

# Lower Lagoon Valley Specific Plan

Volume I: Draft Environmental Impact Report



February 2004

**SCH No. 2003032063**

*Prepared for:*  
**City of Vacaville**  
**Community Development Department**

*Prepared by:*  
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Lower Lagoon Valley Specific Plan  
Volume I: Draft Environmental Impact Report  
SCH #2003032063

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February 2004

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## 1. INTRODUCTION

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# 1. INTRODUCTION

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The City of Vacaville is the lead agency for the preparation of an Environmental Impact Report (EIR) for the Lower Lagoon Valley Specific Plan (Specific Plan or Proposed Project) located in Solano County in the southwestern portion of the City, in the City's Sphere of Influence (SOI) (see Figure 3-1). The approximately 2,354 acre Specific Plan area includes a 736-acre residential/recreational community with 1,225 single-family homes and 100 attached town homes (1,325 total dwelling units), a K-6 public school or a K-8 private school, a 213 acre championship-style golf course with a clubhouse, and neighborhood park spaces throughout the development area. The proposed development would also include an approximately 88-acre business village area with approximately one million square foot (sf) of commercial/office space, 50,000 sf of Town Center retail space and community center use, a fire station, and supporting infrastructure. The Specific Plan area also includes the 388-acre Lagoon Valley Regional Park and 1,066 acres of open space.

## **Project Background**

In 1990, the City of Vacaville approved the Lower Lagoon Valley Policy Plan (1990 Policy Plan), together with an associated rezoning and general plan amendment, to allow the development of approximately 5 million sf of office/medical/commercial space, 730 residential units, and a golf course on approximately 824 acres of land in the Lower Lagoon Valley. In addition to the proposed development area, the 1990 Policy Plan also included within its scope the then-existing 388-acre Lagoon Valley Regional Park, and surrounding hillside areas to the east and south of the proposed development envelope (Hillside Areas) which were later dedicated to the City, as well as certain existing highway commercial uses located along Interstate 80 (I-80). Prior to approving the 1990 Policy Plan, the City certified an Environmental Impact Report (1990 EIR) to evaluate the impacts of development and other uses proposed in the entire 2,190-acre area covered by the 1990 Policy Plan. Shortly after beginning the tentative mapping, the improvement plans and the bond assessment process, the development proposed in the 1990 Policy Plan was abandoned by the developer because of a change in market conditions.

In December 2002, a new developer -- Triad Communities (Triad or applicant) -- submitted to the City for consideration a new development concept for Lower Lagoon Valley. Under this development concept, the 1990 Policy Plan would be replaced with a new Lower Lagoon Valley Specific Plan that would anticipate a different mix of land uses in Lower Lagoon Valley. See Chapter 3, Project Description for complete project details. The Specific Plan includes a mix of residential uses, commercial/retail, business village, schools, open space, and a championship style golf course.

Although the mix of development proposed by the applicant is different from that proposed under the 1990 Policy Plan, it would occur within roughly the same development envelope (879 acres compared to 853 acres, respectively) with some minor differences outlined in Chapter 3, Project Description.

Following Triad's submission of a concept for the development areas within Lower Lagoon Valley, the City initiated a public process to review the elements of Triad's proposal and to

provide certain policy-related direction as to the future of the Lower Lagoon Valley. The Specific Plan encompasses the 388-acre Lagoon Valley Regional Park, which includes Lagoon Valley Lake. At this time no modifications to Lagoon Valley Regional Park are currently proposed. At the conclusion of this process, on February 11, 2003, the City Council directed staff to initiate a formal planning and environmental review process for Lower Lagoon Valley. Implementation of the Proposed Project would require, in addition to adoption of the Specific Plan (to replace the 1990 Policy Plan), an amendment to the City's General Plan, changes to the zoning of lands in the planning area, and approval of project-specific land use entitlements for development to proceed. In addition, the City and Triad would enter into a development agreement, in accordance with California Government Code Section 65864 et seq. (Development Agreement), to implement the development-related components of the Specific Plan.

### **Scope of the EIR**

The requirement to prepare an EIR is set forth in the California Environmental Quality Act of 1970 (CEQA), as amended (Public Resources Code, Section 21000, et seq.) and the State Guidelines for Implementation of CEQA of 1970, as amended (California Code of Regulations, Section 15000, et seq.), (CEQA Guidelines). Consistent with Section 15161 of the CEQA Guidelines, this EIR is a Project EIR and is intended to evaluate the environmental impacts of the Proposed Project, which is the approval and implementation of the Lower Lagoon Valley Specific Plan.

This EIR, in accordance with CEQA Guidelines Section 15126, should be used as the primary environmental document to evaluate all subsequent permitting actions associated with the project.

As mentioned above, the Specific Plan area includes the Lagoon Valley Regional Park, open space and existing privately owned commercial, vacant land and rural residential uses. As also mentioned, no other actions involving the park are proposed. In 2002, the City adopted a Mitigated Negative Declaration that evaluated impacts associated with a Conditional Use Permit for on-going operation and use of the Park, improvements to the watershed areas above Lagoon Valley Lake (Lake Management Plan) to reduce sedimentation and improve water quality, and creation of an off-leash dog park. The Mitigated Negative Declaration identified potentially significant impacts associated with potential disturbance of Valley Elderberry Longhorn Beetle habitat, and increased sediment loading in the lake due to bank disturbing activities. Mitigation measures were adopted into the Lake Management Plan that reduce these impacts to a less-than-significant level.

Separately, from the Proposed Project the City is currently initiating the studies and background work necessary to prepare and propose an update of the Lagoon Valley Regional Park Master Plan. Other improvements, in addition to those approved under the 2002 Conditional Use Permit, could be considered as part of that process. Improvements proposed as part of the Park Master Plan update could include, but might not be limited to, trails, play structures, landscaping, lake enhancements and other facilities that would be identified through a public process subject to adoption by the City Council. However, at this time, no particular projects or improvements within the park have been selected for incorporation into an updated Park Master Plan. The Park Master Plan process will also identify means by which funding can be secured for any proposed future improvements. The Proposed Project is not dependent on this effort, which is being undertaken independently by the City in light of the regional nature of these facilities, and is expected to be completed regardless of whether the Specific Plan is eventually approved by the City. Therefore, the Park Master Plan Update is being considered as a

separate project for CEQA purposes and will undergo project-level CEQA review once the master plan update is developed and proposed. Nonetheless, because of the close proximity of the Lagoon Valley Regional Park to the new development proposed under the Specific Plan, and the fact that the proposed Development Agreement between the City and the applicant requires the applicant to contribute \$4 to \$5 million to the City for park-related and other purposes (which may fund only a portion of the moneys needed for whatever ultimate park improvements the City proposes), this EIR will include a program level of environmental review of this separate project based on what is known to date about the future Master Plan Update and will identify any cumulative effects arising in connection with the two projects.

In addition, this EIR considers the extent to which development of the approximately 879-acre proposed residential/recreational community could result in environmental impacts on Lagoon Valley Regional Park facilities either directly or indirectly.

The proposed Specific Plan does not include any changes to the 1,066 acres of undeveloped land (minor boundary change) and the approximately 21 acres of existing privately owned commercial, and vacant land, and also the rural residential uses. Nonetheless, this EIR considers the extent to which proposed development of the approximately 879-acre proposed residential/recreational community could result in environmental impacts to or from these existing uses that would remain unchanged as part of the project.

### **Notice of Preparation**

In accordance with sections 15082(a), 15103, and 15375 of the CEQA Guidelines, the City of Vacaville circulated a Notice of Preparation (NOP) of an EIR for the Proposed Project from March 13, 2003 to April 11, 2003 (see Appendix A). In the NOP, the City of Vacaville was identified as the Lead Agency for preparation of the Proposed Project EIR. The NOP was circulated to the public; to local, state, and federal agencies; and to other interested parties in order to solicit comments on the Proposed Project. Concerns raised in response to the NOP were considered and responded to in preparing the Draft EIR and are included in Appendix B.

### **Public and Agency Review**

This Draft EIR is being circulated for public review and comment for a period of 45 days beginning on February 20, 2004. A Notice of Availability is also published to alert the public and others that the Draft EIR is available for review. During this period, comments from the general public as well as organizations and agencies on the accuracy and completeness of the Draft EIR may be submitted to the Lead Agency (City of Vacaville). Upon completion of the public review period, a Final EIR will be prepared which will include all written comments on the Draft EIR received during the public review period and responses to those comments, as well as a summary of any revisions to the Draft EIR made in response to public comments. The Final EIR will be distributed to applicable commenting agencies, advisory and decision-making bodies, and other interested parties before the City makes a determination about whether to certify the EIR, and adopt the proposed Specific Plan and take the other related implementation actions. The Draft EIR and Final EIR will comprise the EIR for the proposed Lower Lagoon Valley Specific Plan Development Project. The Vacaville City Council will consider whether the EIR complies with CEQA, and if so will adopt a certification of that fact and the legally required findings before taking any final action on the Specific Plan and other approvals.

## **Organization of the Draft EIR**

The Draft EIR is organized into the following sections:

**Chapter 1 - Introduction.** Provides an introduction and overview describing the intended use of the Draft EIR and the review and certification process.

**Chapter 2 - Summary.** Summarizes the elements of the project and the environmental impacts that would result from implementation of the Proposed Project, describes proposed mitigation measures, and conclusions as to the level of significance of impacts after mitigation.

**Chapter 3 - Project Description.** Provides a detailed description of the Proposed Project, including its location, background information, major objectives, and technical characteristics.

**Chapter 4 - Environmental Setting, Impacts and Mitigation Measures.** Contains an analysis of environmental impacts that could result from the Proposed Project. The subsection for each environmental issue contains an introduction and description of the setting of the project site, explains the baseline(s) used for the analysis, identifies project impacts and recommends appropriate mitigation measures.

**Chapter 5 – Other CEQA Considerations.** Provides discussions required by CEQA regarding impacts that would result from the Proposed Project, including an analysis of cumulative impacts, potential growth-inducing impacts, and significant irreversible changes to the environment.

**Chapter 6 - Alternatives Analysis.** Describes and analyzes the alternatives to the Proposed Project and their respective environmental effects.

**Chapter 7 - References.** Provides information for all resources cited.

**Chapter 8 - Report Preparation.** Lists report authors by section, City of Stockton staff and others who provided technical assistance in the preparation and review of the EIR.

**Appendices.** Includes the NOP and additional technical information relevant to the environmental analysis including, but not limited to water supply, cultural and historic resources, and transportation.

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## 2. SUMMARY

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## 2. SUMMARY

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### 2.1 PROJECT UNDER REVIEW

This EIR evaluates the potential environmental impacts associated with construction and occupancy of the proposed Lower Lagoon Valley Specific Plan (Specific Plan) project. Specifically, this document evaluates potential significant effects in the following resource areas:

- Land Use and Planning
- Parks and Recreation
- Visual Resources
- Transportation and Circulation
- Air Quality
- Noise
- Public Utilities
- Public Services
- Water Supply
- Hydrology, Drainage and Water Quality
- Geology and Soils
- Hazards and Human Health
- Cultural Resources
- Biological Resources

#### **Project Description**

The project evaluated in this EIR is the City's proposed adoption of the Specific Plan (to replace the 1990 Policy Plan), together with certain concurrent actions (adoption of a General Plan Amendment and related zoning changes, approval of the Development Agreement) and any later required permits and approvals needed to implement the Specific Plan. The approximately 2,354-acre proposed Specific Plan area is located in Lower Lagoon Valley in the southwestern portion of the City of Vacaville, in the City's Sphere of Influence. The Proposed Project includes a 736-acre residential/recreational community with 1,225 single-family homes and 100 attached town homes (1,325 total dwelling units), a K-6 public school or a K-8 private school, a 213 acre championship-style golf course with a clubhouse, and neighborhood park spaces throughout the development area. The proposed development would also include an approximately 88-acre business village area with approximately one million sf of commercial/office space, 50,000 sf of Town Center retail space and community center use, a fire station, and supporting infrastructure. The Specific Plan area also includes the 388-acre Lagoon Valley Regional Park and 1,066 acres of open space.

Please see Chapter 3, Project Description, for a complete description of Proposed Project elements and project objectives.

## 2.2 KNOWN AREAS OF CONTROVERSY

Section 15123 of the CEQA Guidelines requires that an EIR identify areas of controversy known to the Lead Agency, including issues raised by agencies and the public. Comment letters were received from the following agencies in response to the NOP:

- Solano County Airport Land Use Commission regarding proximity to Travis Air Force Base;
- Yolo-Solano Air Quality Management District regarding air quality impacts;
- Solano Irrigation District regarding non-potable water use;
- State Department of Fish and Game regarding wildlife and wildlife habitat;
- City of Fairfield Department of Planning regarding traffic and land use; and
- State Department of Conservation regarding loss of agricultural land.

In addition, a number of comments were received from members of the public, including individuals and organizations. Comments raised a number of issues including appropriateness of using Lower Lagoon Valley for urban growth, visual impacts, health and safety hazards, growth inducing impacts, and cumulative impacts.

These topics are discussed in detail in each respective chapter of Section 4, Environmental Analysis of this EIR.

## 2.3 ALTERNATIVES ANALYSIS

The following alternatives are evaluated in Chapter 6 of this EIR and are compared to the Proposed Project to identify the environmentally superior alternative:

- **Alternative 1: No Project/No Development Alternative** -assumes the site would remain under its current condition and that no development would occur.
- **Alternative 2: 1990 Policy Plan/No Action Alternative** - assumes that the Proposed Project area would be developed consistent with the current land uses, zoning, and development intensities identified in the 1990 Lower Lagoon Valley Policy Plan.
- **Alternative 3: No Golf Course Alternative** – the 213-acre golf course and supporting facilities would not be developed as part of the project and the acreage would remain as undeveloped open space. All other project elements would remain the same.
- **Alternative 4: Decreased Residential Alternative** - assumes that fewer residential units would be developed as part of the Proposed Project. This alternative would consist of development of 730 units on 523 acres (compared to 1,325 units on 523 acres under the Proposed Project). All other project elements would remain the same.
- **Alternative 5: Increased Commercial Use Alternative** - assumes there would be 33 acres of Office/Business Village (388,500 sf) and 57 acres of Highway Commercial (661,500 sf) (as compared to approximately 1,050,000 sf of Office/Business Village for the Proposed Project). All other project elements would remain the same.
- **Alternative 6: Off-Site Alternative** - approximately 736 acres in the Vaca Valley/Rodgers Lane Area north of and adjacent to the City limits would be developed with residential (1,325 units on 523 acres, inclusive of the proposed school site and

10,000 sf Village Center) and golf course uses (213 acres). The 88 acres of Office/Business Village (1,050,000 sf) would be developed on consistent with the Proposed Project. The remainder of the Specific Plan area (approximately 2,264 acres) would remain in its current condition. Any future development of the Specific Plan area would be limited to rural subdivisions and/or small-scale commercial not requiring connection to City services such as water and sewer consistent with existing zoning.

Detailed descriptions and analysis of potential impacts of these alternatives are presented in Chapter 6, Alternatives.

## **SUMMARY TABLE**

Table 2-1 provides a complete list of all impacts and mitigation measures for the topics evaluated in this EIR, as listed above. For each impact, the table presents the significance of the impact before mitigation, applicable project-specific mitigation, and the level of significance of the impact after implementation of applicable mitigation measures.

**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                                 | Level of Significance Prior to Mitigation | Mitigation Measure(s) | Level of Significance After Mitigation |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------|----------------------------------------|
| <b>4.2 Land Use and Planning</b>                                                                                                                                                                       |                                           |                       |                                        |
| 4.2-1 The Proposed Project includes construction and operation of developed uses that could be incompatible with on-going agricultural uses in the Specific Plan area.                                 | LS                                        | 4.2-1 None required.  | NA                                     |
| 4.2-2 The Proposed Project includes construction and operation of developed uses that could be incompatible with the Lagoon Valley Regional Park.                                                      | LS                                        | 4.2-2 None required.  | NA                                     |
| 4.2-3 The Proposed Project includes construction and operation of incompatible uses.                                                                                                                   | LS                                        | 4.2-3 None required.  | NA                                     |
| 4.2-4 Development of the Proposed Project could result in an incompatibility with adjacent existing and planned uses.                                                                                  | LS                                        | 4.2-4 None required.  | NA                                     |
| 4.2-5 Development of the Proposed Project could conflict with adopted applicable land use plans, policies, or regulations.                                                                             | LS                                        | 4.2-5 None required.  | NA                                     |
| 4.2-6 Development of the Proposed Project would convert Important Farmland to developed use.                                                                                                           | S                                         | 4.2-6 None available. | SU                                     |
| <b>4.3 Parks and Recreation</b>                                                                                                                                                                        |                                           |                       |                                        |
| 4.3-1 Development of the Proposed Project could conflict with City standards for the provision of parkland.                                                                                            | LS                                        | 4.3-1 None required.  | NA                                     |
| 4.3-2 Proposed project would create additional demand necessitating the construction or expansion of existing recreational facilities, which might have an adverse physical effect on the environment. | PS                                        | 4.3-2 None available. | SU                                     |
| 4.3-3 Proposed project could increase use of existing park facilities such that substantial physical deterioration of the facility could occur or be accelerated.                                      | PS                                        | 4.3-3 None available. | SU                                     |

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 SU = Significant and Unavoidable      STS = Short-term Significant      NC = Not Considerable      C = Considerable

**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                  | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Level of Significance After Mitigation |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>4.3-4 Construction activities associated with installation of utilities infrastructure could temporarily disrupt existing recreation facilities.</b> | S                                         | 4.3-4<br>(a) The Applicant shall fund a public information and outreach program beginning two months prior to construction of utility corridors in Lagoon Valley Regional Park and continuing until construction is completed. The program shall either be developed by the City, or subject to City review and approval no later than three months prior to start of construction.<br>(b) The Applicant shall implement measures to minimize the amount of time the trails are closed to public access including, but not limited to, development of an alternative/detour plan in coordination with the City Community Services Department.<br>(c) The Applicant shall ensure that at no time during construction on the trail will City staff be hindered from accessing the reservoir site or water transmission pipelines for routine and emergency operational and maintenance activities, by providing alternative access, subject to City Public Works approval. | LS                                     |
| <b>4.4 Visual Resources</b>                                                                                                                             |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                        |
| <b>4.4-1 Implementation of the Proposed Project would alter scenic vistas and the visual character of scenic resources.</b>                             | S                                         | 4.4-1 None available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SU                                     |
| <b>4.4-2 Implementation of the Proposed Project would alter the existing visual character of the Lower Lagoon Valley.</b>                               | S                                         | 4.4-2 None available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | SU                                     |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                             | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Level of Significance After Mitigation |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <p><b>4.4-3 The Proposed Project would create new sources of light which could adversely affect nighttime views of the Specific Plan area.</b></p> | <p>PS</p>                                 | <p>4.4-3</p> <ul style="list-style-type: none"> <li>(a) The use of reflective materials shall be limited and when feasible, exterior-building surfaces in the business village shall include the installation of low-glare materials.</li> <li>(b) Any outdoor incandescent lighting fixture or more than 160 watts shall be constructed so that no more than 10 percent of the light rays from the fixture shall be emitted at angles above the horizontal plane.</li> <li>(c) Streetlights with any high-intensity discharge lamp, including, but not limited to, mercury, metal halide and high-pressure sodium lamps, are prohibited on private roads.</li> <li>(d) Streetlights shall use low-pressure sodium lamps, so that no light rays are emitted from the fixture at angles above the horizontal plan. Streetlights shall use "cut off" fixtures.</li> <li>(e) Outdoor metal halide and high-pressure sodium lighting shall be permitted only for the purpose of illuminating recreational facilities and all figures shall be fully shielded.</li> <li>(f) Outdoor lighting with any mercury vapor, quartz-halogen or fluorescent fixture is prohibited. Except as permitted by Mitigation Measure 4.4-3(e), outdoor lighting with any high-intensity discharge lamp, including but not limited to, mercury vapor, metal halide or high-pressure sodium lamp, is prohibited.</li> </ul> | <p>SU</p>                              |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                       | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Level of Significance After Mitigation |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>4.5 Transportation and Circulation</b>                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |
| <p><b>4.5-1 Traffic generated by the Proposed Project would cause LOS to degrade to unacceptable levels at one intersection under Existing + Approved Projects + Project conditions.</b></p> | S                                         | <p>4.5-1<br/>                     (a) Convert the northbound approach at the intersection of I-80 eastbound ramps / Cherry Glen / Peña Adobe / Rivera Road to two left turn lanes and 1 shared-through-right turn lane, using a design approved by the City of Vacaville with review and approval of CALTRANS.<br/>                     (b) Redesign project access intersections to shift motorists from the commercial portion of the Proposed Project from the Peña Adobe Road / Cherry Glen Road interchange to the Lagoon Valley Road access to I-80. The redesign shall include installation of traffic controls and design of circulation patterns to discourage travel to Peña Adobe Road. The redesign shall encourage visitors to the commercial portion of the Proposed Project to use Lagoon Valley Road by appropriate placement of parking lot entrances, using a loop road and/or other features. Convert the northbound shared through-right lane at the intersection of Lagoon Valley Road/I-80 eastbound ramps into two separate lanes, one through lane and one right turn lane. Implement Mitigation Measure 4.5-4(a) to add an auxiliary freeway lane between Lagoon Valley Road and Peña Adobe/Cherry Glen.</p> | LS                                     |
| <p><b>4.5-2 Traffic generated by the Proposed Project would cause intersection LOS to degrade to unacceptable levels in 2025.</b></p>                                                        | S                                         | <p>4.5-2<br/>                     (a) At the intersection of Lagoon Valley Road / I-80 eastbound ramps, signalize the intersection and add a northbound right-turn lane.<br/>                     (b.1) At the intersection of the I-80 eastbound ramps with Cherry Glen Road / Peña Adobe Road / Rivera Road, convert northbound approach to two left-turn lanes and one shared through-right-turn lane.<br/>                     (b.2) Implement Mitigation Measure 4.5-1(b).<br/>                     (c) Convert southbound right-turn lane to shared through-right-turn lane at the intersection of Alamo Drive / Marshall Road.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LS                                     |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                               | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Level of Significance After Mitigation |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <p><b>4.5-3 Project-generated traffic would cause freeway segment LOS to degrade to unacceptable levels on Interstate 80 in 2025.</b></p>                            | <p>S</p>                                  | <p>4.5-3<br/>                     (a) Widen the I-80 freeway by 12 feet on the west side to add a fifth westbound lane to I-80 from the North Cherry Glen off-ramp to Cherry Glen/Peña Adobe, relocating the shoulder and using the existing shoulder area for the new lane.<br/>                     (b) Widen the I-80 freeway by 12 feet and construct a retaining wall on the west side to add a fifth (auxiliary) westbound lane between the Alamo Drive overcrossing and the North Cherry Glen off-ramp, and construct a retaining wall west of the relocated shoulder.<br/>                     (c) Widen the I-80 freeway by 12 feet on the west side to add a fifth westbound lane to I-80 from the Cherry Glen / Peña Adobe overcrossing to the Lagoon Valley Road overcrossing, relocating the shoulder and using the existing shoulder area for the new lane.<br/>                     (d) Widen the I-80 freeway by 12 feet on the west side to add a fifth westbound lane between Lagoon Valley Road and North Texas Street, relocating the shoulder and using the existing shoulder area for the new lane. Install a retaining wall along the edge of the widened freeway.</p> | <p>SU</p>                              |
| <p><b>4.5-4 Project-generated traffic would cause one freeway ramp to degrade from acceptable to unacceptable LOS in 2025.</b></p>                                   | <p>S</p>                                  | <p>4.5-4<br/>                     (a) Widen the freeway by 12 feet on the east side to add a fifth eastbound lane on I-80 between Lagoon Valley Road and Cherry Glen Road / Peña Adobe Road, in coordination with Rivera Road reconstruction that is proposed as part of the project.<br/>                     (b) In the alternative, implement Mitigation Measure 4.5-1(b), to redesign project access intersections to shift traffic to the Lagoon Valley Road freeway interchange.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p>SU</p>                              |
| <p><b>4.5-5 Traffic generated by the Proposed Project would cause LOS at diverge locations near freeway off-ramps to degrade to unacceptable levels in 2025.</b></p> | <p>S</p>                                  | <p>4.5-5<br/>                     (a) Widen the freeway by 12 feet on the east side to add a new eastbound lane along I-80 from North Texas Street to Lagoon Valley Road.<br/>                     (b) Implement Mitigation Measure 4.5-3(a) to add a westbound lane to I-80 between North Cherry Glen off-ramp and Cherry</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>SU</p>                              |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                        | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Level of Significance After Mitigation |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                               |                                           | (c) Glen/Peña Adobe. Implement Mitigation Measure 4.5-3(b) to add a westbound lane between Alamo Drive and the North Cherry Glen off-ramp and construct a retaining wall adjacent to the freeway shoulder.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                        |
| <b>4.6 Air Quality</b>                                                                                                        |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |
| <b>4.6-1 Construction activities associated with the Proposed Project could generate substantial air pollutant emissions.</b> | STS                                       | 4.6-1<br>(a) Prior to all phases of project construction, the applicant and City shall ensure that construction contracts include the following specifications: <ul style="list-style-type: none"> <li>• After review and approval by the YSAQMD, the developer, if required, shall apply approved chemical soil stabilizers according to manufacturers specifications, to all inactive construction areas (previously graded areas which remain inactive for 96 hours), including the soil that would be used for construction of the earthen berm.</li> <li>• Reduce traffic speeds on all unpaved surfaces to 15 miles per hour or less.</li> <li>• Creation of a dust control plan for approval by YSAQMD</li> <li>• No open burning of vegetation during project construction.</li> <li>• Reestablishment of ground cover as soon as possible after construction.</li> <li>• Suspension of grading activities when winds exceed 25 mph.</li> <li>• Enclose, cover or water at least twice daily all soil piles and exposed surfaces.</li> <li>• Keep all designated haul routes clean of any loose soil associated with soil transportation.</li> <li>• Cover loads of all haul/dump trucks securely.</li> </ul> | SU                                     |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Level of Significance After Mitigation |
|--------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <p>(b) Prior to all phases of project construction, the applicant and City shall ensure that construction contracts include the following specifications:</p> <ul style="list-style-type: none"> <li>• The prime contractor shall submit to the YSAQMD a comprehensive inventory (i.e., make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. District personnel, with assistance from the California Air Resources Board, will conduct initial Visible Emission Evaluations of all heavy-duty equipment on the inventory list.</li> <li>• An enforcement plan shall be established to weekly evaluate project-related on-and-off- road heavy-duty vehicle engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180 - 2194. An Environmental Coordinator, CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy-duty on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified and the equipment must be repaired within 72 hours.</li> </ul> |                                        |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                 | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Level of Significance After Mitigation |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                        |                                           | <ul style="list-style-type: none"> <li>• Contractors shall provide a plan for approval by the YSAQMD demonstrating that the heavy-duty (&gt;50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, would achieve a project-wide fleet average 30 percent NO<sub>x</sub> reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.</li> <li>• Minimize idling time to 10 minutes.</li> <li>• Use low sulfur fuel for stationary construction equipment, if feasible.</li> <li>• Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.</li> <li>• Use low emission on-site stationary equipment.</li> </ul> |                                        |
| <p><b>4.6-2 Daily operation of the project could generate substantial air pollutant emissions.</b></p> | <p>S</p>                                  | <p>4.6-2 Prior to building permit, the applicant shall implement these, or equally effective measures, in consultation with the YSAQMD.</p> <ul style="list-style-type: none"> <li>• Improve the thermal integrity of nonresidential buildings, and reduce the thermal load with automated time clocks or automated sensors.</li> <li>• Provide efficient heating and other appliances, such as water heaters, cooking equipment, refrigerators, furnaces, and boiler units.</li> <li>• Electrical outlets shall be installed on the exterior walls of both the front and back of a residence or all commercial buildings to promote the use of electric landscape maintenance equipment.</li> </ul>                                                                                                                                                                                                                                                                                                                      | <p>SU</p>                              |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Level of Significance After Mitigation |
|--------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <ul style="list-style-type: none"> <li>• Install a gas outlet in the backyard of residential buildings for use with outdoor cooking appliances, such as gas burning barbeques.</li> <li>• If feasible, install a gas outlet with ceramic logs in any proposed fireplaces, including outdoor recreational fireplaces or pits.</li> <li>• Install low nitrogen oxide (NO<sub>x</sub>) hot water heaters. (Beyond YSAQMD Rule Requirements)</li> <li>• HVAC units shall be equipped with PremAir (or other manufacturer) catalyst system if available and economically feasible at the time building permits are issued. The PremAir catalyst can convert up to 70 percent of ground level ozone that passes over the condenser coils into oxygen. The PremAir system is considered feasible if the additional cost is less than 10 percent of the base HVAC unit cost.</li> <li>• Require all flat roofs in the nonresidential land use areas to have a white or silver cap sheet to reduce energy demand.</li> <li>• If feasible, purchase battery powered or electric landscape maintenance equipment for new residences.</li> <li>• Configure parking to minimize traffic interference and delays.</li> <li>• Include wide parking spaces or vanpool only spaces to accommodate vanpool vehicles in employment areas (e.g., community commercial, business-professional, industrial) as determined by YSAQMD.</li> </ul> |                                        |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Level of Significance After Mitigation |
|--------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <ul style="list-style-type: none"> <li>• Provide preferential parking for carpools and vanpools in employment areas (e.g., community commercial, business-professional, and industrial areas).</li> <li>• Equip all truck loading and unloading docks with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and shall be required to connect to the 110/208 volt power to run any auxiliary equipment. Signage addressing these requirements shall be provided at the loading docks.</li> <li>• Vehicle and bicycle all day parking lots near transit stops, and freeway access points.</li> <li>• Permit park &amp; ride lots in business village area.</li> <li>• Provide ridesharing information in a homeowners association package.</li> <li>• Contribute to an area transit fund to help build, maintain, and enhance transit services/facilities/amenities.</li> <li>• Subsidized school bus service.</li> <li>• A subsidy for added transit services.</li> <li>• Class II and III on-street bikeway system.</li> <li>• Class I bikeway system that connects residential, commercial and park uses of the Specific Plan.</li> <li>• Design streets to maximize pedestrian access to transit stops.</li> <li>• Site design to maximize access to transit lines.</li> <li>• Site design to accommodate bus travel.</li> <li>• Site design to provide lighted shelters at transit access points.</li> <li>• Preparation of a Transportation System Management Plan for employers with 50 or more employees.</li> <li>• Provide secure bicycle storage at public parking facilities.</li> </ul> |                                        |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                              | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Level of Significance After Mitigation |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                                     |                                           | <ul style="list-style-type: none"> <li>• Only U.S. EPA Phase II certified woodburning devices should be allowed in single-family residences. The emission potential from each residence shall not exceed 7.5 grams per hour.</li> <li>• Woodburning or Pellet appliances shall not be permitted in multi-family developments. Only natural gas or propane fired fireplace appliances are permitted.</li> </ul>                                                                                                                                                                                                                                                                                                                                             |                                        |
| <p><b>4.6-3 The Proposed Project would generate increased local traffic volumes that could expose sensitive receptors near roadway intersections to substantial pollutant concentrations.</b></p>   | <p>LS</p>                                 | <p>4.6-3 None required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>NA</p>                              |
| <p><b>4.6-4 Implementation of the Proposed Project would result in new sources of air emissions that could impair implementation of the Clean Air Plan.</b></p>                                     | <p>LS</p>                                 | <p>4.6-4 None required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>NA</p>                              |
| <p><b>4.6-5 Implementation of the Proposed Project could expose sensitive receptors on or off site to substantial pollutant concentrations due to project-generated toxic air contaminants.</b></p> | <p>LS</p>                                 | <p>4.6-5 None required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p>NA</p>                              |
| <p><b>4.6-6 Implementation of the Proposed Project could release objectionable odors at the proposed manholes along the sewer main downstream of the pump station.</b></p>                          | <p>PS</p>                                 | <p>4.6-6</p> <p>(a) The Applicant shall include odor and corrosion control features in the manhole design where turbulence is anticipated. These may include vortex tube manhole inserts; manhole seals and ventilation tubes vented at least 20 feet from pedestrian path with carbon filters; or some other system. All proposed odor control systems (including those listed herein) shall be demonstrated to be effective to the satisfaction of the City Utilities Division and Community Services Department through pilot testing or other means prior to design approval.</p> <p>(b) The Applicant shall include in the manhole design where turbulence is anticipated, corrosion protection features approved by the City Utilities Division.</p> | <p>SU</p>                              |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                              | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Level of Significance After Mitigation |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                     |                                           | (c) Separate the trail and any vents from each other, to the maximum feasible distance needed to reduce odor detection by pedestrians, based on final analysis of specific facility.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |
| <b>4.7 Noise</b>                                                                                                                                                    |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                        |
| <b>4.7-1 Construction activities associated with the Proposed Project development could generate temporary or periodic noise levels that exceed City standards.</b> | PS                                        | 4.7-1<br>(a) Construction activities shall be limited to the hours of 7:00 A.M. to 6:00 P.M. Monday through Saturday.<br>(b) All construction equipment engines shall be properly tuned and muffled according to manufacturers' specifications.<br>(c) Noise construction activities whose specific location on the site may be flexible (e.g., operation of compressors and generators, cement mixing, general truck idling) shall be conducted as far as possible from the nearest noise-sensitive land uses, and natural and/or manmade barriers (e.g., intervening construction trailers) shall be used to screen propagation of noise from such activities towards these land uses to the extent possible.<br>(d) The use of those pieces of construction equipment or construction methods with the greatest peak noise generation potential shall be minimized. Examples include the use of drills, jackhammers, and pile drivers. | SU                                     |
| <b>4.7-2 Construction activities associated with the Proposed Project development could generate and expose persons to excessive groundborne vibration levels.</b>  | PS                                        | 4.7-2<br>(a) Equipment warm-up areas, water tanks, and equipment storage areas shall be located a minimum of 150 feet from occupied residences, where feasible.<br>(b) Flexible sound control curtains shall be placed around drilling apparatus and drill rigs, if sensitive receptors are located nearby.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | SU                                     |

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| Impact                                                                                                                                                                                   | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Level of Significance After Mitigation |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <p><b>4.7-3 Implementation of the Proposed Project development could expose existing and proposed residential or other sensitive land uses to noise in excess of City standards.</b></p> | <p>PS</p>                                 | <p>4.7-3<br/>                     (a) Prior to the issuance of building permits for residential uses located within 2,000 feet of I-80, the project developer(s) shall submit an acoustical analysis to the City of Vacaville Community Development Depart that demonstrates that the final project design incorporates measures that reduce traffic noise levels within the exterior living environments of the residential uses will not exceed 60 dBA L<sub>dn</sub>. The analysis shall be based on the final grading plan for the project.<br/>                     (b) Prior to the construction of public utility facilities, an acoustical analysis shall be prepared to identify projected noise levels from equipment and to identify project design measures, if required, that reduce noise effects on adjacent residential or other sensitive uses to levels meeting City standards.</p> | <p>LS</p>                              |
| <p><b>4.7-4 The specific plan would generate increased local traffic volumes, which could result in a substantial permanent increase in off site ambient noise levels.</b></p>           | <p>LS</p>                                 | <p>4.7-4 None required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>NA</p>                              |
| <p><b>4.8 Public Utilities</b></p>                                                                                                                                                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |
| <p><b>4.8-1 Improvements to existing wastewater collection system facilities would be needed to accommodate projected Proposed Project flow.</b></p>                                     | <p>LS</p>                                 | <p>4.8-1 None required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>NA</p>                              |
| <p><b>4.8-2 The Proposed Project would increase flow to the Easterly Wastewater Treatment Plant.</b></p>                                                                                 | <p>LS</p>                                 | <p>4.8-2 None required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p>NA</p>                              |
| <p><b>4.8-3 The Proposed Project would result in the construction of a collection system to expand the existing wastewater treatment facility service area.</b></p>                      | <p>S</p>                                  | <p>4.8-3<br/>                     (a) The Applicant shall include in the project improvements on-site and off-site wastewater collection system facilities within the project area designed in accordance with current City standards.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>LS</p>                              |

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| Impact                                                                                                                                                               | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Level of Significance After Mitigation |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                      |                                           | b) The Applicant shall fully fund the design and construction of onsite and off-site wastewater collection system facilities necessary to convey flow to the existing wastewater collection system. The off-site facilities shall be as described for either Option 1 or Option 2, including special odor control, corrosion control, and other measures required by the City and outlined in Appendix G.<br>(c) The City shall determine which off-site facility alternative (Option 1 or Option 2) is preferred, based on consideration of life-cycle costs and potential non-monetary impacts.<br>(d) The City shall require permanent flow metering equipment with telemetry, either at the pump station (under Option 1), or on the proposed gravity sewer near the point of connection to the existing wastewater collection system (Option 2).<br>(e) If a pump station is included in the off-site facilities, the Applicant shall establish a major maintenance reserve fund to fully fund future major pump station replacement and rehabilitation projects. |                                        |
| <b>4.8-4</b> Development of the Proposed Project would increase the demand for electricity and could result in the need for additional distribution infrastructure.  | LS                                        | 4.8-4 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NA                                     |
| <b>4.8-5</b> Development of the Proposed Project would increase the demand for natural gas, and could result in the need for additional distribution infrastructure. | LS                                        | 4.8-5 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NA                                     |
| <b>4.8-6</b> Development of the Proposed Project would increase the demand for cable television and result in the need for additional distribution infrastructure.   | LS                                        | 4.8-6 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | NA                                     |

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>4.9 Public Services</b>                                                                                                                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |
| <b>4.9-1 The Proposed Project would increase the demand for police protection services, and could exceed adopted service standards or response times.</b>               | PS                                        | 4.9-1<br>(a) The City shall require the integration of design features to maximize public safety service impacts for public safety features added to the Proposed Project (gates, lighting, etc.) The recommended features shall be developed in consultation with the Vacaville Police Department Crime Prevention Division.<br>(b) Prior to approval of tentative maps or design reviews, the City shall ensure that adopted features are incorporated into final project designs. | LS                                     |
| <b>4.9-2 The Proposed Project would increase the demand for fire protection services that could exceed the capacity of existing or planned services and facilities.</b> | LS                                        | 4.9-2 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NA                                     |
| <b>4.9-3 The residential and non-residential land uses in the Proposed Project would increase the volume of solid waste accepted at the B&amp;J Landfill.</b>           | LS                                        | 4.9-3 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | NA                                     |
| <b>4.10 Water Supply</b>                                                                                                                                                |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                        |
| <b>4.10-1 Development of the Proposed Project would increase the demand for water.</b>                                                                                  | S                                         | 4.10-1 The City shall use actual demand and production data accompanied with periodic water distribution system modeling (through the City of Vacaville Infrastructure, Facilities and Services Status Report Update, Master Plan update, and as needed) to determine when planned water sources should be brought on-line.                                                                                                                                                          | LS                                     |
| <b>4.10-2 Development of the Proposed Project would require main zone water distribution system improvements.</b>                                                       | S                                         | 4.10-2 The City shall complete the modeling necessary to confirm the size and length of the needed Alamo Drive Pipeline (DIF 10). The Zone 2 booster pump station must be in service before water can be provided to customers. Therefore, the City shall complete construction of the required main zone DIF 10 project concurrent with the booster pump station completion (see Figure 4.10-7).                                                                                    | LS                                     |

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|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <p><b>4.10-3 Development of the Proposed Project would require on-site potable water distribution system improvements.</b></p> | <p>S</p>                                  | <p>4.10-3<br/>                     (a) Creation of an upper zone (Zone 2) to serve the existing development and part of the Proposed Project (elevation range from approximately 210 to 310 feet). The water distribution system for this new upper pressure zone (Zone 2) will include a 2,690 gpm booster pump station and a 2.9 MG partially buried concrete storage reservoir. Prior to approval of the Final Master Map, project proponent must deposit with the City adequate funds for the City to predesign, design and construct the reservoir and booster pump station required for this upper zone (Zone 2).<br/>                     (b) Creation of a second upper zone (Zone 3) to serve the remainder of the Proposed Project (elevation approximately 310 to 350 feet). The water distribution system for this upper pressure zone (Zone 3) will include a 230 gpm booster pump station and a 0.25 MG partially buried concrete water storage tank. Project proponent must deposit with the City adequate funds for predesign, design, and construction of the needed facilities, no less than three years before they are needed.<br/>                     (c) Conduct a water service area master plan and pump station/reservoir siting study to determine the specific limits of the Zone 2 and Zone 3 service area boundaries as well as the optimum location for the booster pump stations and water storage reservoirs. (Service area master plan and water modeling simulations are City responsibility and must be initiated prior to the approval of the Final Master Map).<br/>                     (d) Project proponent shall dedicate adequate space within the development to the City for the construction of the Zone 3 booster pump station. It is assumed that the Zone 2 booster pump station can be properly located within open space near the existing Butcher Road Reservoirs. If not, additional adequate space shall be required. The parcel(s) could be in open space areas or a separate accessible location and shall be dedicated at the time of approval of the first Final Map, tentative map, or area map for the Proposed Project.</p> | <p>LS</p>                              |

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|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                             |                                           | (e) Project proponent shall dedicate the proposed reservoir sites and access roads as identified by the water service area master plan and siting study. The sites shall be dedicated to the City for construction of the upper zone(s) partially buried concrete water storage reservoirs. The property shall be dedicated with the Final Master Map, first tentative map, or area map for the Proposed Project.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| <b>4.10-4 Development of the Proposed Project would require on-site non-potable water distribution system improvements.</b> | S                                         | <p>4.10-4 The Proposed Project shall include local and on-site non-potable system improvements as depicted in Figure 4.10-9.</p> <ul style="list-style-type: none"> <li>• 8-inch non-potable water main loop through the proposed business park and around the existing Lagoon Valley Regional Park.</li> <li>• 12-inch non-potable water main connected to existing Hines Nursery Pipeline and extended through Village III and golf course club house.</li> <li>• 8-inch non-potable water main extended from the 12-inch non-potable water main through Village I and connected to the 8-inch non-potable water main loop described above.</li> </ul> <p>These improvements must be designed and constructed according to SID requirements. Provisions shall be included to ensure non-potable water service to the existing users is maintained throughout construction of the necessary improvements. Additional improvements to the existing non-potable water distribution system may be required after SID reviews the proposed improvements.</p> | LS                                     |

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| Impact                                                                                                                                                                                                                                   | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Level of Significance After Mitigation |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>4.11 Hydrology, Drainage, and Water Quality</b>                                                                                                                                                                                       |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                        |
| <p><b>4.11-1 Development of the Proposed Project would produce increased peak runoff flows from the project area, which could exceed the capacity of downstream drainage facilities and increase the downstream flooding hazard.</b></p> | <p>PS</p>                                 | <p>4.11-1<br/>(a) A Storm Drain Master Plan (SDMP) shall be prepared by a registered civil engineer that identifies specific design improvements that would mitigate for the increased runoff resulting from development of the Proposed Project. The SDMP shall demonstrate that the proposed drainage facilities adequately convey the design runoff and that the increased runoff will be mitigated through implementation of the proposed drainage facilities (see Figure 4.11-4). The SDMP shall be completed prior to approval of the first Tentative Map, and shall include the following:</p> <ul style="list-style-type: none"> <li>• Maps showing the location of existing and proposed drainage facilities, the watershed boundaries, location of analysis points, and overland release paths;</li> <li>• Preliminary pipe sizes and/or typical channel geometry with hydraulic grade lines, invert, and proposed ground elevations at analysis points;</li> <li>• Design flows (10- and 100-year) at key analysis points;</li> <li>• Preliminary grading plan and layout of proposed detention basins;</li> <li>• Stage, storage, and discharge information for detention basins for selected design storms;</li> <li>• Description of storage requirements, operation, and maintenance of detention facilities; and</li> <li>• Description and analysis of any necessary water quality features.</li> </ul> | <p>LS</p>                              |

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|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                          |                                           | (b) The project applicant shall include drainage improvements and detention basins designed to accommodate 10- and 100-year flows. Detention facilities shall be adequate to limit discharges from the Lower Lagoon Valley watershed such that the 10- and 100-year peak flows are reduced to 90 percent of the estimated existing peak flows. The detention facilities shall be designed to the City's Design Standards and will include provisions to ensure draining during high flows in the main channels and to prevent increased flows downstream due to the occurrence of simultaneous peak flows from upstream. All necessary detention storage shall be accommodated within the project site.<br><br>(c) The Proposed Project shall be designed such that the building pads are raised and overland flows can be safely conveyed through the project site to an existing receiving channel (such as the Bypass channel or Lagoon Valley Lake), to the proposed golf course, and/or to the proposed detention facilities. |                                        |
| <b>4.11-2 The northern portion of the proposed residential development and most of the proposed business village development is within the FEMA 100-year floodplain.</b> | PS                                        | 4.11-2<br>(a) Prior to the first residential Final Map and commercial building permit, a detailed floodplain study for the proposed residential and commercial projects shall be conducted by a registered civil engineer to determine the boundaries of the 100-year floodplain within the Lower Lagoon Valley.<br>(b) Prior to issuance of the first building permit, the floodplain study shall be submitted to and approved by FEMA in accordance with all FEMA requirements for the floodplain map revision process.<br>(c) Until a revised floodplain map is adopted, prior to any development within the 100-year floodplain as currently designated by the City of Vacaville FIRM, the City shall require as a condition of building permit issuance that the Proposed Project complies with the City's Floodplain Management ordinance for residential and non-residential floodproofing. When the revised floodplain map is adopted,                                                                                     | LS                                     |

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                                                                                             |                                           | any areas in the revised floodplain shall comply with the City's Floodplain Management Ordinance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                        |
| <p><b>4.11-3 Increased rates of surface runoff generated by the project development or dewatering for construction activities could result in sedimentation and increased levels of urban contaminants, which could affect receiving water quality.</b></p> | PS                                        | <p>4.11-3<br/>(a) A SWPPP shall be prepared to address water quality impacts associated with construction of project facilities and roadways prior to the start of construction. The project applicant shall incorporate into the construction contract specifications the requirement that all contractors comply with and implement the provisions of the SWPPP. The objectives of the SWPPP are to identify pollutant sources that could affect the quality of stormwater discharge, to implement control practices to reduce pollutants in stormwater discharges, and to protect receiving water quality.</p> <p>The City shall require preparation of a SWPPP Plan for construction activities, and shall comply with requirements adopted by the SWRCB that are shown to be necessary to mitigate project specific and cumulative water quality impacts of runoff.</p> <p>(b) Prior to adoption, the City shall ensure the Specific Plan includes policies directing that a comprehensive stormwater quality management plan for the proposed residential, golf course, and business village be prepared by a registered civil engineer or registered professional hydrologist for approval by the City prior to approval of local improvements plans. The management plan shall be designed to protect water resources from water quality impacts of runoff generated by the project to the maximum extent practicable, identifying construction and programmatic Best Management Practices (BMPs) as required to achieve this goal.</p> | LS                                     |

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|--------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <p>(c) Project Conditions of Approval shall specify that appropriate BMPs be incorporated into project design to reduce urban pollutants in runoff, consistent with goals and standards established under federal and State non-point source discharge NPDES regulations and Basin Plan water quality objectives. To maximize effectiveness, the selected BMPs shall be based on finalized site-specific hydrologic conditions, with consideration for the types and locations of development. Mechanisms to maintain the BMPs shall be identified in the Conditions of Approval for individual projects.</p> <p>(d) Stormwater runoff BMPs selected from the CASQA (California Storm Water Best Management Practices Handbook, 2003), the Bay Area Stormwater Management Agencies Association Start at the Source-Design Guidance Manual, or similar documents shall be identified prior to final design approval. Typical BMPs that could be used shall include, but are not limited to, the following: dry extended detention basins, wet detention basins (permanent pools), grassy swales and vegetated channels, oil/grease separators, vortex type separators, catch basin inserts, or other equally effective measures. Other BMPs shall include, but would not be limited to, administrative controls such as signage at inlets to prevent illicit discharges into storm drains, street sweeping, public education, and household hazardous waste disposal programs. BMPs shall identify mechanisms for routine maintenance and repair of BMPs.</p> |                                        |

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|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                                                      |                                           | (e) If the City's NPDES Phase II program is not approved prior to occupancy of the Proposed Project, a water quality testing program shall be developed by a qualified professional and implemented by the project applicant to sample and analyze for urban runoff pollutants at upstream and downstream locations from the Proposed Project to determine whether pollutants (if any) detected downstream originated from the plan area. If a statistically significant increase in urban pollutants is identified that are determined to have originated in the Proposed Project, additional controls shall be implemented and monitored to correct the problem.<br>(f) If the City's NPDES Phase II program SWMP is approved prior to approval of improvement plans the BMPs identified in the program shall be implemented for Proposed Project. If BMPs are identified prior to the NPDES Phase II program that would provide an additional level of water quality protection, their use shall be continued. |                                        |
| <b>4.11-4 Runoff from the surrounding hillsides contains sediment that could plug drainage facilities, resulting in increased maintenance and increasing the potential for flooding within the Proposed Project.</b> | PS                                        | 4.11-4 A comprehensive erosion control management plan shall be prepared by a registered civil engineer, registered geotechnical engineer, or registered geologist for approval by the City prior to submittal of local improvements plans. The management plan shall be designed to reduce sediment entering the Proposed Project, develop a maintenance plan for the proposed drainage facilities and/or erosion control measures, and protect the water quality of Lagoon Valley Lake.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | LS                                     |
| <b>4.11-5 The Proposed Project could be subject to flooding from dam failure inundation.</b>                                                                                                                         | PS                                        | 4.11-5 Prior to Tentative Map approval, the results of a dam failure inundation study shall be used to identify measures to protect locations that could be affected in the event of failure of the earthen dam at Lagoon Valley Lake. The finish floor elevations of buildings within the Specific Plan area shall be above the 100-year water surface elevation in Lagoon Valley Lake. Additional measures could include, but would not be limited to, periodic inspections, ensuring structures that could be affected are floodproofed, and an emergency notification/response plan.                                                                                                                                                                                                                                                                                                                                                                                                                          | LS                                     |

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <p><b>4.11-6 Occupied uses adjacent to Lagoon Valley Lake could be subject to seiche activity in the event of a large earthquake.</b></p>                                                                                                                                          | <p>PS</p>                                 | <p>4.11-6 Prior to Tentative Map approval, the results of a site-specific geotechnical study using an appropriate and industry-accepted model shall be used to identify the extent to which the project site could be affected by seiche hazard from Lagoon Valley Lake. If overtopping could occur, the study shall identify the extent of flooding and depth of flood water. The City shall ensure through the permit review process that recommendations for floodproofing potentially affected structures or increasing the freeboard and/or storage capacity of Lagoon Valley Lake are incorporated into project design prior to issuance of building permits for affected locations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>LS</p>                              |
| <p><b>4.11-7 Development of the Proposed Project could alter groundwater recharge conditions.</b></p>                                                                                                                                                                              | <p>LS</p>                                 | <p>4.11-7 None required.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <p>NA</p>                              |
| <p><b>4.12 Geology and Soils</b></p>                                                                                                                                                                                                                                               |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        |
| <p><b>4.12-1 Implementation of the Proposed Project could expose people or structures to potential risks caused by earthquake activity, including strong seismic groundshaking and seismic-related ground failures such as liquefaction and earthquake-induced landslides.</b></p> | <p>PS</p>                                 | <p>4.12-1<br/>(a) Prior to issuance of Grading or Building Permits, the applicant shall provide the City with site-specific geotechnical report(s) for the residential subdivision/golf course, business village, and utility areas as a condition of grading or building permit approval. The site-specific geotechnical report(s) shall include detailed design for foundations, structures, roadways, infrastructure, and related facilities that conform to: (1) current standards for development in Seismic Zone 4 in accordance with the CBC; (2) current standards for development in areas near mapped and/or likely landslide areas or unstable slopes in accordance with the CBC; and (3) recommendations in the preliminary geotechnical report prepared for the residential subdivision/golf course ("Preliminary Geotechnical Exploration, Lagoon Valley, Vacaville, California" dated July 2003) and business village ("Preliminary Geotechnical Exploration, Commercial Development, Lagoon Valley, Vacaville, California" dated August 2003). Project developers shall implement the recommendations of these reports and site-specific geotechnical reports.</p> | <p>LS</p>                              |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                                                                                    | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Level of Significance After Mitigation |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                                                                                           |                                           | (b) Implement Mitigation Measure 4.12-3 (Mitigate Landslide Hazards) and 4.12-4 (Water Storage Tank Siting).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                        |
| <b>4.12-2 Implementation of the Proposed Project could result in short-term soil erosion.</b>                                                                                                                                                             | PS                                        | 4.12-2<br>(a) Implement Mitigation Measure 4.11-3.<br>(b) Implement Mitigation Measures 4.12-1(a) and 4.12-3.<br>(c) If the gravity sewer line option is selected, the project developer shall comply with Caltrans recommendations, prior to final Building Permit, to ensure that the location, design, and construction methods for the segment passing under I-80 and within Caltrans right-of-way conform to Caltrans specifications.<br>(d) All soil areas remaining exposed after grading and excavation for building sites, utility corridors, or for obtaining fill material for the landscape berm and not developed with project features shall be immediately stabilized through hydroseeding, geotextiles, or other equally effective measures as identified in site-specific geotechnical reports.<br>(e) Implement Mitigation Measure 4.6-1 (a).                               | LS                                     |
| <b>4.12-3 Development of residential and golf course uses along the eastern, southern, and western boundaries of the Specific Plan area would occur at or adjacent to locations where unstable soils and/or landslide hazards are known or may exist.</b> | PS                                        | 4.12-3<br>(a) Implement Mitigation Measure 4.12-1(a).<br>(b) Prior to Grading and Building Permits, when the locations of individual lots, building pads, roadways, and related facilities are more fully known, for each location that could be affected by landslide hazard, the results of a design-level geotechnical investigation shall be used to identify the specific landslide hazard reduction method(s) that shall be used to protect project features. Mitigation for landslides could include, but would not be limited to: complete removal of slide debris; reconstructing the slide area with drained, engineered fill; buttressing the slide areas; designing the Proposed Project in areas away from landslides; or equally effective measures. Landslide risk reduction methods shall be implemented during grading activities and prior to construction of improvements. | LS                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                                                                                            | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Level of Significance After Mitigation |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                                                                                                   |                                           | (c) Prior to occupancy of residential units that could be affected by unstable slopes, a landslide hazard monitoring plan shall be developed by a registered engineer to be implemented during the life of the project. The plan shall, at a minimum: identify methods for routine investigation of slopes surrounding the Specific Plan area to inspect the effectiveness of controls installed; describe procedures for identifying new hazards and implementing appropriate controls and/or corrective actions; annual report to City staff and applicants and a documentation and reporting mechanism to City staff and applicants.                                                                                                                                                                                                                                                                                  |                                        |
| <p><b>4.12-4 Development of potable water storage tanks and associated infrastructure to serve the southern portion of the Proposed Project could occur at or adjacent to locations where unstable soils and/or landslide hazards are known or may exist.</b></p> | PS                                        | <p>4.12-4 (a) Prior to final tank site selection, the results of a site-specific geotechnical study shall be used to identify specific tank site and infrastructure locations to serve Zones 2 and 3 that would be unlikely to be subject to unstable slopes. If alternative tank site(s) and/or pipeline routing to avoid known or potentially unstable slope areas cannot be identified, the recommendations for mitigating potential slope hazards identified in the geotechnical report prepared for the residential subdivision/golf course (“Preliminary Geotechnical Exploration, Lagoon Valley, Vacaville, California” dated July 2003) shall be implemented prior to construction of the tanks and the pipelines. Tanks and pipelines shall be designed and constructed in accordance with applicable professional standards, as determined by the City.</p> <p>(b) Implement Mitigation Measure 4.12-3(c).</p> | LS                                     |
| <p><b>4.12-5 Implementation of the Proposed Project would result in the development of structures and roadways that could be affected by subsurface geologic and soils characteristics.</b></p>                                                                   | PS                                        | <p>4.12-5 Implement Mitigation Measure 4.12-1.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | LS                                     |

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## SUMMARY OF IMPACTS AND MITIGATION MEASURES

| Impact                                                                                                                                                                                                                        | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Level of Significance After Mitigation |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>4.12-6 Construction of a landscape berm adjacent to the golf course and residential development in the southwestern part of the Specific Plan area could result in exposure of people and property to unstable slopes.</b> | PS                                        | 4.12-6<br>(a) Prior to construction of the berm, the results of a geotechnical design evaluation prepared by a registered professional engineer or engineering geologist shall be used to identify specific construction methods to be used to create the landscape berm, taking into account local climate, geologic, and seismic conditions. The design shall be submitted to the City Engineer for review and approval. Contract specifications shall incorporate the approved engineering design.<br>(b) Prior to occupancy of the first residential unit, or golf course use, whichever comes first, the City shall develop a plan that identifies City inspection and maintenance procedures to evaluate berm stability. The plan shall also address procedures to correct deficiencies and identify funding mechanism(s) to ensure long-term maintenance.<br>(c) Implement Mitigation Measure 4.12-2(d). | LS                                     |
| <b>4.13 Hazards and Human Health</b>                                                                                                                                                                                          |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                        |
| <b>4.13-1 Construction and occupancy of the Proposed Project would result in the routine transport, use, or disposal of hazardous materials.</b>                                                                              | LS                                        | 4.13-1 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | NA                                     |
| <b>4.13-2 Implementation of the Proposed Project would result in the use, transportation, storage, and disposal of hazardous materials within ¼ mile from a proposed school site.</b>                                         | SU                                        | 4.13-2 None available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | NA                                     |
| <b>4.13-3 Construction and occupancy of the Proposed Project could create a health hazard to workers, the public and the environment due to previously unidentified contaminated soil and groundwater.</b>                    | PS                                        | 4.13-3<br>(a) Prior to, or concomitantly with construction activities to implement the Specific Plan, the project Applicant shall implement all recommendations from the two ESAs completed by ENGEO Inc. on August 15, 2003. Specifically, the Proposed Project shall:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | LS                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Level of Significance After Mitigation |
|--------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <ul style="list-style-type: none"> <li>• Conduct further evaluations of soil and groundwater impacts at the Hines Nursery facility through a Phase II ESA and remediate, as necessary, to all federal, State, and local standards;</li> <li>• Collect and dispose of identified stained soil according to federal, state, and local laws;</li> <li>• Collect and dispose of all abandoned tanks according to federal, state, and local laws;</li> <li>• Conduct a survey for lead-based paints and ABCM prior to demolition and remediate, as necessary, to all applicable federal, State, and local standards;</li> <li>• Collect and dispose of all abandoned pesticide containers according to federal, state, and local laws;</li> <li>• Demolish all observed equipment wash pads and collect and dispose of any stained soil according to federal, state, and local laws;</li> <li>• Collect and dispose of all abandoned farm equipment, debris and machinery according to federal, state, and local laws; and,</li> <li>• Abandon all agriculture and domestic water wells, and septic systems under permit by the SCDEM.</li> </ul> |                                        |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Level of Significance After Mitigation |
|--------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <p>(b) If, during site preparation and construction activities, evidence of hazardous materials contamination is observed or suspected through either obvious or implied measures (i.e., stained or odorous soil, or oily or discolored water), construction activities shall cease and an environmental professional shall assess the situation. If necessary, the environmental professional shall prepare a sampling plan to collect soil and/or groundwater samples to determine whether or not the site has been adversely affected by past activities. The samples shall be analyzed for the contaminants determined to be a potential health concern by the environmental professional. Depending on the nature of the contamination (if any), the SCDEM, or the current designated CUPA, shall be contacted for further direction, which could include further investigation or remediation to all applicable federal, State, and local levels.</p> <p>(c) If any required remediation has not yet been completed for contaminated soils or groundwater identified during construction, the project applicant shall perform a human health risk assessment, in accordance with the guidelines from USEPA and DTSC, to determine health risks to construction workers and future site occupants. The results of the human health risk assessment may indicate that added protection for construction workers and/or requirements for vapor barriers in structures would be required to prevent adverse effects on indoor air quality. The human health risk assessment shall be submitted to the SCDEM for review and approval, and engineering controls, if required to reduce health risks to acceptable levels for future site users, shall be incorporated into the project design.</p> |                                        |

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| Impact                                                                                                                                                                                           | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Level of Significance After Mitigation |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                                  |                                           | (d) If remediation of soil and/or groundwater has not been completed by the time site development occurs, the remediation systems shall be designed so that the systems can be effectively installed, operated, and removed without substantial conflict with planned land uses. The design of project improvements in the areas of the know soil and/or groundwater contamination locations shall be submitted to the SCDem for concurrence prior to building permit issuance.<br><u>And</u><br>(e) Prior to any ground-disturbing activities on either Lagoon Valley Regional Park or the proposed utility corridor north of I-80, or any other off-site utility corridor, the Applicant shall conduct a Phase I ESA for each of these sites and follow the recommendation(s) within each Phase I ESA, as well as Mitigation Measures 4.13-3(b) through (d). |                                        |
| <b>4.13-4 Construction and occupancy of the proposed elementary school could create a health hazard to school children and school workers due to previously unidentified contaminated soils.</b> | PS                                        | 4.13-4<br>(a) Prior to the construction of the proposed school site, the project applicant shall conduct a Preliminary Endangerment Assessment (PEA) of the proposed school site, pursuant to Title 22 of the CCR, Chapter 51.5, Section 69107(c), where the PEA shall include sampling to determine one or more of the following: <ul style="list-style-type: none"> <li>• If a release of hazardous material has occurred and, if so, the extent of the release;</li> <li>• If there is the threat of a release of hazardous materials; and</li> <li>• If a naturally occurring hazardous material is present.</li> </ul> (b) Implementation of Mitigation Measures 4.13-3(a) through (d).                                                                                                                                                                   | LS                                     |
| <b>4.13-5 Implementation of the Proposed Project could expose people or structures to a significant risk of loss, injury, or death involving wildland fires.</b>                                 | LS                                        | 4.13-5 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | NA                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                                                                                                                      | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Level of Significance After Mitigation |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>4.14 Cultural Resources</b>                                                                                                                                                                                                                                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                        |
| <p><b>4.14-1 Construction of sewer line option 1 or sewer line option 2 could affect prehistoric sites CA-SOL-324, CA-SOL-270, or CA-SOL-30/H or historic archaeological features associated with the Peña family adobes (sewer option 2 and northern portion of Business Village).</b></p> | S                                         | <p>4.14-1</p> <p>(a) If CA-SOL-270 or CA-SOL-324 cannot be avoided by altering the proposed sewer and other utility alignments, the trench for the selected alignment shall be pre-excavated with a backhoe under the direction of a qualified archaeologist to identify residential features, human graves, and other intact cultural deposits. Prior to any excavation, the qualified archaeologist shall prepare a research design conforming to the requirements of section 15126.4(b)(3)(C) of the CEQA Guidelines.</p> <p>(b) If human burials or cultural features are encountered during pre-excavation, trenching shall stop, and the burial or feature should be excavated in a controlled manner and thoroughly recorded consistent with current archaeological standards. Non-feature site deposits shall also be sampled through the hand excavation of columns retrieved from trench sidewalls and/or from control units placed in the trench bottom. All hand-excavated sediments and soils shall be processed through 1/8-in mesh screen, with a minimum of 10 cubic meters of site deposit sampled in this manner. Flotation samples excavated from trench sidewalls shall also be obtained to recover fine-grained faunal and floral remains. The location of the utility trenches and any features or burials encountered during excavation shall be mapped using GPS technology. Trench side walls shall be thoroughly examined and recorded by a qualified geoarchaeologist and a site map shall be prepared. All recovered materials shall be analyzed, including radiocarbon and obsidian hydration dating, and a thorough research report prepared documenting the results of the investigation. This report shall, at a minimum, follow guidelines set forth in Archaeological Resource Management Reports Recommended Content and Format (Office of Historic Preservation [OHP], 1990).</p> | LS                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                    | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Level of Significance After Mitigation |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                           |                                           | (c) During construction, all ground-disturbing activities within sites CA-SOL-30/H, CA-SOL-270, CA-SOL-324 or other archaeologically sensitive zones (e.g., Peña family adobes) shall be monitored by a qualified archaeologist (listed on the Registry of Professional Archaeologists [ROPA]).<br>(d) Should an intact deposit or feature be uncovered during monitoring at CA-SOL-30/H, CA-SOL-270, CA-SOL-324 or in archaeologically sensitive zones, work in the immediate vicinity shall stop and the find assessed as to its legal significance by a qualified archaeologist. Any significant historical features or other deposits shall be hand excavated and sampled using accepted archaeological standards. Any foundation remnants shall be mapped, photo documented, and recorded prior to removal. The location of all finds shall be recorded on project plans and documented using GPS technology.                                                                                            |                                        |
| <b>4.14-2 Construction along utility corridors east of Lagoon Valley Lake could encounter a potentially significant prehistoric deposit at CA-SOL-43.</b> | PS                                        | 4.14-2<br>(a) Prior to construction, a qualified archaeologist shall implement a testing program to determine whether significant deposits associated with CA-SOL-43 lie within the proposed utilities alignment. Prior to any excavation, the archaeologist shall prepare a research design conforming to the requirements of Section 15126.4(b)(3)(C) of the CEQA Guidelines. The research design shall include procedures for finds that are determined not to be significant, as well as finds that are potentially significant.<br>(b) A qualified archaeologist shall hand-excavate surface transect units between the recorded site boundary and the utility corridor to determine if intact cultural deposits associates with CA-SOL-43 are present. If such deposits exist in the proposed corridor, a 1-x-2-m control unit shall be excavated under the direction of a qualified archaeologist and the material evaluated to determine if the deposit represents a significant resource under CEQA. | LS                                     |

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| Impact                                                                                                                                                                                                        | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Level of Significance After Mitigation |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                                               |                                           | (c) If the site deposit does not appear significant, no further management is required.<br>(d) If a significant deposit is encountered, the project applicant shall, in consultation with the lead agency, evaluate alternative alignments for the proposed utilities to avoid the deposits associated with CA-SOL-43.<br>(e) If the utilities alignment cannot feasibly be moved, data recovery excavations shall be conducted under the direction of a qualified archaeologist immediately following conclusion of the test excavation. This work shall include the excavation of additional 1-x-2-m control units (up to 6 cubic meters) and collection of column samples for flotation processing to recover plant macrofossils and small faunal remains. The site shall be mapped, unit profiles described, and the location of all control units recorded using GPS technology. All materials recovered during the test and data recovery excavations shall be analyzed and a research report prepared following guidelines set forth in Archaeological Resource Management Reports: Recommended Content and Format (OHP 1990). |                                        |
| <b>4.14-3 Earth-disturbing activities associated with implementation of the Proposed Project could result in the disturbance of previously unidentified prehistoric or historic archaeological resources.</b> | PS                                        | 4.14-3<br>(a) In the event that such historical resources are discovered during project construction, construction work in the vicinity of the find shall cease until the find has been evaluated by a qualified archaeologist and a course of action decided upon, as described in (b), below. A physical barrier (e.g., exclusionary fencing) shall be erected to prohibit potentially destructive activities from occurring and/or visitation and potential vandalism by unauthorized personnel. Project-related activities and access to the location shall be prohibited until the City of Vacaville is notified otherwise.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | LS                                     |

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| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Level of Significance After Mitigation |
|--------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <p>(b) A qualified archaeologist shall be notified to make a preliminary assessment of the discovered resource. Following this assessment, the City of Vacaville and the applicant shall be provided written notice to alert them of the situation. In coordination with the City and the applicant, the archaeologist shall evaluate the potential significance of the find and recommend what treatment measures, if any, are appropriate.</p> <p>The qualified archaeologist shall conduct the evaluation of the discovered resource following these considerations:</p> <ul style="list-style-type: none"> <li>• CRHR criteria for evaluation should be applied to determine if the resource is significant.</li> <li>• The evaluation should be conducted in following a research design consistent with that found in Guidelines for Archaeological Research Designs (Office of Historic Preservation [OHP], 1991).</li> <li>• The City and the applicant (or at their request, the qualified archaeologist) shall consult with the appropriate Native American tribal groups during the evaluation and treatment phases.</li> </ul> <p>(c) To expedite the review process after fieldwork is completed, the qualified archaeologist shall prepare a brief management summary report for the City and the applicant that describes and assesses the significance of the discovered resource, including a discussion of the methods and criteria used to determine significance. If the resource is deemed eligible for inclusion in the CRHP, the report shall detail avoidance and/or treatment recommendations.</p> <p>(d) A comprehensive research report, detailing the results of any archaeological evaluation and/or data recovery treatment activities associated with the unanticipated discovery, shall be prepared by the qualified archaeologist, and submitted to</p> |                                        |

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                                                                          |                                           | the City and the applicant no later than 360 days after the completion of any field studies associated with this effort. The comprehensive research report shall follow guidelines set forth in Archaeological Resource Management Reports: Recommended Content and Format (OHP, 1990).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                        |
| <p><b>4.14-4 Trenching for sewer line option 2 in the vicinity of the Peña Adobe could subject the structure to vibration, which could affect the building structure or non-structural elements.</b></p>                                 | PS                                        | <p>4.14-4<br/>(a) Prior to utility trenching adjacent to the Peña Adobe, an engineering analysis on the adobe shall be made by an engineer qualified in acoustic/vibration analysis to determine the level (if any) of vibrational effects that could occur during construction. If such effects could occur and could result in damage, appropriate equipment selection and construction methods shall be specified in construction contracts to avoid the potential for damage.</p> <p>(b) A monitoring program shall be developed and implemented during construction under the direction of a qualified professional to monitor vibration levels and to evaluate the effectiveness of controls. In the event of adverse effects, work shall stop immediately and corrective action taken.</p>                                                                                                                                                                           | LS                                     |
| <p><b>4.14-5 Earth-disturbing activities associated with implementation of the Proposed Project could result in the disturbance of previously unidentified human remains, including those interred outside of formal cemeteries.</b></p> | PS                                        | <p>4.14-5<br/>(a) In the event that human skeletal remains or material thought to be human remains are encountered during project construction, work shall be halted in the general vicinity of the finds and the City and the applicant immediately notified. If possible, all finds will be preserved in place and protective measures implemented to safeguard the remains from further disturbance or vandalism. Following protection of the finds, the following steps will be implemented:</p> <p>The City and the applicant shall immediately retain a qualified cultural resources specialist to assess the remains and determine whether they are human. If the find is determined to be non-human and nonarchaeological, then no further consideration is necessary and construction may resume. If the find is determined to be non-human, but archaeological, then the procedures described in Mitigation Measure 4.14-2 (a) through (e) shall be followed.</p> | LS                                     |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Level of Significance After Mitigation |
|--------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <p>(b) If the find is determined to be human, the Solano County Coroner and representatives of the City of Vacaville and the applicant shall be simultaneously notified. The cultural resources specialist or physical anthropologist shall work with the Coroner to determine whether the remains are prehistoric Native American or are of more recent origin. If the remains are found to be of recent origin, then the discovery becomes a police issue. If the remains are determined to be Native American, the following shall be implemented:</p> <ul style="list-style-type: none"> <li>i. The NAHC shall be notified by the Coroner within 24 hours of identification. Although it is the Coroner's responsibility to notify the NAHC, a representative of the City shall also contact the NAHC and verify that the notification was made. The NAHC shall immediately notify the person it believes to be the Most Likely Descendant (MLD) for purposes of consultation.</li> <li>ii. Following notification, City shall consult with the selected MLD and provide the opportunity within 24 hours for the MLD to visit the site of discovery, provided permission from the legal landowner can be obtained. The City shall work with the MLD to arrive at a satisfactory plan for treatment and final disposition of the remains. The preferred resolution shall be to preserve the remains in place and to avoid further project-related impacts. If preservation in-place is not a viable option, in consultation with the MLD, the City shall develop an appropriate plan for the recovery and documentation of the remains and any associated grave goods. This plan shall be implemented along with an Unanticipated Historic Properties evaluation to determine the CRHR significance of the discovery and any associated archaeological deposit.</li> </ul> |                                        |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                        | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Level of Significance After Mitigation |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                               |                                           | iii. It is the policy of the State of California that any Native American remains and/or grave goods not immediately reburied will be repatriated. Final disposition of the remains, however, may include re-interment or placement within a state approved curation facility if requested by the MLD.<br>iv. If a satisfactory agreement for the final disposition of the remains cannot be reached, either of the parties may request mediation by the NAHC. In the event that mediation fails, with appropriate dignity, the landowner or their representative must re-inter the remains and any associated items on the property in a location not subject to further disturbance.                                                                                                                             |                                        |
| 4.14-6 Ground-disturbing activities associated with implementation of the Proposed Project could encounter previously unidentified paleontological resources. | PS                                        | 4.14-6<br>(a) The project applicant shall retain a qualified paleontologist to prepare a paleontological resources impact mitigation plan. The plan shall include, but not be limited to, the following elements and requirements: <ul style="list-style-type: none"> <li>• Resource identification training procedures for construction personnel</li> <li>• Procedures for reporting discoveries and their geologic context</li> </ul> (b) If subsurface paleontological resources are encountered, excavation shall halt in the vicinity of the resources and a qualified paleontologist shall evaluate the resource and its stratigraphic context. The monitor shall be empowered to temporarily halt or redirect construction activities to ensure avoidance of adverse impacts to paleontological resources. | LS                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                    | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Level of Significance After Mitigation |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                           |                                           | <ul style="list-style-type: none"> <li>• During monitoring, if potentially significant paleontological resources are found, “standard” samples shall be collected and processed by a qualified paleontologist to recover micro vertebrate fossils</li> <li>• If significant fossils are found and collected during the Project, they shall be prepared to a reasonable point of identification. Excess sediment or matrix shall be removed from the specimens to reduce the bulk and cost of storage. Itemized catalogs of material collected and identified shall be provided to the museum repository with the specimens</li> <li>• Significant fossils collected during this work, along with the itemized inventory of these specimens, shall be deposited in a museum repository for permanent curation and storage</li> <li>• A report documenting the results of the monitoring and salvage activities, and the significance of the fossils, if any, shall be prepared. The report and inventory, when submitted to the lead agency, signifies the completion of the program to mitigate impacts to paleontological resources</li> <li>• As necessary, the qualified vertebrate paleontologist shall revise the paleontological resources impact mitigation program for the remaining excavation</li> </ul> |                                        |
| <b>4.15 Biological Resources</b>                                                                                                                          |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        |
| <b>4.15-1 Construction of the Proposed Project could result in the loss of approximately 7.65-acres of wetlands or other waters of the United States.</b> | S                                         | 4.15-1<br>(a) All wetlands and waters of the U.S. in the Specific Plan Area shall be avoided to the extent feasible. Avoidance shall be accomplished through the following steps:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | LS                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Level of Significance After Mitigation |
|--------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <ul style="list-style-type: none"> <li>(i) Wetlands and drainages within the Specific Plan Area, including the off-site infrastructure improvements area, but outside the development area shall be identified prior to submittal of final project designs to the City. A jurisdictional wetland delineation shall be submitted to the Corps and verified prior to the commencement of construction (a wetland delineation has already been submitted to the Corps for the development area, but it has not yet been verified).</li> <li>(ii) The project applicant shall design the final project to retain the maximum amount of existing wetlands and establish minimum 25 to 50 foot buffers around all sides of these features. In addition, the final project design shall not cause significant changes to the pre-project hydrology, water quality or water quantity in any wetland that is to be retained on site. This shall be accomplished by avoiding or repairing any disturbance to the hydrologic conditions supporting these wetlands, as verified through wetland protection plans.</li> </ul> |                                        |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Level of Significance After Mitigation |
|--------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <p>(b) Where avoidance of existing wetlands and drainages is not feasible, then mitigation measures shall be implemented for the project related loss of any existing wetlands on site, such that there is no-net loss of wetland acreage or habitat value. Wetland habitat acreage can be greater than the acreage of wetlands that fall under the jurisdiction of the Corps.</p> <p>Wetland mitigation shall be developed as a part of the Section 404 CWA permitting process. Mitigation is to be provided prior to construction related impacts on the existing wetlands. The exact mitigation ratio is variable, based on the type and value of the wetlands affected by the project, but will be a minimum of 1:1 for preservation and 1:1 for construction of new wetlands. In addition, a wetland mitigation and monitoring plan shall be developed that includes the following:</p> <ul style="list-style-type: none"> <li>• Descriptions of the wetland types, and their expected functions and values;</li> <li>• Performance standards and monitoring protocol to ensure the success of the mitigation wetlands over a period of five to ten years;</li> <li>• Engineering plans showing the location, size and configuration of wetlands to be created or restored;</li> <li>• An implementation schedule showing that construction of mitigation areas will commence prior to or concurrently with the initiation of construction; and</li> <li>• A description of legal protection measures for the preserved wetlands (i.e., dedication of fee title, conservation easement, and/or an endowment held by an approved conservation organization, government agency or mitigation bank).</li> </ul> |                                        |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                         | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Level of Significance After Mitigation |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                |                                           | (c) The project applicant or their agent shall acquire all appropriate wetland permits prior to construction of the project. These permits include a Section 404 Wetlands Fill Permit from the U.S. Army Corp of Engineers, a Section 401 Water Quality Certification from the Regional Water Quality Control Board, and A Section 1601 Streambed Alteration Agreement from the California Department of Fish and Game.<br>(d) The permits required above shall be obtained prior to the issuance of grading permits by the City.                                                                                                                                                                                                                                                                                                                                           |                                        |
| <b>4.15-2 Construction of the Proposed Project could result in the loss of vernal pool crustacean habitat.</b> | S                                         | 4.15-2<br>(a) Prior to development or construction activities in the park, open space, or utility corridors, the project applicant shall conduct a survey of all grasslands affected by construction within the Specific Plan boundaries to determine if suitable habitat for vernal pool crustaceans is present. If no suitable habitat for these species is present, then no further mitigation would be required.<br>(b) The project applicant may assume presence of listed vernal pool crustaceans and fully mitigate for any project related effects to that habitat, or they may have a qualified biologist survey the potential habitat following USFWS protocol to determine presence or absence of these species. If, through the surveys, it is determined that vernal pool crustaceans do not occupy the habitat, then no further mitigation would be required. | LS                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                       | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Level of Significance After Mitigation |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                              |                                           | <p>(c) If it is either determined that vernal pool crustaceans occupy the habitat, or presence is assumed, then to the extent feasible, buffer areas shall be established such that any proposed development shall be at least 250 feet from the vernal pool crustacean habitat. Such areas shall be flagged, and encircled with an exclusionary fence. These areas shall be preserved in a conservation easement or other acceptable agreement with a USFWS approved agency (e.g., CDFG or a conservation organization such as the Solano Land Trust). Any such agreements shall be conducted in coordination with the USFWS.</p> <p>(d) If impacts on vernal pool crustaceans or their habitat are unavoidable, then formal consultation with the USFWS pursuant to Section 7 of FESA would be required. Specific mitigation measures would be developed as a part of the Section 7 Consultation, but may be accomplished through either onsite preservation and creation of vernal pool crustacean habitat, or payment into an off-site mitigation bank.</p> |                                        |
| <p><b>4.15-3 Construction of the Proposed Project could result in the loss of Swainson’s hawk individuals (eggs, nestlings or juveniles), and other nesting raptors (birds-of-prey).</b></p> | <p>S</p>                                  | <p>4.15-3<br/>(a) Project related disturbance to any active nest shall be avoided during the nesting season (March 1 through August 15). The project applicant shall retain a qualified biologist to conduct a pre-construction survey for nesting Swainson’s hawk and other raptors within 0.5 mile of the development area. Surveys shall be conducted no more than 30 days prior to the commencement of construction related activities within the breeding season. If construction activities are to begin and end outside the breeding season for this species, then the pre-construction surveys shall not be required. If active Swainson’s hawk or other raptor nests are discovered during the survey, then the project applicant shall consult with the City and CDFG, to develop appropriate avoidance and protection measures for the identified nest, including appropriate setbacks during the nesting season.</p>                                                                                                                                | <p>LS</p>                              |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Level of Significance After Mitigation |
|--------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <p>(b) In addition to the preconstruction surveys, routine monitoring of any known active nest sites within 0.5 miles of the development area shall be conducted by a qualified biologist throughout the nesting season, or until construction activities have ceased. The purpose of this monitoring is to document nesting activity and any signs of disturbance. The biologist shall submit to the City and CDFG a report of the findings that includes a summary of observations, nesting success and any protective measures that were implemented. If any known or suspected disturbance to nesting raptors is observed, then the biologist shall report the observation to the City/CDFG immediately and the parties shall take appropriate remedial steps, including temporary cessation of construction activities in the areas surrounding the nest. In addition, the project applicant shall have a qualified biologist conduct an environmental awareness training program for all construction personnel to inform them of their responsibilities regarding the protection of sensitive biological resources, including Swainson's hawk.</p> <p>(c.1) To address potential losses of Swainson's hawk foraging habitat, prior to the first residential building permit within the project, the project applicant shall pay to the city a mitigation fee to fund the acquisition of a conservation easement or easements covering lands suitable for foraging by Swainson's hawk.</p> <p>(c.2) Based upon the distance of the project site from known active Swainson's hawk nests, and the amount of open space already preserved around the project site, the amount of this fee shall be sufficient to fund the acquisition of easements covering mitigation lands at a ratio of approximately 0.5 acre for every acre of suitable foraging area within the planning area converted to other uses, together with an appropriate endowment for monitoring purposes, subject to consultation as described in Mitigation Measure 4.15-3(c.3).</p> |                                        |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                   | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Level of Significance After Mitigation |
|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                          |                                           | (c.3) The precise amount and location of mitigation lands shall be determined in consultation between the developer, the City and the department of fish and game. If mitigation lands (or a conservation easement covering the same) have not been acquired by the time of the first building permit, the city shall hold the project applicant's contribution in a separate, interest-bearing account until such time as the appropriate lands are identified through the consultation with CDFG and City and acquired by the City or preserved through other methods such as a suitable mitigation bank.<br><br>(c.4) In the alternative, these amounts may be paid by the City into the Solano County HCP effort if and when it becomes approved. |                                        |
| <b>4.15-4 Construction of the Proposed Project could result in the loss of burrowing owl individuals (eggs, nestlings or juveniles).</b> | S                                         | 4.15-4<br>(a) The project applicant shall hire a qualified biologist to conduct both nesting and wintering season surveys for burrowing owl to determine if the site is used by this species. The timing and methodology for the surveys are based on the CDFG/Burrowing Owl Consortium Survey Guidelines and are detailed below. CDFG may require that these surveys be repeated annually if project construction is expected to span over two or more years.                                                                                                                                                                                                                                                                                        | LS                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Level of Significance After Mitigation |
|--------|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|        |                                           | <p><u>Winter Season (December 1 through January 31)</u></p> <ul style="list-style-type: none"> <li>Four site visits on separate days, 2 hours before to 1 hour after sunset or 1 hour before to 2 hours after sunrise.</li> </ul> <p><u>Nesting Season (February 1 to August 31)</u></p> <ul style="list-style-type: none"> <li>Four site visits on separate days, 2 hours before to 1 hour after sunset or 1 hour before to 2 hours after sunrise. At least two of the surveys shall be conducted during the peak nesting season between April 15 and July 15.</li> </ul> <p>(b) In addition to the wintering and nesting season surveys, pre-construction surveys shall be conducted by an experienced biologist within 30-days prior to the start of work activities where land conversions are planned in known or suitable habitat areas. If construction activities are delayed for more than 30 days after the preconstruction surveys, then a new preconstruction survey will be required. All surveys shall be conducted in accordance with the CDFG/Burrowing Owl Consortium survey protocols (Burrowing Owl Consortium, 1993).</p> <p>(c) If burrowing owls are discovered in the Specific Plan area, the project applicant shall notify the City and CDFG. A qualified biologist shall implement a routine monitoring program and establish a fenced exclusion zone around each occupied burrow. No construction activities shall be allowed within the exclusion zone until such time that the burrows are determined to be unoccupied. The buffer zones shall be a minimum of 150 feet from an occupied burrow during the non-breeding season (September 1 through January 31), and a minimum of 250 feet from an occupied burrow during the breeding season (February 1 through August 31).</p> |                                        |

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| Impact                                                                                                                           | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Level of Significance After Mitigation |
|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                  |                                           | (d) The project applicant shall provide appropriate mitigation for project related effects on burrowing owl in consultation with CDFG. Mitigation can be conducted either onsite, or at an off-site location that is approved by the CDFG. Preference is for onsite within open space areas, if possible.<br>(e) The CDFG shall be consulted regarding the implementation of avoidance or passive relocation methods. All activities that will result in a disturbance to burrows shall be approved by CDFG prior to implementation.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                        |
| <b>4.15-5 Construction of the Proposed Project could result in loss of Valley elderberry longhorn beetles and their habitat.</b> | S                                         | 4.15-5<br>(a) Prior to the approval of the Proposed Project, the project proponents shall conduct a project-specific survey for potential VELB habitat (elderberry shrubs).<br>(b) Any ground disturbing activities within 30 m of elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level shall conform to the following minimum avoidance measures:<br><br>1) Applicants shall provide a minimum setback of at least 6 m from the drip line of each elderberry plant containing stems measuring 1.0 inch or greater in diameter at ground level. The setbacks shall be fenced and flagged to identify equipment and materials encroachment into the setback zone. Fire fuel breaks (disked land) may not be included within the 6 m set back. Where encroachment within the 20 m setback zone is unavoidable, the applicant shall provide compensatory mitigation at a 50 percent ratio of the standard requirements identified in Table 4.15-3. | LS                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                       | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Level of Significance After Mitigation                               |                                                                     |                                |  |  |  |                     |              |                                                         |                                                                      |                                                                     |                                |                   |    |     |     |     |     |     |     |     |      |     |                   |    |     |     |     |     |     |     |      |      |     |            |    |     |     |      |     |     |     |      |      |     |  |
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|                              |                                           | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="6" style="text-align: center;">Elderberry Mitigation Ratios</th> </tr> <tr> <th style="text-align: center;">Location/Stem Size*</th> <th style="text-align: center;">Exit Holes**</th> <th style="text-align: center;">Elderberry Seedling Ratio September 1 to February 14***</th> <th style="text-align: center;">Elderberry Seedling Ratio March 15 to February 15 (2 x normal ratio)</th> <th style="text-align: center;">Elderberry Seedling Ratio June 15 to August 31 (2.5 x normal ratio)</th> <th style="text-align: center;">Associate d Native Plant Ratio</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">Stems ≥ 1" &amp; &lt; 3"</td> <td style="text-align: center;">No</td> <td style="text-align: center;">2:1</td> <td style="text-align: center;">4:1</td> <td style="text-align: center;">5:1</td> <td style="text-align: center;">1:1</td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">4:1</td> <td style="text-align: center;">8:1</td> <td style="text-align: center;">10:1</td> <td style="text-align: center;">2:1</td> </tr> <tr> <td rowspan="2" style="text-align: center;">Stems ≥ 3" &amp; &lt; 5"</td> <td style="text-align: center;">No</td> <td style="text-align: center;">3:1</td> <td style="text-align: center;">6:1</td> <td style="text-align: center;">8:1</td> <td style="text-align: center;">1:1</td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">6:1</td> <td style="text-align: center;">12:1</td> <td style="text-align: center;">15:1</td> <td style="text-align: center;">2:1</td> </tr> <tr> <td rowspan="2" style="text-align: center;">Stems ≥ 5"</td> <td style="text-align: center;">No</td> <td style="text-align: center;">4:1</td> <td style="text-align: center;">8:1</td> <td style="text-align: center;">10:1</td> <td style="text-align: center;">1:1</td> </tr> <tr> <td style="text-align: center;">Yes</td> <td style="text-align: center;">8:1</td> <td style="text-align: center;">16:1</td> <td style="text-align: center;">20:1</td> <td style="text-align: center;">2:1</td> </tr> </tbody> </table> <p>* Ratios are shown for elderberry occurring in existing or historic riparian situations. Ratios for elderberry in non-riparian situations are 50 percent of the standard ratio.<br/>           ** The presence of exit holes in a stem, bush, or contiguous clump applies to the entire site<br/>           *** No removal of elderberry is allowed between March 15 and June 15, except in cases of isolated bushes greater than 0.5 mile removed from other suitable valley elderberry longhorn beetle habitat and there is no sign of use (exit holes).</p> <ol style="list-style-type: none"> <li>2) Construction contractors will be briefed on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.</li> <li>3) Work crews will be instructed about the status of the beetle and the need to protect its elderberry host plant.</li> <li>4) No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant will be used in the buffer areas, or within 30 m of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.</li> </ol> | Elderberry Mitigation Ratios                                         |                                                                     |                                |  |  |  | Location/Stem Size* | Exit Holes** | Elderberry Seedling Ratio September 1 to February 14*** | Elderberry Seedling Ratio March 15 to February 15 (2 x normal ratio) | Elderberry Seedling Ratio June 15 to August 31 (2.5 x normal ratio) | Associate d Native Plant Ratio | Stems ≥ 1" & < 3" | No | 2:1 | 4:1 | 5:1 | 1:1 | Yes | 4:1 | 8:1 | 10:1 | 2:1 | Stems ≥ 3" & < 5" | No | 3:1 | 6:1 | 8:1 | 1:1 | Yes | 6:1 | 12:1 | 15:1 | 2:1 | Stems ≥ 5" | No | 4:1 | 8:1 | 10:1 | 1:1 | Yes | 8:1 | 16:1 | 20:1 | 2:1 |  |
| Elderberry Mitigation Ratios |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                      |                                                                     |                                |  |  |  |                     |              |                                                         |                                                                      |                                                                     |                                |                   |    |     |     |     |     |     |     |     |      |     |                   |    |     |     |     |     |     |     |      |      |     |            |    |     |     |      |     |     |     |      |      |     |  |
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| Stems ≥ 1" & < 3"            | No                                        | 2:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 4:1                                                                  | 5:1                                                                 | 1:1                            |  |  |  |                     |              |                                                         |                                                                      |                                                                     |                                |                   |    |     |     |     |     |     |     |     |      |     |                   |    |     |     |     |     |     |     |      |      |     |            |    |     |     |      |     |     |     |      |      |     |  |
|                              | Yes                                       | 4:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8:1                                                                  | 10:1                                                                | 2:1                            |  |  |  |                     |              |                                                         |                                                                      |                                                                     |                                |                   |    |     |     |     |     |     |     |     |      |     |                   |    |     |     |     |     |     |     |      |      |     |            |    |     |     |      |     |     |     |      |      |     |  |
| Stems ≥ 3" & < 5"            | No                                        | 3:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 6:1                                                                  | 8:1                                                                 | 1:1                            |  |  |  |                     |              |                                                         |                                                                      |                                                                     |                                |                   |    |     |     |     |     |     |     |     |      |     |                   |    |     |     |     |     |     |     |      |      |     |            |    |     |     |      |     |     |     |      |      |     |  |
|                              | Yes                                       | 6:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 12:1                                                                 | 15:1                                                                | 2:1                            |  |  |  |                     |              |                                                         |                                                                      |                                                                     |                                |                   |    |     |     |     |     |     |     |     |      |     |                   |    |     |     |     |     |     |     |      |      |     |            |    |     |     |      |     |     |     |      |      |     |  |
| Stems ≥ 5"                   | No                                        | 4:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8:1                                                                  | 10:1                                                                | 1:1                            |  |  |  |                     |              |                                                         |                                                                      |                                                                     |                                |                   |    |     |     |     |     |     |     |     |      |     |                   |    |     |     |     |     |     |     |      |      |     |            |    |     |     |      |     |     |     |      |      |     |  |
|                              | Yes                                       | 8:1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 16:1                                                                 | 20:1                                                                | 2:1                            |  |  |  |                     |              |                                                         |                                                                      |                                                                     |                                |                   |    |     |     |     |     |     |     |     |      |     |                   |    |     |     |     |     |     |     |      |      |     |            |    |     |     |      |     |     |     |      |      |     |  |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Level of Significance After Mitigation |
|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                       |                                           | 5) Mowing of grasses/ground cover will only occur from July through April to reduce fire hazard. No mowing should occur within 1.5 m of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., avoid stripping away bark through careless use of mowing/trimming equipment).<br><br>6) Trimming of elderberry stems less than 1 inch in diameter may occur between September 1 and March 14. The recommended period for trimming is between November through the first two weeks in February when the plants are dormant and after they have lost their leaves.<br><br>(c) In cases where removal of elderberry shrubs or their stems measuring 1-inch or greater (removal or trimming) is unavoidable, these impacts shall be compensated for through mitigation. Mitigation shall include salvaging and planting the effected elderberry shrubs and planting additional elderberry shrubs and associated native riparian plants according to the ratios specified in the following table. Mitigation planting shall occur, to the maximum extent practicable, in areas adjacent to the impact area and/or located to fill in existing gaps in riparian corridors. |                                        |
| <b>4.15-6 Construction of the Proposed Project could result in the loss of western pond turtles or their habitat.</b> | S                                         | 4.15-6<br>(a) Implement Mitigation Measure 4.15-1(a).<br>(b) If disturbance would occur within a perennial stream or other water body, a qualified biologist shall be retained to monitor the presence of western pond turtle in the active construction area. If individual western pond turtles are observed that may be in harms way, then construction activities shall cease until the biologist can move the turtle to a safe location.<br>(c) Buffer zones shall be established along areas of potential habitat for western pond turtle (i.e., perennial drainages) at a minimum of 50 feet from the top of stable bank pursuant to                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LS                                     |

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| Impact                                                                                                                        | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Level of Significance After Mitigation |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                               |                                           | guidance contained in the City's General Plan and wetland mitigation guidelines. Mitigation measures that have been proposed for addressing effects to wetlands, drainages and riparian corridors will concurrently facilitate the avoidance and/or minimization of effects on western pond turtle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                        |
| <p><b>4.15-7 Construction of the Proposed Project could result in the loss and degradation of rare plant populations.</b></p> | <p>S</p>                                  | <p>4.15-7</p> <p>(a) The project applicant shall retain a qualified biologist to conduct focused preconstruction surveys within the project site and off-site areas proposed for infrastructure development for special status plant species that could potentially occur in the Specific Plan area during the appropriate time of year (March through May). If none of these species are located during the surveys, no further mitigation would be required.</p> <p>(b) If any special-status plants are found to be present in the Specific Plan area, those plants shall be avoided to the greatest extent feasible. Habitats that support special-status plants that can be avoided shall be flagged and encircled with orange construction fencing to protect them from disturbance during construction of the project. These areas shall be preserved in perpetuity through conservation easements with an appropriate agency, and shall have appropriate buffer zones between their boundaries and areas of development. These buffers shall be a minimum of 250 feet if development is down slope of the special-status plant population and 500 feet if development is upslope of the plant population.</p> | <p>LS</p>                              |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                 | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Level of Significance After Mitigation |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                        |                                           | <p>(c) If the special-status plant population cannot be avoided, then the project applicant shall provide mitigation fore the loss of the population in consultation with either CDFG or USFWS as appropriate. Mitigation could be accomplished through the acquisition of off-site habitat that supports the affected species, or through purchase of mitigation credits at an established mitigation bank that has appropriate habitat for the species. Selection of mitigation sites shall be conducted in consultation with the City, CDFG, CNPS and/or USFWS. Selection of the mitigation site will be subject to the approval of the above agencies. The ratio for off-site mitigation shall be at 2:1 for each acre affected.</p> <p>As a part of either off-site mitigation option, the project applicant shall retain a qualified biologist to collect seed directly from the plants (during the appropriate season), or from the soil containing the seed bank and transplanting of existing plants. Additionally, a Rare Plant Mitigation and Monitoring Plan shall be developed. If mitigation is to occur at an established mitigation bank, seed collection, transplanting and development of the Mitigation and Monitoring Plan typically becomes the responsibility of the mitigation bank as a part of the agreement that the project applicant enters into with the mitigation bank.</p> |                                        |
| <b>4.15-8 Construction of the Proposed Project could result in the loss of oak woodland/savannah, individual oak trees, and other protected trees.</b> | LS                                        | 4.15-8 None required                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | NA                                     |
| <b>4.15-9 Construction of the Proposed Project could result in the loss of Riparian habitat.</b>                                                       | S                                         | <p>4.15-9 (a) The project shall be designed to avoid disturbance to riparian habitat and the drainages that support the habitat. CDFG guidelines call for minimum 100 foot buffers from edge of riparian vegetation, however, smaller buffers can be allowed on a case by case basis.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | LS                                     |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                 |                                           | (b) If disturbance to riparian vegetation is unavoidable, the project applicant shall retain a qualified habitat restoration specialist to develop and implement a Riparian Habitat Mitigation Plan. The goal of the plan is to offset the loss of existing riparian vegetation by establishing replacement riparian vegetation at a ratio of at least 1:1. This compensatory habitat is intended to replace wildlife habitat and hydrologic values either onsite or at an off-site location as approved by the agencies. The details of the Riparian Habitat Mitigation Plan shall be the result of negotiations with the City and the CDFG, but will likely include planting of oaks, walnut, willows and cottonwoods as well as a number of understory species common to the region. It may also include measures to reconfigure channelized drainages such that they have a more naturally meandering pattern. Monitoring of the mitigation habitat shall be conducted by a qualified biologist twice a year for at least five years. A draft of the plan shall be submitted to the Corps, CDFG, RWQCB and the City for review and approval prior to implementation. |                                        |
| <b>4.15-10 Construction of the Proposed Project could result in the loss of nesting loggerhead shrike and white-tailed kite that are protected by the CDFG.</b> | S                                         | 4.15-10<br>(a) Prior to construction, the applicant shall retain a qualified biologist to conduct a nesting survey for loggerhead shrike and protected raptors throughout the development area. If necessary, this survey will be repeated during the construction period. Locations of any active nests shall be mapped and reported to CDFG and the City.<br><br>(b) The project applicant shall develop, in consultation with CDFG, appropriate protection measures to ensure that all identified active nests are protected. These measures shall include monitoring by a qualified biologist through the nesting season or until construction ends (whichever comes first). Additionally, protective measures may include establishment of clearly marked avoidance areas around active nests, prevention of removal of shrubs/trees containing nests during the nesting season.                                                                                                                                                                                                                                                                                    | LS                                     |

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**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                                                                                                                                  | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Level of Significance After Mitigation |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
|                                                                                                                                                                                                                                                                                                         |                                           | (c) The project applicant shall retain a qualified biologist to conduct an environmental awareness training session for all construction personnel to inform them of their responsibilities regarding the protection of sensitive resources. This training program shall include specific information to enable them to avoid disturbance to loggerhead shrike and protected raptors.                                                                                                   |                                        |
| <b>5.1 Cumulative Impacts</b>                                                                                                                                                                                                                                                                           |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                        |
| 5.1-1 Cumulative development, including the Proposed Project, would result in the conversion of Important Farmland (Prime and Unique) to developed uses.                                                                                                                                                | S/C                                       | 5.1-1 None available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | C                                      |
| 5.1-2 Cumulative development, including the Proposed Project, would contribute to the increased demand for parks and recreational facilities.                                                                                                                                                           | LS                                        | 5.1-2 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | NA                                     |
| 5.1-3 The Proposed Project would contribute to a cumulative alteration of aesthetic characteristics of the Lower Lagoon Valley region of Vacaville by increasing urban development in existing rural and undeveloped natural areas.                                                                     | S/C                                       | 5.1-3 None available.                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | C                                      |
| 5.1-4 Cumulative development, including the Proposed Project, could contribute to an increase in nightlighting and overall light in this area of the City.                                                                                                                                              | S/C                                       | 5.1-4 Implement Mitigation Measures 4.4-3(a) through 4.4-3(c).                                                                                                                                                                                                                                                                                                                                                                                                                          | C                                      |
| 5.1-5 Cumulative traffic, including the Proposed Project, would result in further reductions in volume-to-capacity ratios at the Alamo Drive and Merchant Street intersection in the AM peak hour and at the North Texas Street/Manuel Campos Parkway intersection in 2025 in the AM and PM peak hours. | S/C                                       | 5.1-5<br>(a) Construct the new intersection at North Texas Street and Manuel Campos Parkway with an additional northbound right-turn lane, two westbound left-turn lanes and a shared left-through lane, and one eastbound shared through-right-turn lane and one exclusive right-turn lane. Signalize the intersection.<br><br>(b) Construct the California Drive overcrossing over I-80, connecting Marshall Road with Cherry Glen Road, as called for in the Vacaville General Plan. | C                                      |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>5.1-6 Cumulative traffic, including the Proposed Project, would result in further reductions in V/C ratios on the eastbound I-80 freeway segment between the Alamo Drive overcrossing and the Cherry Glen/Peña Adobe overcrossing in the PM peak hour in 2025.</b> | S/C                                       | 5.1-6 Widen eastbound I-80 between the Alamo Drive overcrossing and the Cherry Glen / Peña Adobe Road overcrossing by 12 feet, by adding an auxiliary lane in the existing shoulder area and relocating the shoulder into the adjacent right-of-way. Construct a retaining wall as part of relocating the shoulder.                                                                                                                                                                                                                                                                                                                                                                               | C                                      |
| <b>5.1-7 Cumulative traffic, including the Proposed Project, would result in further reductions in V/C ratios on the Alamo Drive / Merchant Street ramps to I-80 in the AM and PM peak hours.</b>                                                                     | S/C                                       | 5.1-7<br>(a) Implement Mitigation Measure 5.1-6 to add an eastbound lane to I-80 between the Cherry Glen / Peña Adobe overcrossing and the Alamo Drive overcrossing, and, in addition, widen the Alamo Drive / Merchant Street eastbound off-ramp by 12 feet to two lanes and add a new lane at the ramp intersection with Alamo Drive and Merchant Street to accommodate the new ramp lane.<br>(b) Implement Mitigation Measure 4.5-3(b) to widen the I-80 freeway to add a westbound lane between Alamo Drive and North Cherry Glen Road, and construct a retaining wall adjacent to the freeway. In addition, widen the westbound on-ramp at Alamo Drive/Merchant Street to two traffic lanes. | C                                      |
| <b>5.1-8 Cumulative traffic, including the Proposed Project, would further reduce the V/C ratio at the diverge from I-80 to the Alamo Drive / Merchant Street off-ramp.</b>                                                                                           | S/C                                       | 5.1-8 Implement Mitigation Measure 5.1-6 to add an eastbound lane on I-80 between Alamo Drive and Cherry Glen/Peña Adobe Road.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | C                                      |
| <b>5.1-9 Cumulative development, including the Proposed Project, could generate increased air pollutant emissions that could impair implementation of the Clean Air Plan.</b>                                                                                         | S/NC                                      | 5.1-9 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | NA                                     |
| <b>5.1-10 Cumulative development, including the Proposed Project, would include new sources of toxic air contaminants.</b>                                                                                                                                            | LS                                        | 5.1-10 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | NA                                     |
| <b>5.1-11 Cumulative development, including the Proposed Project, would increase vehicle trips and would result in increased noise levels.</b>                                                                                                                        | S/NC                                      | 5.1-11 None required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | NA                                     |

LS = Less than Significant      S = Significant      STSU = Short-term Significant and Unavoidable      PS = Potentially Significant      NA = Not Applicable  
 SU = Significant and Unavoidable      STS = Short-term Significant      NC = Not Considerable      C = Considerable

**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                                                                                       | Level of Significance Prior to Mitigation | Mitigation Measure(s) | Level of Significance After Mitigation |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-----------------------|----------------------------------------|
| 5.1-12 Cumulative development, including the Proposed Project, would contribute to increased flows throughout many areas of the wastewater collection system that could result in required improvements to existing wastewater collection system facilities. | LS                                        | 5.1-12 None required. | NA                                     |
| 5.1-13 Cumulative development, including the Proposed Project, would increase flow to the Easterly Wastewater Treatment Plant.                                                                                                                               | LS                                        | 5.1-13 None required. | NA                                     |
| 5.1-14 Cumulative Development, including the Proposed Project, would result in an increased demand for electrical and natural gas supplies and distribution infrastructure.                                                                                  | LS                                        | 5.1-14 None required. | NA                                     |
| 5.1-15 Cumulative development, including the Proposed Project, would increase the demand for cable television service and could result in the need for additional distribution infrastructure.                                                               | LS                                        | 5.1-15 None required. | NA                                     |
| 5.1-16 Cumulative development, including the Proposed Project, would require the need for additional police personnel to maintain the standard level of police protection services.                                                                          | LS                                        | 5.1-16 None required. | NA                                     |
| 5.1-17 Cumulative development, including the Proposed Project, would require the need for additional fire services to maintain the current level of services.                                                                                                | LS                                        | 5.1-17 None required. | NA                                     |
| 5.1-18 Cumulative development, including the Proposed Project, would increase the amount of solid waste disposed of at B&J Landfill and could decrease capacity at the landfill.                                                                             | LS                                        | 5.1-18 None required. | NA                                     |

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**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                                                                                                                                 | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                             | Level of Significance After Mitigation |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------|----------------------------------------|
| 5.1-19 Cumulative development, including the Proposed Project, would contribute to increased water demands throughout many areas of the existing water distribution system that could result in required improvements to existing water distribution system facilities.                                | LS                                        | 5.1-19 None required.                                             | NA                                     |
| 5.1-20 Cumulative development, including the Proposed Project, would increase the total water demand city-wide.                                                                                                                                                                                        | LS                                        | 5.1-20 None required,                                             | NA                                     |
| 5.1-21 Cumulative development, including the Proposed Project, could increase runoff that could exceed the capacity of existing drainage facilities resulting in localized flooding.                                                                                                                   | S/C                                       | 5.1-21 Implement Mitigation Measures 4.11-1(a) through 4.11-1(c). | NC                                     |
| 5.1-22 Increased runoff generated by cumulative development, including the Proposed Project, could result in sedimentation and increased levels of urban contaminants, which could affect receiving water quality in the Ulatis Creek Watershed.                                                       | S/C                                       | 5.1-22 Implement Mitigation Measures 4.11-3(a) through 4.11-3(f). | NC                                     |
| 5.1-23 Cumulative development, including the Proposed Project, would result in increased exposure of people or structures to potential risks caused by earthquake activity, including strong groundshaking and seismic-related ground failures such as liquefaction and earthquake-induced landslides. | S/C                                       | 5.1-23 Implement Mitigation Measure 4.12-1(a) and (b).            | NC                                     |
| 5.1-24 Cumulative development, including the Proposed Project, could expose people to unidentified soil or groundwater.                                                                                                                                                                                | LS                                        | 5.1-24 None required.                                             | NA                                     |

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 SU = Significant and Unavoidable      STS = Short-term Significant      NC = Not Considerable      C = Considerable

**TABLE 2-1**

**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

| Impact                                                                                                                                                                                                                                                                   | Level of Significance Prior to Mitigation | Mitigation Measure(s)                                                | Level of Significance After Mitigation |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------|----------------------------------------|
| 5.1-25 Cumulative development, including the Proposed Project, could result in cumulative impacts from increased risk related to the storage, uses, and disposal of hazardous materials.                                                                                 | LS                                        | 5.1-25 None required.                                                | NA                                     |
| 5.1-26 Cumulative development, including the Proposed Project, could result in a cumulative increase in hazardous materials transportation in the area, which could expose greater numbers of people to increased risks in the event of an inadvertent release or spill. | LS                                        | 5.1-26 None required.                                                | NA                                     |
| 5.1-27 Cumulative development, including the Proposed Project, would result in a cumulative increase in the number of people and structures which could be exposed to wildland fires.                                                                                    | S/NC                                      | 5.1-27 None required.                                                | NA                                     |
| 5.1-28 Cumulative development, including the Proposed Project, could result in the disturbance of previously identified or unidentified prehistoric sites or historic archaeological features, paleontological resources or previously unidentified human remains.       | S/C                                       | 5.1-28 Implement Mitigation Measures 4.14-1, 4.14-2, 4.14-4, 4.14-6. | C                                      |
| 5.1-29 Cumulative development, including the Proposed Project, could adversely contribute to the cumulative loss of regional wildlife and habitat.                                                                                                                       | S/C                                       | 5.1-29 Implement Mitigation Measures 4.15-1 through 4.15-10.         | NC                                     |

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 SU = Significant and Unavoidable      STS = Short-term Significant      NC = Not Considerable      C = Considerable

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### **3. PROJECT DESCRIPTION**

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## 3. PROJECT DESCRIPTION

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### 3.1 OVERVIEW

In 1990, the City of Vacaville approved the Lower Lagoon Valley Policy Plan (1990 Policy Plan), together with an associated rezoning and general plan amendment, to allow the development of approximately 5 million sf of office/medical/commercial space, 730 residential units, and a golf course on approximately 824 acres of land in the Lower Lagoon Valley area of the City of Vacaville. In addition to the proposed development area, the Policy Plan also included within its scope the then-existing 388-acre Lagoon Valley Regional Park and surrounding undeveloped hillside land to the east and south of the proposed development envelope which was later dedicated to the City, as well as certain existing highway commercial uses located along I-80. Prior to approving the 1990 Policy Plan, the City certified an Environmental Impact Report (the 1990 EIR) to evaluate the impacts of development and other uses proposed in the entire 2,190-acre area covered by the 1990 Policy Plan. Shortly after beginning the tentative mapping, improvement plans and bond assessment process, however, the development proposed in the 1990 Policy Plan was abandoned by the developer because of a change in market conditions.

In December 2002, Triad submitted to the City for consideration a new development concept for Lower Lagoon Valley. Under this development concept, the 1990 Policy Plan would be replaced with a new Lower Lagoon Valley Specific Plan (Specific Plan) that would call for a different mix of land uses. As proposed by Triad, the 879-acre development component of the Specific Plan would consist of a 736-acre residential/recreational community with 1,225 single-family homes and 100 attached townhomes (1,325 total dwelling units), a K-6 public school or a K-8 private school, a 213 acre championship-style golf course with a clubhouse, and neighborhood park spaces throughout the development area. The proposed development would also include an approximately 88-acre business village area with approximately one million sf of commercial/office space, 50,000 sf of Town Center retail space and community center use, and a fire station.

Although the mix of development proposed by Triad is different from that proposed under the 1990 Policy Plan, it would occur within roughly the same development envelope (approximately 879 acres for the Specific Plan area compared to 853 acres for the 1990 Policy Plan area) with some minor differences outlined more fully below. The remaining land uses within the Specific Plan area (primarily the existing Lagoon Valley Regional Park, open space and certain existing commercial land uses within "Area 1" as described below) would not be changed under the Specific Plan.

Following Triad's submission of a concept for the development areas within Lower Lagoon Valley, the City initiated a public process to review the elements of Triad's proposal and provide certain policy-related direction as to the future of the Lower Lagoon Valley. At the conclusion of this process, on February 11, 2003, the City Council directed staff to initiate a formal planning and environmental review process for the Lower Lagoon Valley. Implementation of the Proposed Project would require, in addition to adoption of the Specific Plan (to replace the 1990 Policy Plan), an amendment to the City's General Plan, changes to the zoning of lands in the planning area, and approval of project-specific land use entitlements for development to

proceed. In addition, the City and Triad would enter into a development agreement, in accordance with California Government Code section 65864 et seq. (Development Agreement), to implement the development-related components within Areas 2, 3, 4, and 7 of the Specific Plan area, and pursuant to which the City would secure certain additional benefits from Triad as described below.

## **3.2 PROJECT LOCATION AND SETTING**

### **Project Location**

The Specific Plan area is located in the southwestern portion of the City of Vacaville, within the City's municipal boundaries. The Specific Plan area is bordered by I-80 on the west, and low hills to the north, east and south. The City of Vacaville is located approximately 30 miles southwest of the City of Sacramento and 65 miles northeast of San Francisco. The regional and Specific Plan area locations are shown in Figures 3-1 through 3-3.

Regional access to the Specific Plan area is provided via I-80, which borders the western edge of the project site and is an eight-lane divided freeway controlled by the California Department of Transportation (Caltrans). The I-80 corridor is one of the major routes linking the San Francisco Bay area to the Central Valley. Local access from this major freeway is via Lagoon Valley Road, which traverses the Specific Plan area, and from Peña Adobe/Cherry Glen Road. Local access within Lower Lagoon Valley is from Rivera Road, Lagoon Valley Road and to a lesser extent from Nelson Road from the southwest.

The existing terrain of the Specific Plan area includes gentle slopes on the floor of the valley to moderate slopes at the perimeter. Elevations range from 210 feet (ft) (NGVD 1929) near Lagoon Valley Lake and I-80 to over 900 ft (NGVD 1929) at the perimeter of the Specific Plan area. The existing topography slopes north and west from the surrounding hills and east from I-80, eventually leveling off at the lake. There are broad views and vistas from I-80 into Lower Lagoon Valley and from parts of the valley floor and hill areas to Upper Lagoon Valley to the north and west (north of I-80).

More specifically, the draft Specific Plan divides the overall 2,324-acre planning area into seven "sub-areas" reflecting existing or proposed land uses (see Table 3-1 and Figure 3-4).

- Area 1 (Commercial) – existing private commercial uses to remain
- Area 2 (Business Village) – new development
- Area 3 (Residential) – new development
- Area 4 (Golf Course) – new development
- Area 5 (Lagoon Valley Regional Park) – existing use to remain
- Area 6 (Open Space) – existing use to remain
- Area 7 (Buffer) – new landscape buffers along I-80

The Specific Plan describes proposed land uses and development standards for each of these sub-areas, and these are summarized more fully below.

### **Existing Land Uses**

The following describes the existing land uses in the Specific Plan area (see Table 3-1 and Figure 3-5).



**FIGURE 3-1**  
**Regional Location**

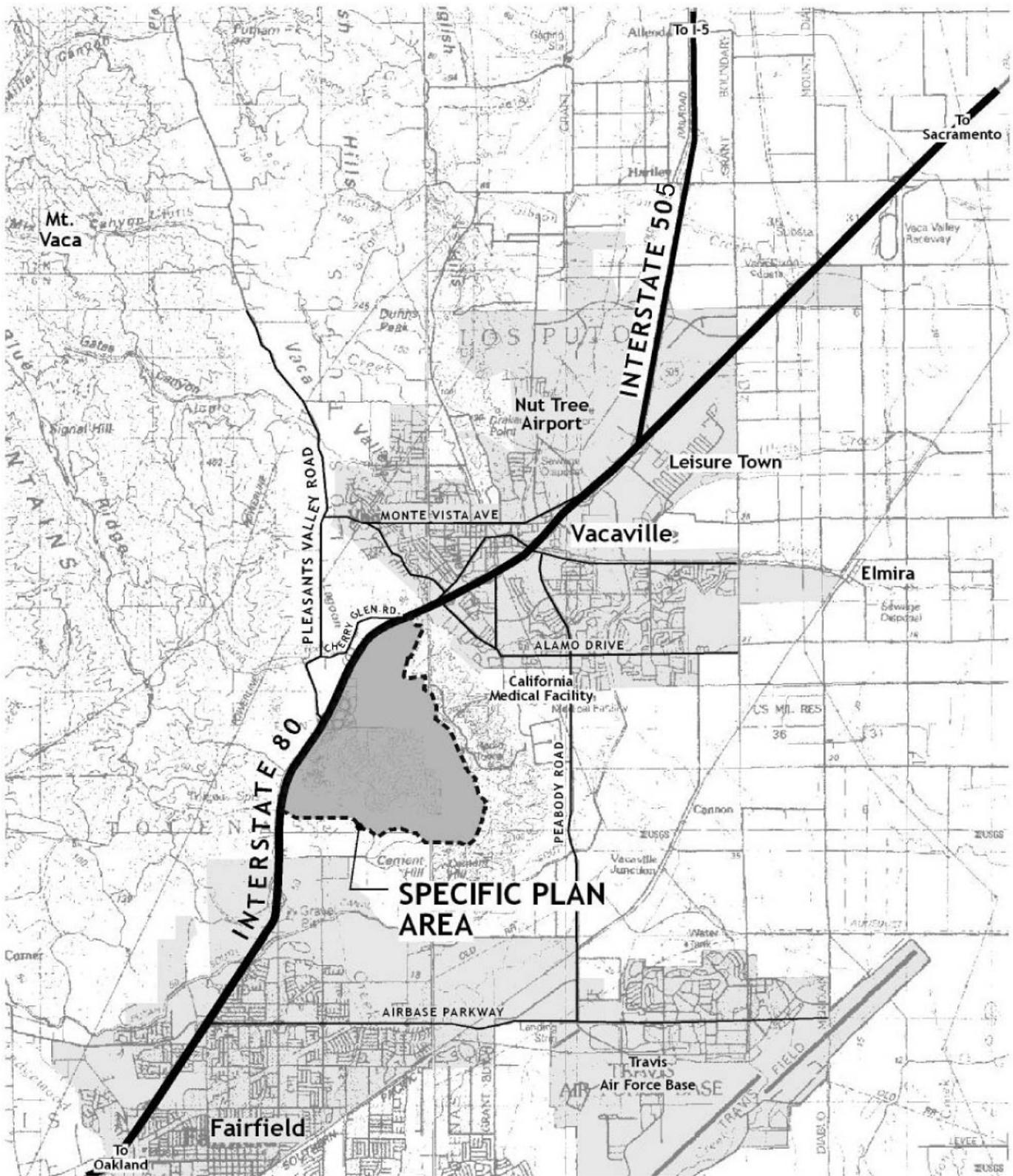
Not to Scale

10794-00

Source: City of Vacaville

City of Vacaville





**FIGURE 3-2**  
**Proposed Project Location**

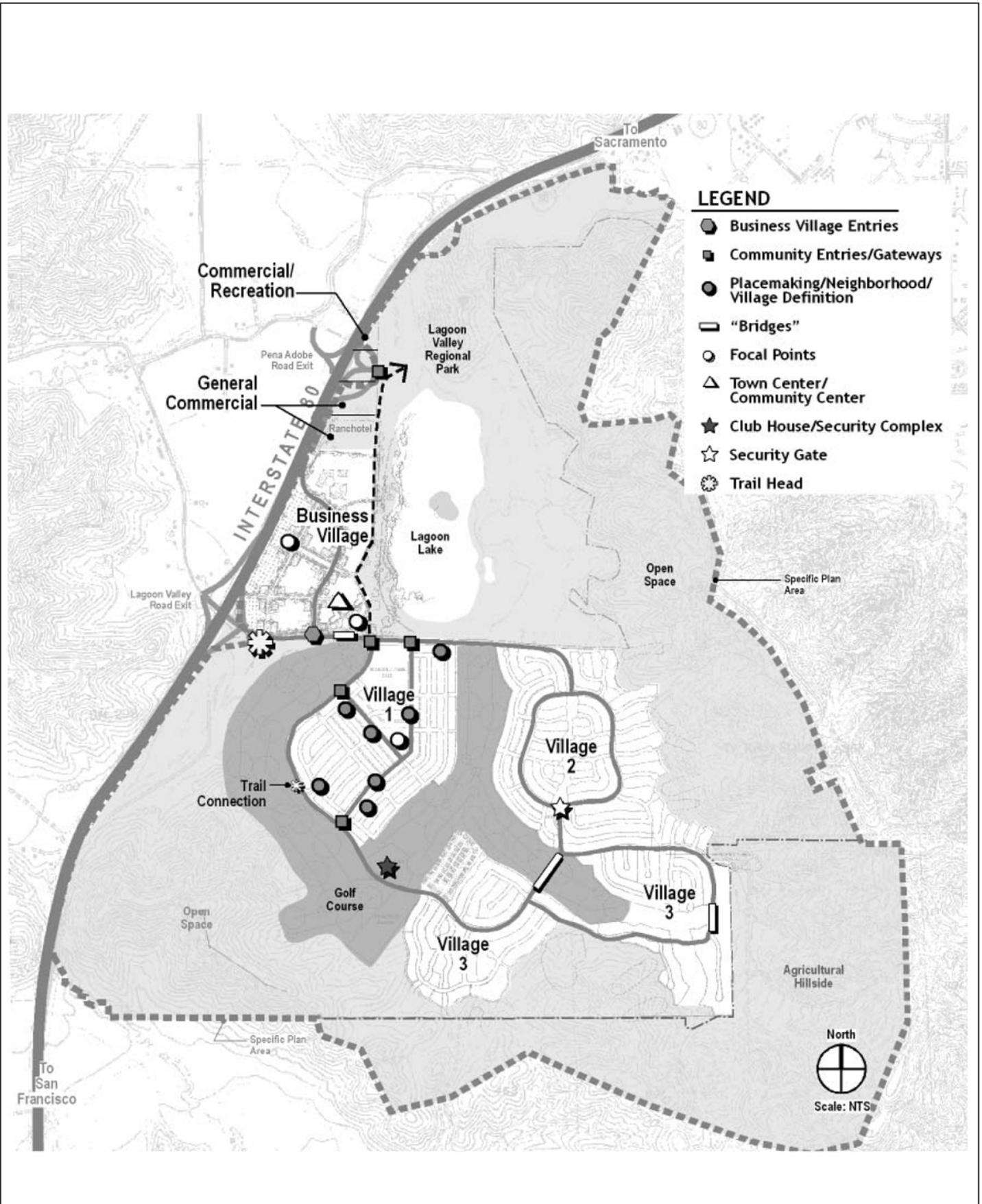
Not to Scale

10794-00

Source: City of Vacaville, 2004

City of Vacaville





**FIGURE 3-3**  
**Proposed Specific Plan**

10794-00 **Source:** City of Vacaville, 2004

Not to Scale

City of Vacaville

**EIP**  
 ASSOCIATES

**TABLE 3-1**

**LOWER LAGOON VALLEY SPECIFIC PLAN PROPOSED USES**

| Sub-Areas                        | Land Use         | Existing or New Use | Acres          | FAR/Density | Sq. Ft./Units    | Comments                                                                                                                                                   |
|----------------------------------|------------------|---------------------|----------------|-------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Area 1 - Commercial</b>       |                  |                     |                |             |                  |                                                                                                                                                            |
| 1A                               | CR (Blue Lagoon) |                     | 5.4            | 0.3         | 70,567           | closed water slide, recreation facilities                                                                                                                  |
| 1B                               | CG (Almond)      |                     | 6.7            | 0.3         | 87,556           | vacant                                                                                                                                                     |
| 1C                               | CG (Ranchotel)   |                     | 9.2            | 0.3         | 120,225          | existing building and facilities                                                                                                                           |
| Total                            |                  | Existing            | 21.3           |             |                  |                                                                                                                                                            |
| <b>Area 2 - Business Village</b> |                  |                     |                |             |                  |                                                                                                                                                            |
|                                  |                  | <b>New</b>          | <b>88</b>      | 0.3         | <b>1,050,000</b> | includes up to 50,000 sq. ft. of neighborhood serving commercial uses and community center; 1 acre fire station site; (5,000 sq. ft. building)             |
| <b>Area 3 - Residential</b>      |                  |                     |                |             |                  |                                                                                                                                                            |
| 3A                               | Village I        |                     | 136            | 4.46        | 512              | 10 to 12 acre school/park                                                                                                                                  |
| 3B                               | Village II       |                     | 142            | 2.83        | 382              |                                                                                                                                                            |
| 3C                               | Village III      |                     | 222            | 1.61        | 415              |                                                                                                                                                            |
| 3D                               | Community Homes  |                     | 23             | 0.79        | 16               | maximum                                                                                                                                                    |
| Subtotal                         |                  | <b>New</b>          | <b>523</b>     |             | <b>1,325</b>     |                                                                                                                                                            |
| <b>Area 4 - Golf Course</b>      |                  |                     |                |             |                  |                                                                                                                                                            |
|                                  |                  | <b>New</b>          | <b>213</b>     |             | <b>17,000</b>    | 10,000 sq. ft. clubhouse with offices, pro shop, restaurant & meeting rooms; 7,000 sq. ft. maintenance facility                                            |
| <b>Area 5 - LV Regional Park</b> |                  |                     |                |             |                  |                                                                                                                                                            |
|                                  |                  | Existing            | 388            |             |                  |                                                                                                                                                            |
| <b>Area 6 - Open Space/AH</b>    |                  |                     |                |             |                  |                                                                                                                                                            |
| 6A                               | OS East          |                     | 385            |             |                  |                                                                                                                                                            |
| 6B                               | AH Southeast     |                     | 356            |             |                  | property outside City limits; included in Specific Plan for planning purposes only; privately owned agricultural properties with some existing residential |
| 6C                               | OS Southwest     |                     | 325            |             |                  |                                                                                                                                                            |
| Total                            |                  | Existing            | 1,066          |             |                  |                                                                                                                                                            |
| <b>Area 7 - Buffer</b>           |                  |                     |                |             |                  |                                                                                                                                                            |
| 7A                               | Nelson Road Berm |                     | 47             |             |                  | one privately owned parcel                                                                                                                                 |
| 7B                               | Rivera Road Berm |                     | 8              |             |                  | some privately owned parcels                                                                                                                               |
|                                  |                  | <b>New</b>          | <b>55</b>      |             |                  |                                                                                                                                                            |
| <b>Total</b>                     |                  |                     | <b>2,354.3</b> |             |                  |                                                                                                                                                            |