Town of Danville that would allow the development of a project with the unique characteristics of the proposed project; and,
- it is not under the control of the project sponsor.

A basic objective of the project is to implement the direction for the Podva property as specified by the "Elworthy West/Podva" Special Concern Area in the Town of Danville 2010 General Plan (2010 General Plan). This objective can only be accomplished by developing the project site with the proposed project. In addition, other key project objectives include specific improvements to the project site that would improve existing geologic hazards and drainage conditions to ensure future protection of adjacent homeowners and downhill properties from landslides and flooding. While another key project objective is to provide passive recreational opportunities for Danville's west side by preserving open space and habitat areas and providing public trails to the adjoining open space. These objectives cannot be accomplished on an alternative site. Thus, other than the project site, there is no other site within the Town of Danville that would allow the development of a project with the unique characteristics of the proposed project. Furthermore, CEQA Guidelines Section 15126.6(f)(1) establishes that one of the factors to take into consideration when determining the feasibility of an alternative is "whether the proponent can reasonably acquire, control, or otherwise access the alternative site." The project sponsor owns and/or controls the entire approximately 109-acre area proposed to be developed with the 20 lot subdivision. The project sponsor can therefore feasibly and realistically propose a project on this land. For these reasons, this EIR does not examine an alternative location for the proposed project in detail.

6.3.2 COMPARISON OF ALTERNATIVES

CEQA does not specify the methodology for comparing alternatives. However, the issues and impacts that are most germane to a particular project must be evaluated when comparing an alternative to a proposed project. As such, the issues and impacts analyzed in project alternatives vary depending on the project type and the environmental setting. The alternatives analysis below compares each alternative to the proposed project according to whether it would have less of an impact, the same or similar impact, or a greater impact for each of the environmental resource areas analyzed in this Draft EIR.

6.3.3 ALTERNATIVES ANALYSIS

ALTERNATIVE 1: NO PROJECT/NO BUILD (STATUS QUO)

Description of Alternative

Under the No Project/No Build (Status Quo) Alternative (Alternative 1), there would be no physical or operational changes at the project site and, thus, the existing conditions would remain unchanged. The existing 2010 General Plan land use designation of Rural Residential would remain unchanged, as would the existing A-2; General Agricultural District zoning designation.

Environmental Impacts Compared to the Proposed Project

Aesthetics

Under Alternative 1, no physical changes would occur to the project site, and the overall character and appearance of the site would not change from existing conditions. Because Alternative 1 would not alter the visual character or quality of the site, it would not result in any related impact. Thus, Alternative 1 would reduce the proposed project's potentially significant, but mitigable impact on the visual character or quality of the site to a level of no impact.

Agricultural Resources

No physical changes to the existing grazing land would occur to the project site under Alternative 1. Although the proposed project would not result in any significant impacts to agricultural resources, Alternative 1 would allow the existing grazing land to remain, resulting in less of an impact to agricultural resources than the proposed project.

Air Quality

Alternative 1 would completely avoid the potentially significant, but mitigable air quality impact of the project, as no development would occur.

Biological Resources

Because existing conditions would remain unchanged with Alternative 1, there would be no loss of California red-legged frog, western pond turtle, Alameda whipsnake, burrowing owl, or American badger habitat and the potential mortality of individuals of these species would not increase over existing conditions. In addition, because no construction activities would occur, nest abandonment and direct mortality of nesting raptors and/or migratory birds would not increase over existing conditions. No potentially jurisdictional waters would be filled and no trees would be removed. Thus, Alternative 1 would completely avoid all of the potentially significant, but mitigable biological resource impacts associated with the proposed project.

Cultural Resources

The potential for the damage or destruction of potentially significant unknown cultural resources would be substantially reduced with the implementation of Alternative 1, given that the construction of the proposed 20-lot subdivision would not occur.

Geology and Soils

Under Alternative 1, existing structures on the project site could experience structural damage from seismic-related ground shaking and secondary events, such as landslides. However, substantially fewer buildings and people would be at risk and far less damage could occur compared to the proposed project. Because no new development would occur on the project site with the implementation of Alternative 1, the potential for soil erosion would not increase above existing conditions. Moreover, implementation of Alternative 1 would eliminate the proposed project's risks associated with fill and cut slopes, potentially expansive fill, and compressible fill and surficial soil.

Greenhouse Gas Emissions

Alternative 1 would not generate any GHG emissions. Consequently, Alternative 1 would reduce the proposed project's less than significant contribution of GHG emissions to a level of no impact.

Hazards and Hazardous Materials

Under Alternative 1, the existing remnant farm equipment and other similar materials would continue to be stored on the project site and the wooden barn would remain. Thus, it would not be possible to determine if the soil under the equipment is contaminated and requires clean up, though in contrast, the possibility for an accidental release of potential contaminants in the soil would be eliminated. Because none of the existing buildings would be removed under Alternative 1, there would not be any potential for accidental exposure to ACMs or LBPs. Compared to the proposed project, Alternative 1 would expose considerably fewer structures and essentially no people to risks associated with wildland fire.

Hydrology and Water Quality

The potentially significant water quality degradation impacts associated with project construction activities and post-construction non-point sources of pollution would not occur under Alternative 1. While the project has the potential to result in hydromodification and associated impacts, it also proposes a detention basin and bio-retention facility, which would improve existing drainage conditions and limit future flood damage to downhill properties. If Alternative 1 were to be implemented, no beneficial impact on existing drainage conditions and flooding for downhill properties would occur.

Land Use and Planning

Approximately 99 acres of the project site would not be permanently dedicated to open space under Alternative 1, as they would with project implementation. Additionally, Alternative 1 would not provide a trail connection to the adjacent Las Trampas Regional Wilderness. Thus, Alternative 1 would not be consistent with the 2010 General Plan direction for the site.

Noise

The proposed project would not exceed the Town's noise standards. Similarly, the existing use does not exceed Town noise standards and would not be expected to under Alternative 1. Given that Alternative 1 would not construct any improvements, it would not result in either temporary construction noise or vibration impacts. Therefore, noise impacts associated with Alternative 1 would be reduced compared to the proposed project.

Population and Housing

Under the No Project/No Build (Status Quo) Alternative, no residential development would occur, thus a direct increase in population generated by the provision of new housing would not occur. As discussed in Chapter 5 (Other CEQA Required Topics), the residents added to the Town by the proposed project would be within the growth expectations of the Town and the Association of Bay Area Governments (ABAG). As identified in this Draft EIR and the Initial Study prepared for the project, the project's population increase would not negatively affect the provision of utilities or services. Compared to the proposed project, and regardless of the proposed project's minimal impact on population and housing, under the No Project/No Build scenario, there would be no impact.

Public Services

Alternative 1 would not place any increased demands or burdens on fire protection and emergency services or police protection above existing conditions. As such, Alternative 1 would reduce the proposed project's less than significant demand on fire protection and emergency services and police protection to a level of no impact.

Transportation/Traffic

Alternative 1 would not generate any traffic. Thus, Alternative 1 would reduce the project's less than significant traffic impacts to a level of no impact.

ALTERNATIVE 2: DEVELOPMENT CONSISTENT WITH EXISTING A-2 GENERAL AGRICULTURAL DISTRICT

Description of Alternative

The Development Consistent with Existing A-2; General Agricultural District Alternative (Alternative 2) would develop 20 single-family homes on lots that would be a minimum of five acres, consistent with the site's existing A-2 zoning. Figure 6-1 (Alternative 2 – Development Consistent with Existing A-2; General Agricultural District) illustrates a conceptual site plan for this alternative. The entire approximately 109-acre site would be developed with single-family homes under Alternative 2 at a density of less than one unit per acre (.18 units per acre). No open space would be set aside with this alternative. Although the specific storm drainage improvements proposed by the project would not be implemented under Alternative 2, different, but similar storm drainage improvements consistent with the Town's requirements and the requirements of the Contra Cost Clean Water Program (CCCWP) would be constructed. Substantially more trees would be removed, cut and fill amounts would greatly increase, and the amount of excavated soil would also increase considerably compared to the proposed project.

Overall, lots would be larger than those proposed by the project and would be configured differently. Because the lots would be consistent with the A-2 zoning, homes could be constructed consistent with the height and size standards in the Zoning Ordinance. The houses would not be subject to the height and size limitations that would be imposed on the proposed project through the P-1; Planned Unit Development zoning process. The project sponsor has indicated that if larger homes were built, they would likely have a larger floor plate (20,000 square foot building pads) rather than additional height.

This alternative would require subdivision of the project site and a Tree Removal permit.

The purpose of this alternative is to provide a comparison between the project's impacts and those that may occur from future development consistent with the existing zoning for the project site.

Environmental Impacts Compared to the Proposed Project

Aesthetics

The aesthetic impacts of Alternative 2 would be substantially greater than those of the proposed project. The entire project site would be transformed with a residential subdivision and no open space would be reserved. Considerably more trees would require removal with Alternative 2 compared to the proposed project and more grading would be required as well. The scenic and natural character of the hillside would be considerably altered and the vividness or memorability of the hillside would no longer endure, as it would under the proposed project, resulting in a substantial adverse change to a scenic vista, which would not occur under the proposed project. This

alternative would further alter the character of the project site and affect its existing character and visual quality beyond that of the proposed project, intensifying the project's impact on visual character and quality. Moreover, the site configuration proposed by Alternative 2 would make public views of the proposed homes available from various locations throughout the Town, while the site configuration proposed by the project would mostly be obscured by existing residential development on Midland Way. Implementation of mitigation similar to that recommended for the proposed project that requires tree planting to compensate for tree removal would help to reduce these potentially significant impacts to less than significant. However, the development of the most visually prominent parts of the site, including up to Las Trampas ridgeline, would not be consistent with special planning considerations identified for the site by the "Elworthy West/Podva" Special Concern Area in the 2010 General Plan, which calls for leaving the most visually prominent parts of the site undeveloped.

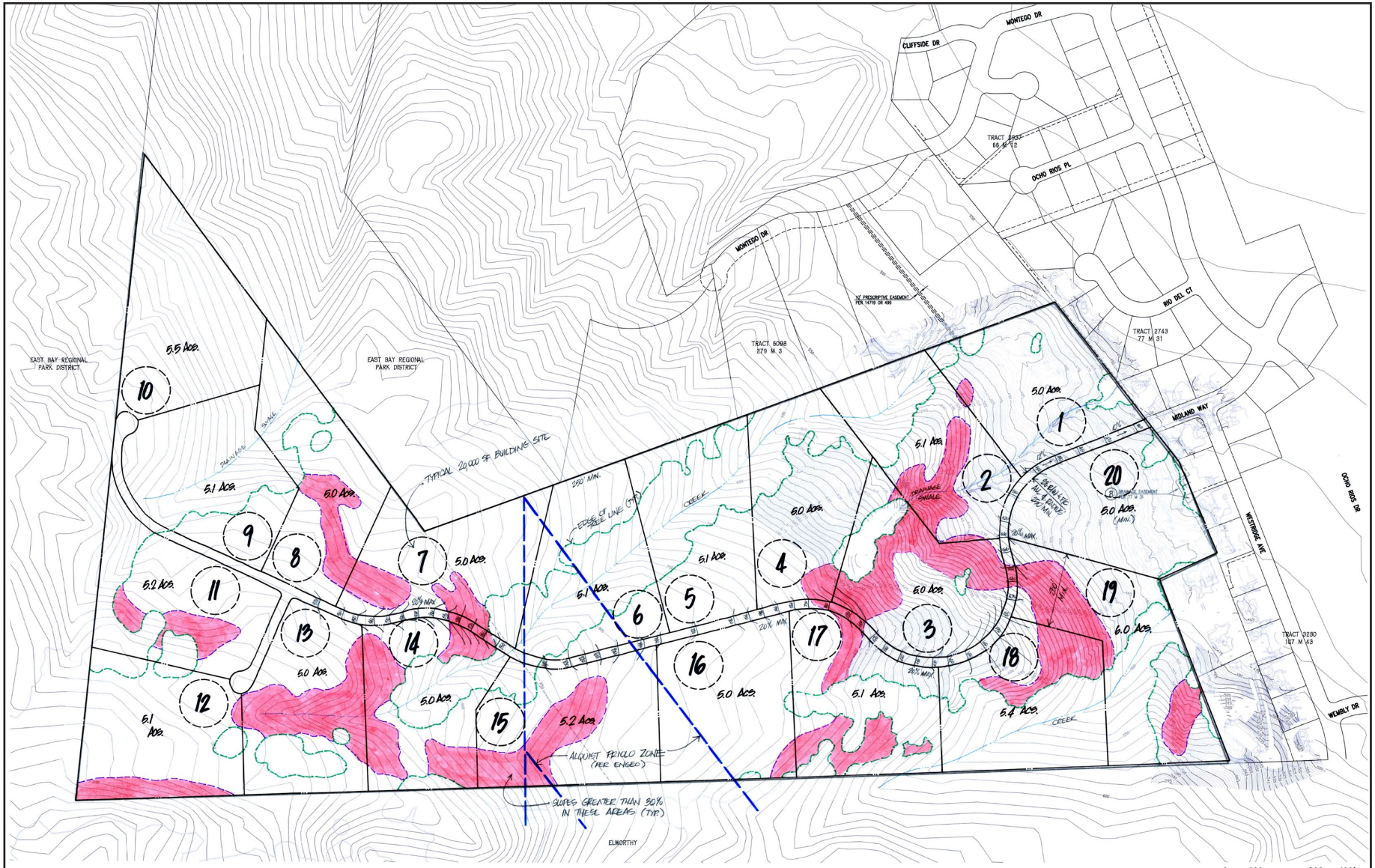
Alternative 2 would not cluster development on the lower, flatter portion of the site as the proposed project would. Thus, Alternative 2 would require extensive cut and fill and tree removal and the higher elevations, the steeper slopes and ravines, and areas of potential geologic instability would develop with homes, resulting in substantial changes to the natural features that define the project site. This type of site design, layout and configuration is inconsistent with the Elworthy West/Podva" Special Concern Area in the 2010 General Plan, and the Town's Scenic Hillside and Major Ridgeline Development Ordinance, Hillside/Ridgeline Design Guidelines, and Tree Preservation Ordinance. In contrast, the proposed project would be consistent with these Town policies and requirements.

Agricultural Resources

The impacts of Alternative 2 would increase compared to those of the proposed project. Since Alternative 2 does not allow for the preservation of 99 acres of open space, and does not ensure that the land will be used for agricultural purposes after it is sold to individual property owners, impacts to agricultural resources under Alternative 2 would increase in comparison to the proposed project.

Air Quality

The operational air quality impacts of Alternative 2 would be similar to those of the proposed project, given that the number of homes would be the same. However, the construction activities of Alternative 2 would require extensive grading and cut and fill techniques, which would result in a greater generation of particulate matter (dust) compared to the proposed project. Furthermore, the grading and cut and fill required for Alternative 2 could potentially be considered "excessive" per Bay Area Air Quality Management District (BAAQMD) construction screening criteria, resulting in a potentially significant and unavoidable violation of air quality standards. In contrast, the amount of grading and cut and fill required for the proposed project would be compliant with BAAQMD construction screening criteria with implementation of Mitigation Measures 4.3-1a through 4.3-1c.



NOTE

THE LOCATION OF 20,000 SF BUILDING SITES MAY VARY BUT MUST BE LOCATED OUTSIDE OF THE 30% SLOPE AREAS AND MINIMIZE TREE REMOVAL.

LEGEND

- BOUNDARY LINE
- EASEMENT LINE
- ADJACENT LINE
- FENCE

0 100 300 400'

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ALTERNATIVE 2 - DEVELOPMENT CONSISTENT WITH EXISTING A-2; GENERAL AGRICULTURAL DISTRICT

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

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FIGURE 6-1

Biological Resources

Impacts on biological resources would greatly increase with the implementation of Alternative 2. Development of the entire approximately 109-acre project site with a residential subdivision would increase the amount of habitat lost for California red-legged frog, western pond turtle, Alameda whipsnake, burrowing owl, and American badger compared to the proposed project. The number of individuals of these species that could potentially die as a result of construction activities would also increase substantially compared to the proposed project. In addition, because more trees would be removed with Alternative 2, it would have an increased potential to result in the abandonment of active nests or direct mortality of nesting raptors and/or migratory birds compared to the proposed project. The amount of potentially jurisdictional waters that would be filled would also increase with Alternative 2, compared to the proposed project, which would fill approximately 300 linear feet and 0.03 acres of jurisdictional waters. Although impacts on biological resources could be mitigated with similar mitigation measures as those identified for the proposed project, the severity of the impacts would increase greatly with the implementation of Alternative 2.

Cultural Resources

Alternative 2 would develop the entire approximately 109-acre project site with a 20-lot subdivision, compared to the proposed project, which would develop approximately ten acres of the lower, flatter portion of the site adjacent to existing development along Midland Way. Because the construction activities associated with Alternative 2 would involve more widespread development on the project site, the possibility of encountering and potentially damaging and destroying significant unknown cultural resources, including historic, archaeological, or paleontological resources, and/or human remains would increase compared to the proposed project. Similar mitigation as recommended for the proposed project would reduce impacts to less than significant. However, overall, Alternative 2 would increase the severity of the proposed project's impacts on cultural resources.

Geology and Soils

Similar to the discussions above, geologic hazard and soil impacts would increase with Alternative 2 due to the greater amount of land developed (approximately 109 acres), compared to the proposed project (approximately ten acres). Development up the hillside under Alternative 2, as opposed to development solely on the lower, flatter portion of the site as proposed by the project, would require extensive grading and cut and fill techniques. Potential adverse effects associated with grading and cut and fill (erosion, slope instability slope failure, etc.) could be mitigated with the recommendations of a site specific geotechnical evaluation, similar to the proposed project. However, the potentially adverse effects associated with these activities would nonetheless be increased in severity compared to the proposed project. Moreover, the type of hillside development proposed by Alternative 2 would require a variety of remediation activities, which though technically possible, would be more complicated and difficult to implement. In addition, the potential for landslides would increase with Alternative 2 compared to the proposed project, but this potentially significant impact could be mitigated with the recommendations of a site specific geotechnical evaluation, similar to the proposed project. Finally, the placement of homes up the hillside could increase impacts associated with expansive soils because soil in these slopes may contain moderately to highly expansive clay, while the soil in the lower, flatter portion of the site are not expansive in nature. The recommendations of a site specific geotechnical evaluation would reduce potential expansive soil impacts associated with Alternative 2 to less than significant, similar to the proposed project.

Greenhouse Gas Emissions

Operational air pollutant emissions under Alternative 2 would be comparable to those under the proposed project, as the number of residences would be the same. Thus, Alternative 2's GHG emissions would be

comparable to the proposed project as well. As such, Alternative 2 would result in similar less than significant emissions of GHGs as the project.

Hazards and Hazardous Materials

Soil could potentially be contaminated beneath remnant farm equipment and other similar materials stored on the project site and due to its age, the wooden barn may contain LBP, ACMs, or other contaminants. Although Alternative 2 would develop the entire 109-acre project site, the areas of suspected hazardous material contamination would remain unchanged due to the limited grazing use and lack of development in the project site. Thus, the overall impacts related to hazardous materials and possible remediation efforts associated with this alternative would be generally comparable to those of the proposed project. In addition, the woodlands and grasslands located on and adjacent to the project site also create a potential wildfire hazard during the summer and fall dry seasons for Alternative 2 as they would for the proposed project. Mitigation similar to that required for the project would be required for this alternative to reduce the impacts associated with wildland fire less than significant.

Hydrology and Water Quality

Alternative 2 would have a similar potential as the proposed project to contaminate surface waters with sediment or accidentally spilled chemicals or fuels during construction. However, during operation this alternative would increase the amount of impervious surface area compared to the proposed project due to increased roadway and infrastructure needs. This in turn could potentially increase the amount of storm water runoff and the potential for hydromodification and the erosion or degradation of downstream channels, alteration of sediment transport characteristics, and changes in flood frequency among other issues, compared to the proposed project. However, because development under this alternative would be subject to all legal requirements for management of storm water runoff, significant drainage and water quality impacts would be avoided. For both the proposed project and this alternative, water quality impacts would be minimized through implementation of standard best management practices, as identified by the recommended mitigation. The overall hydrology and water quality impacts of this alternative would be greater or generally equal to those of the proposed project.

Land Use and Planning

The 2010 General Plan strongly discourages the type of development that could occur with the implementation of Alternative 2. Rather, the 2010 General Plan encourages future site development that transfers the overall number of units permitted onsite under existing zoning to less sensitive portions of the property in a more clustered pattern of development, as is proposed by the project. This alternative would be inconsistent with the Town's General Plan policies, resulting in greater land use impacts than the project.

Noise

This alternative would result in greater construction noise than the proposed project due to more widespread development; increased grading, cut and fill techniques; and, the construction of additional roadways and other required infrastructure. Implementation of mitigation similar to that proposed for the project would reduce temporary noise impacts associated with Alternative 2 to less than significant. However, noise from operations would be introduced into areas that are not affected by the current project configuration (e.g., Las Trampas Regional Wilderness). The overall noise impacts of this alternative would greater than those of the proposed project.

Population and Housing

Alternative 2 would develop the same number of homes on the project site as the proposed project. Thus, the same number of residents would be added to the Town as the proposed project and comparable less than significant population and housing impacts would be expected for Alternative 2.

Public Services

The demand for police and fire protection services associated with Alternative 2 would be expected to be comparable to the demand generated by the proposed project, given that Alternative 2 would construct the same number of homes and thus, add the same number of people to the Town as the proposed project. However, the provision of fire protection services for residences that would be located up the hillside under Alternative 2 could be more difficult and put additional strain on the San Ramon Valley Fire Protection District (SRVFPD) compared to the demand generated by the proposed project. Mitigation similar to that identified for project to reduce wildland fire hazards would reduce the potential impact to less than significant. In general, impacts would be similar, but slightly greater in regard to the provision of fire protection services.

Transportation/Traffic

Alternative 2 would add the same amount of trips to the local roadway network as the proposed project, since it would develop the same number of single-family homes at the project site as the proposed project. Thus, the same less than significant traffic impacts identified for the proposed project would be expected to occur with the implementation of Alternative 2.

ALTERNATIVE 3: MORE CLUSTERED DEVELOPMENT/REDUCED LOT SIZE

Description of Alternative

Alternative 3 would involve the development of the project site with 20 single-family homes on lots sized a minimum of 6,000 square feet. The overall development footprint would be reduced compared to the proposed project; refer to Figure 6-2 (Alternative 3 (More Clustered Development/Reduced Lot Size) for a visual depiction of this alternative. This alternative would eliminate lots four through nine identified on the project site plans, along with their access road for a total reduction of approximately two acres. Thus, 20 lots would develop on approximately eight acres, for a density of approximately 2.5 units per acre. All other aspects of the proposed project would be implemented with this alternative, including the set aside of approximately 101 acres as permanent open space and storm drainage improvements consisting of a bio-swale and detention basin. However, this alternative would eliminate the need to remove four trees, including two Town-protected trees and one heritage tree. Similar to the proposed project, this alternative would require rezoning the site from A-2; General Agricultural District to P-1; Planned Unit Development District, subdivision of the project site, and a Tree Removal permit. This alternative would meet all of the project objectives except that with smaller lots and a higher density, it would make it difficult to be compatible with the surrounding neighborhood as the lots would be much smaller and the homes would be two story versus the single story homes proposed for the project. This alternative is intended to reduce overall site disturbance compared to the proposed project.

Environmental Impacts Compared to the Proposed Project

Aesthetics

Approximately two less acres of the lower, flatter portion of the project site would be developed under Alternative 3, and four fewer trees, (two protected and one heritage) would require removal under this alternative.

However due to the reduced lot sizes, the proposed homes would be all two-story plans to meet the projected market demand. This would significantly impact the existing neighborhood and views from adjacent properties. Thus, Alternative 3 would slightly increase the proposed project's potentially significant, but mitigable visual character and quality impact. The reduced development footprint would require less grading, although the impact would be reduced, it would not be reduced to a level of insignificance and similar mitigation as identified for the proposed project would be required for this alternative. While the site configuration proposed by the project would mostly be obscured by existing residential development on Midland Way, this alternative would reduce the visibility of the subdivision from publicly accessible vantages, as it would reduce development from slightly higher elevations.

Agricultural Resources

Alternative 3 would result in similar less than significant impacts to agricultural resources as the proposed project. Although Alternative 3 reduces the development footprint, the number of preserved open space acres would stay the same. Since Alternative 3 preserves the same amount of land (99 acres) of permanent open space as the proposed project, the impacts would be considered the same as the proposed project.

Air Quality

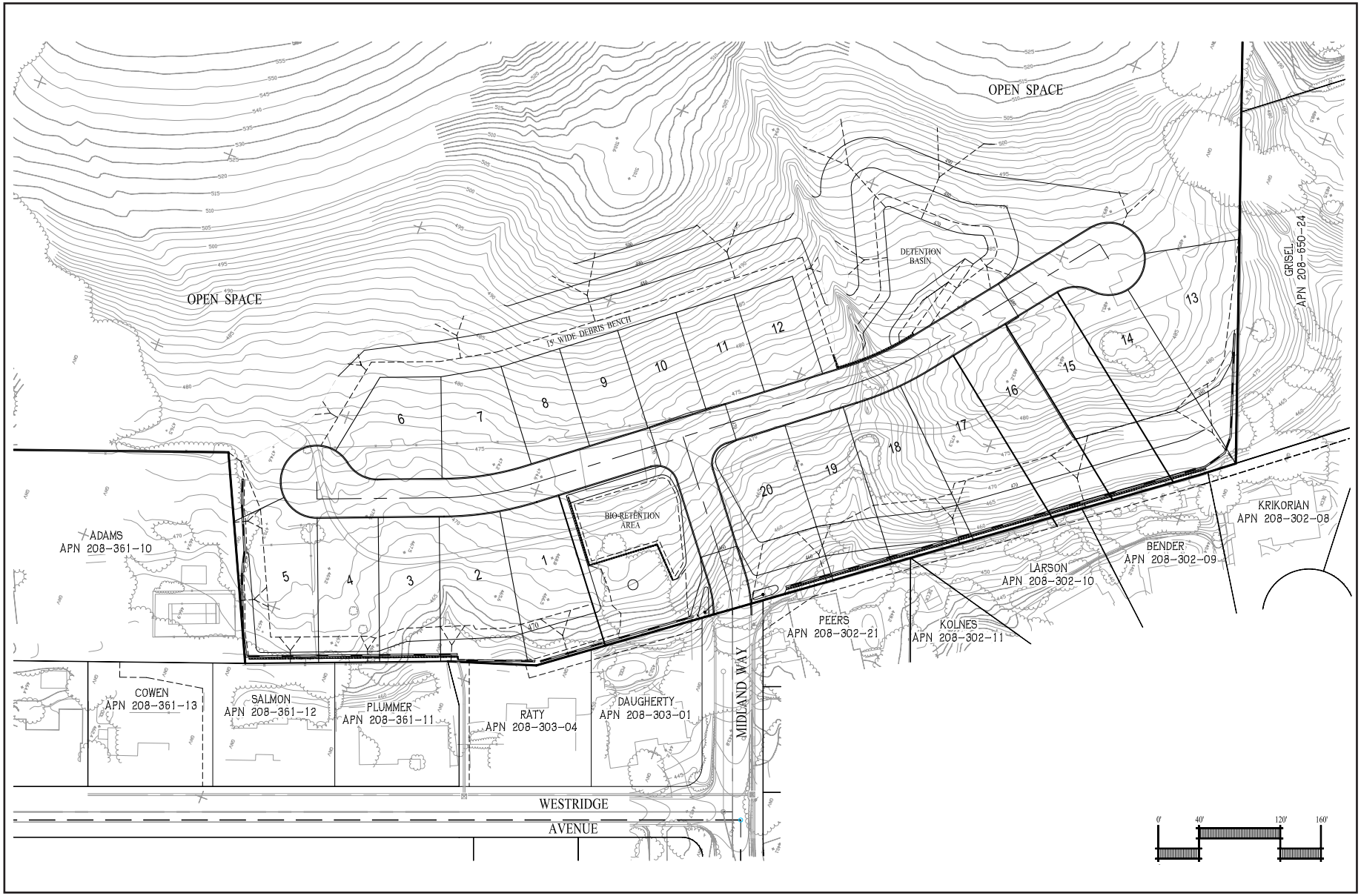
Because Alternative 3 would have the same number of residential units as the proposed project, Alternative 3 would be expected to result in similar less than significant operational air quality impacts as the proposed project. However, construction of Alternative 3 could result in slight reduction of particulate matter (dust) compared to the proposed project due to its reduced development footprint and the associated reduction in grading that would be required. Nonetheless, similar to the proposed project, Alternative 3 would require the implementation of Mitigation Measures 4.3-1a through 4.3-1c to be compliant with BAAQMD construction screening criteria. The overall impacts of this alternative on air quality would be comparable to the proposed project.

Biological Resources

The development footprint of Alternative 3 would be reduced by approximately two acres compared to the proposed project. Thus, Alternative 3 would impact slightly less special status species habitat and could result in the mortality of slightly fewer special status species during construction than the proposed project. Regardless, mitigation similar to that required for the project would be required for Alternative 3 to reduce impacts on special status species and their habitat to less than significant. Four fewer trees would be removed with the implementation of this alternative, including two Town-protected trees and one heritage tree. Thus, this alternative would reduce the project's potentially significant, but mitigable impacts on trees, but not to a level of insignificance and similar mitigation required for the project would be required for Alternative 3. While the removal of four fewer trees would potentially affect fewer nesting raptors and/or migratory birds than would be affected by project construction, Alternative 3 would nonetheless require similar mitigation as the project to reduce potentially significant impacts on nesting raptors and/or migratory birds to less than significant.

Cultural Resources

The reduced development footprint associated with Alternative 3 would result in corresponding reduced potential to encounter potentially significant unknown cultural resources, including historic, archaeological, or paleontological resources, and/or human remains. As such, Alternative 3 would have less potential to result in the damage or destruction of potentially significant cultural resources compared to the proposed project. Regardless, Alternative 3 would not reduce the proposed project's impact on unknown cultural resources to less than significant. Thus, similar mitigation would be required for Alternative 3 as would be required for the project to reduce impacts on unknown cultural resources to less than significant.



Source: cbg, Inc., 2013.

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ALTERNATIVE 3 - MORE CLUSTERED DEVELOPMENT/REDUCED LOT SIZE

PODVA PROPERTY RESIDENTIAL DEVELOPMENT EIR

06/2013 JN 131000

FIGURE 6-2

Geology and Soils

The possibility of seismic-related ground shaking and secondary events, such as landslides affecting the structural integrity of the subdivision and posing a safety threat would not be eliminated with the implementation of Alternative 3. Thus, these impacts would be the same for this alternative as they would for the proposed project. Following the recommendations of a site specific geotechnical evaluation would reduce these potentially significant impacts to less than significant, as it would for the proposed project. This alternative would reduce the total area of disturbance and grading requirements by decreasing the development footprint by approximately two acres. However, this decrease in the development footprint is not substantial enough to reduce impacts associated with erosion to less than significant and similar mitigation as required for the project would be required for Alternative 3 to reduce its impacts related to soil erosion to less than significant. The configuration of Alternative 3 would require less fill and cut slopes, but because it would still nonetheless require cut and fill slopes, it could result in potentially significant impacts associated with unstable slopes/slope failure, requiring the preparation of a site specific geotechnical evaluation to reduce impacts to less than significant, as the project would. Potential geotechnical impacts from existing conditions on the site, including potentially expansive and compressible soils would remain, as the development footprint would essentially be the same, although reduced by two acres. Preparation of a site specific geotechnical evaluation as required for the project would reduce potential impacts to less than significant.

Greenhouse Gas Emissions

Alternative 3 would construct the same number of homes as the proposed project, and thus would be expected to generate comparable emissions of operational air pollutants and GHGs as well. Consequently, Alternative 3 would generate less than significant emissions of GHGs, similar to the proposed project.

Hazards and Hazardous Materials

Although the development footprint under this alternative would be smaller than the proposed project, the areas identified as potentially impacted by hazardous substances would still be affected under this plan. The overall impacts related to hazardous materials and necessary mitigation to reduce impacts to less than significant associated with this alternative would be generally comparable to those of the proposed project.

Hydrology and Water Quality

Alternative 3 would have a similar potential as the proposed project to contaminate surface waters with sediment or accidentally spilled chemicals or fuels during construction. However, this alternative would reduce the amount of impervious area introduced onto the project site, potentially reducing the amount of storm water runoff generated compared to the proposed project and the potential for hydromodification as well. Regardless, development under this alternative would be subject to all legal requirements for management of storm water runoff and significant drainage and water quality impacts would be avoided. For both the proposed project and this alternative, water quality impacts would be minimized through implementation of standard best management practices, as identified by the recommended mitigation. Overall hydrology and water quality impacts of this alternative would be somewhat less or generally equal to those of the proposed project.

Land Use and Planning

Similar to the proposed project, this alternative would be consistent with applicable goals and policies of the 2010 General Plan, as well as the 2010 General Plan direction for the "Elworthy West/Podva" Special Concern Area, as it would transfer the overall number of units permitted onsite under existing zoning and General Plan designation to less sensitive portions of the property in a more clustered pattern of development. Alternative 3

would not require extensive cut and fill or tree removal and the higher elevations, the steeper slopes and ravines, and areas of potential geologic instability would remain as open space in perpetuity. Thus, the natural features that define the project site would remain intact which is also consistent with the Elworthy West/Podva" Special Concern Area in the 2010 General Plan, and the Town's Scenic Hillside and Major Ridgeline Development Ordinance, Hillside/Ridgeline Design Guidelines, and Tree Preservation Ordinance. The proposed project would be consistent with these Town policies and requirements as well. Alternative 3 would result in comparable less than significant land use and planning impacts as the proposed project.

Noise

This alternative would result in generally the same construction and operational noise sources associated with the project due to the comparable number of residential lots. The reduced development footprint could reduce grading requirements and associated noise during construction. However, construction noise would not be reduced to a level of insignificance and implementation of mitigation similar to that proposed for the project would be required to reduce temporary construction noise impacts associated with Alternative 3 to less than significant. The overall noise impacts of this alternative would be generally equal to those of the proposed project.

Population and Housing

Alternative 3 would develop the same number of homes on the project site as the proposed project. Thus, the same number of residents would be added to the Town as the proposed project and comparable less than significant population and housing would be expected for Alternative 3.

Public Services

Implementation of Alternative 3 would result in a similar demand for police and fire protection services given that it proposes the same number of homes and as such, would add the same number of people to the Town as the proposed project. The overall public services impacts of this alternative would thus be equal to those of the proposed project.

Transportation/Traffic

Alternative 3 would develop the same number of single-family homes at the project site as the proposed project. Thus, it would add the same amount of trips to the local roadway network as the proposed project and the traffic impacts would be essentially the same for Alternative 3 as they would for the proposed project.

6.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires the identification of the environmentally superior alternative in an EIR, which is an alternative that would result in the fewest or least significant environmental impacts. If the "No Project" Alternative is the environmentally superior alternative, CEQA Guidelines Section 15126.6 (e)(2) requires that another alternative that could feasibly attain most of the project's basic objectives be chosen as the environmentally superior alternative. Based on the above analysis, summarized in Table 6-1, the environmentally superior alternative is Alternative 3. The majority of impacts would be the same or reduced compared to those identified for the proposed project. Specifically, impacts associated with greenhouse gas emissions, hazards and hazardous materials, land use and planning, population and housing, public services, and transportation/traffic would be equivalent under Alternative 3 and the proposed project. However, Alternative 3 would result in reduced impacts compared to the proposed project in the following areas: aesthetics; air quality, biological resources, cultural resources, geology and soils; hydrology and water quality; and, noise.

Table 6-1 (Comparison of Alternative Project Impacts to the Proposed Project) compares the potential environmental impacts of each Alternative to those of the proposed project for each of the environmental resource areas analyzed above. The comparison identifies whether the impacts associated with each alternative would be reduced, the same, or greater than those identified for the proposed project.

TABLE 6-1 COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

Topic	Alternative 1: No Project/No Build (Status Quo)	Alternative 2: Development Consistent with Existing A-2 (General Agricultural) District	Alternative 3: More Clustered Development/Reduced Lot Size
Aesthetics	–	+	+
Agricultural Resources	–	+	=
Air Quality	–	+	=
Biological Resources	–	+	=
Cultural Resources	–	+	–
Geology and Soils	–	+	–
Greenhouse Gas Emissions	–	=	=
Hazards and Hazardous Materials	–	=	=
Hydrology and Water Quality	–	+	–
Land Use and Planning	+	+	=
Noise	–	+	=
Population and Housing	–	=	=
Public Services	–	+	=
Transportation/Traffic	–	=	=

Notes:
– Less impact compared to proposed project.
= Same or similar impact as proposed project.
+ Greater impact compared to proposed project.

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7 LIST OF PREPARERS

7.1 LEAD AGENCY

Town of Danville

Tai Williams, Community Development Director
David Crompton, Principal Planner
Nazanin Shakerin, Traffic Engineer
Michael Stella, Senior Engineer

7. 2 TOWN CONSULTANTS

EIR PREPARATION

RBF Consulting

Alex Jewell, EIR Project Manager
Eddie Torres, Air, Noise, and GHG Studies
Achilles Malisos, Air, Noise, and GHG Studies
Kelly Chiene, Air, Noise, and GHG Studies
Monica Kling, EIR Preparer
Desirae Hoffman, EIR Preparer
Debby Hutchinson, Graphic Artist
Hilary Potter, Document Production

Kimley-Horn and Associates

Laura Worthington-Forbes, Project Director

7.3 APPLICANT'S TECHNICAL CONSULTANTS

The applicant retained the following consultants to complete technical studies that were peer reviewed by the Town and included in this report:

Live Oak Associates, Biological Evaluation and Wetland Delineation
Hort Science, Preliminary Arborist Report and Valley Oak Assessment
Carlson, Barbee, and Gibson, Inc., Civil Engineers
Hexagon Transportation Consultants, Inc., Traffic Impact Analysis
ENGEO Incorporated, Preliminary Geotechnical and Fault Evaluation Report
Basin Research Associates, Historic Properties Survey Report
Edward L. Pack Associates, Inc, Traffic Noise Assessment
Balance Hydrologics, Inc., Preliminary Stormwater Control Plan

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8 REFERENCES

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