

***Draft***

***Environmental Impact Report***



***SOUTH LIVERMORE VALLEY AREA PLAN***

**(SCH. #92033037)**

**June 1992**

**Alameda County Planning Department  
399 Elmhurst Street  
Hayward, CA 94544**



**Table of Contents**

		<i>Page</i>
I.	<b>INTRODUCTION</b>	
	Background	I- 1
	EIR Purpose	- 2
	EIR Approach	- 2
II.	<b>SUMMARY</b>	
	Project Under Review	II- 1
	Summary of Impacts and Mitigation Measures	- 2
	Alternatives to the Project	-24
III.	<b>PROJECT DESCRIPTION</b>	
	Regional Location	III -1
	Project Boundary	-1
	The South Livermore Valley Area Plan	-1
	Development Potential of the Proposed SLVAP	-4
IV.	<b>ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES</b>	
	A. Land Use	A -1
	B. Population, Housing and Employment	B -1
	C. Geology, Seismicity and Soils	C -1
	D. Hydrology and Water Quality	D -1
	E. Vegetation and Wildlife	E -1
	F. Traffic and Circulation	F -1
	G. Air Quality	G -1
	H. Noise	H -1
	I. Cultural and Historical Resources	I -1
	J. Visual Quality	J -1
	K. Public Services and Utilities	
	K.1 Water Supply	K.1-1
	K.2 Wastewater	K.2-1
	K.3 Schools	K.3-1
	K.4 Police Services	K.4-1
	K.5 Fire Services	K.5-1
	K.6 Parks and Recreation	K.6-1

**Table of Contents (continued)**

	<i>Page</i>
<b>V. PROJECT ALTERNATIVES</b>	
A. Preliminary Draft South Livermore Valley Area Plan	V - 2
B. Citizens Advisory Committee Alternative	- 9
C. Viticultural Zoning Alternative	-14
D. No Project Alternative	-17
E. Alternatives Considered and Rejected	-19
F. The Environmentally Superior Alternative	-20
<b>VI. CEQA CONSIDERATIONS</b>	
A. Cumulative Impacts	VI- 1
B. Growth-Inducing Impacts	- 2
C. Significant Unavoidable Impacts	- 4
D. Short-Term Uses of the Environment and Long-Term Productivity	= 4
E. Irreversible Environmental Changes	- 5
<b>VII. REPORT PREPARATION AND BIBLIOGRAPHY</b>	
A. Report Authors and Contributors	VII-1
B. Organizations and Persons Consulted	-2
C. Bibliography	-3
<b>VIII. APPENDICES</b>	
A. Draft South Livermore Valley Area Plan Text	
B. Estimation of Maximum Development Potential	
C. Findings Required For Williamson Act Cancellation	
D. List of Cumulative Project References	

**Figures**

		<i>Following Page</i>
Figure III-1	Regional Location	III-1
III-2	Project Vicinity	-1
III-3	Proposed SLVAP	-1
Figure IV.A-1	Property Ownership Patterns	IV.A-1
A-2	Existing Land Uses	-2
A-3	State-Designated Important Farmlands	-2
A-4	Williamson Act Lands	-3
A-5	Surrounding Land Uses	-5
A-6	Approved Projects in the Plan Area	-6
A-7	County General Plan Designations	-7
A-8	City Spheres of Influence	-9
A-9	City General Plan Designations	-9
C-1	Slopes Greater than 25%	C-1
C-2	Generalized Geology	-2
C-3	Regional Fault Zones	-2
C-4	Landslide Hazard Zones	-5
C-5	South Livermore Valley Soils	-6
C-6	Soils with Septic Tank Limitations	-7
C-7	Regionally Significant Aggregate Resources	-7
D-1	Arroyo Flood Zones	D-1
D-2	Ground Water Basins	-2
E-1	Vegetation Communities and Wildlife Habitats	E-1
F-1	Existing Road Network	F-5
F-2	Existing Transit Routes	-6
F-3	Tri-Valley Traffic Analysis Zones	-9
F-4	South Livermore Traffic Analysis Zones	-9
F-5	Year 2010 Baseline Roadway Improvements	-9
H-1	Noise Measurement Locations	H-1
H-2	Construction Equipment Noise Levels	-5
J-1	South Livermore Valley Visual Elements	J-1
J-2	Key to Plan Area Views	-6
J-3	Plan Area Views	-6
J-4	Plan Area Views	-6
J-5	Plan Area Views	-6
K.1-1	Water Districts and Water Supply Systems	K.1-1
K.2-1	Wastewater Systems	.2-4

**Figures (continued)**

	K.3-1	School Districts and Facilities	K.3-1
	K.6-1	Parks and Trails	.6-1
Figure	V-1	Preliminary Draft Plan	V-2
	V-2	Citizens Advisory Committee Alternative	-9
Figure	VI-1	Cumulative Project Locations	VI-1

**Tables**

			<i>Page</i>
Table	III-1	Maximum Potential Land Uses Resulting From Plan Implementation	III-7
Table	IV.C-1	Soils of the South Livermore Valley	C-8
	E-1	Plant Species of Concern	E-5
	E-2	Wildlife Species of Concern	-13
	F-1	Existing Volume-to-Capacity Ratios	F-6
	F-2	Vicinity Trip Distribution (2010 Baseline)	-11
	F-3	Critical Intersection Analysis (2010 Baseline)	-14
	F-4	Potential Urban Development Trip Generation	-17
	G-1	Federal and State Ambient Air Quality Standards	G-3
	G-2	Air Quality in Livermore: 1985-1990	-5
	G-3	SLVAP-Related Emissions, Rural Development	-8
	G-4	SLVAP-Related Emissions, Urban Development	-10
	I-1	Historical Resources in the South Livermore Valley	I-6
	K.1-1	Existing Water Supply	K.1-2
	K.1-2	Water Supply Capability	-3
	K.1-3	Summary of Possible Water Sources	-6
	K.1-4	Best Management Practices	-8
	K.2-1	Sewage Export Capacity	K.2-3
	K.2-2	Additional Sewage Export Requirements	-5
	K.3-1	Current Enrollment and Capacities: LVJUSD	K.3-2
	K.3-2	Projected Enrollment: PUSD	-4
	K.3-3	Current Enrollment and Capacities: PUSD	-5
Table	VI-1	Cumulative Project List	VI -3

# I.

## INTRODUCTION

### Background

The Livermore Valley in eastern Alameda County, especially the area to the south of the city of Livermore, has a long and distinguished history as a premium viticultural area. The Cresta Blanca, Wente and Concannon wineries were all founded in the 1880's. Charles Wetmore's Cresta Blanca wine won for California the first International Award, the highest honor at the 1889 Paris Exposition. James Concannon, using Livermore Valley cuttings, launched the Mexican wine industry at the turn of the century. In 1935, the Wente brothers introduced California's first varietal wine label, Sauvignon Blanc, which won Grand Prix at the Paris International Exhibition in 1937 (Chavez, 1991).

It has been estimated that at its height, viticulture in the Livermore Valley covered some 15,000 acres (Welch, 1982). Since World War II, however, the rapid urbanization of Alameda County and the Livermore Valley has resulted in a long decline in agriculture in general and viticulture in particular. The acreage of wine grapes decreased by over 50% in the four decades between 1947 and 1987 (Livingston, 1988). Over 1,800 acres of soil considered suitable for viticulture were annexed and developed by Livermore alone in the last decade (Hart, 1991).

The continuing decline of viticulture, together with proposals for large-scale residential development in the South Livermore Valley, provided the impetus for a joint effort by Alameda County, Livermore and Pleasanton to create a plan for the area that would preserve, promote and enhance viticulture and other cultivated agriculture. A Steering Committee of city and county officials was formed in 1987. The Steering Committee identified a 15,500 acre Study Area to the south and east of Livermore, selected and hired a team of consultants to develop a plan for the area, and created a Citizens Advisory Committee, made up of property owners and other local residents, to provide community input. The process resulted in several competing proposals, and no action was taken.

In January 1991, Alameda County staff proposed a compromise preliminary draft South Livermore Valley Area Plan, which was accepted by the Steering Committee and later endorsed by Pleasanton and the Alameda County Board of Supervisors. Required environmental review was initiated in preparation for the formal adoption of the Plan by Alameda County.

In June 1991, Alameda County approved the Ruby Hill residential development, permitting up to 850 homes, a golf course, inn and small retail area to be built, and requiring up to 467 acres of vineyards to be planted, two wineries to be restored, and a minimum of \$8.5 million to be earmarked for acquisition of agricultural lands or easements in the South Livermore Valley. Consequently, Livermore sued the County over the approval. Due to findings

during the environmental review process, the Preliminary Draft was revised. The Alameda County Board of Supervisors authorized that the revised draft Plan be considered as the "preferred alternative" in the CEQA process in February, 1992.

### **EIR Purpose**

This draft Environmental Impact Report (EIR) has been prepared in compliance with State and Alameda County guidelines for implementation of the California Environmental Quality Act (CEQA). The purpose of the EIR is to inform local decision makers, other reviewing agencies, and the public of the potential environmental effects that may result from the adoption and implementation of the revised draft South Livermore Valley Area Plan (SLVAP), a land use policy document for approximately 15,500 acres in eastern Alameda County.

The draft EIR, by law, is subject to public review, agency review, and consideration by Alameda County. During the public review process the draft version of this document is subject to amendment to reflect concerns of reviewing agencies and the public regarding potential impacts of the project. When all interested parties have had an opportunity to comment on the draft report (within a 45 day time limit), the County will then prepare a Final EIR, which will consist of this draft report together with responses to comments raised during the review and consultation process. Prior to adoption of the SLVAP, the Final EIR must be certified by the Alameda County Planning Commission and the Board of Supervisors.

The proposed SLVAP will require a great deal of cooperation between Alameda County, Livermore, and Pleasanton regarding future land use proposals in the South Livermore Valley. The Plan anticipates that a large majority of any development that occurs in the Plan Area will be within areas that will be annexed by, and served by, the cities. On the other hand, many of the mitigation measures proposed by the Plan will need to be carried out in the unincorporated County. Therefore, it can be anticipated that the Plan, or relevant Plan policies, may be adopted by Pleasanton and Livermore. In this event, this EIR may serve as the environmental review document for these actions.

### **EIR Approach**

CEQA requires that an EIR address the physical effects on the environment that might follow from actions taken by public agencies. CEQA guidelines define a project as the whole of an action, not the separate governmental proceedings that may be necessary to permit it. The actions themselves may be purely preliminary and have no direct effect on the environment at all. However, if the actions can foreseeably result in environmental impacts,



Alameda County, as lead agency, is generally required to prepare an EIR to analyze those effects. Under CEQA, the effects resulting from physical development must be analyzed and not just the lead agency's action itself.

The proposed South Livermore Valley Area Plan is a policy document to guide land use decisions within approximately 15,500 acres of currently unincorporated lands south and east of the City of Livermore (the Plan Area). The proposed Plan creates no new entitlements for additional development, nor does it establish a holding capacity, but instead establishes a set of criteria for judging development proposals in the Plan Area, whether in Alameda County, or annexed to either Livermore or Pleasanton. In general, these criteria seek to limit development to peripheral areas that will minimize impacts on agricultural areas, require development projects to directly enhance agricultural activities in the area, and limit development to those projects that will further the Plan's objective preserving and enhancing viticulture and other cultivated agriculture.

Potential environmental effects of the proposed South Livermore Valley Area Plan are primarily related to the amount of additional development that could occur as a result of adoption of the Plan. However, because the Plan does not establish densities, nor a holding capacity, the Plan strategy of maximizing agriculture in the Plan Area through development incentives could be achieved through a number of combinations of development types and densities, making a range of development possible. Therefore, this EIR takes the conservative tact of estimating the maximum amount of development possible under the Plan; using Plan criteria, existing land use patterns, and planning staff estimates. This allows a "worst-case" projection of the effects of full development on the land, expressed in terms of housing units and related development. This approach does not entitle land owners to this level of development, nor does it require the County or cities to approve this level of development, or any development at all, for that matter. It simply provides the public and decision makers with an upper benchmark of potential environmental impacts that could result from adoption of the proposed South Livermore Valley Area Plan. Other possible combinations of development types and locations would be expected to have less environmental effects.

The EIR emphasizes environmental analysis of basic policy considerations, regional influences, cumulative impacts, and growth-inducing impacts. The EIR also analyzes potential effects specific to portions of the project area or particular types of development, where such level of analysis is feasible. However, because actual sites, designs, sizes and uses of possible individual development components are speculative at this time, the analysis is accordingly fairly general, as allowed under CEQA.

For convenience of use, discussion of potential impacts of the Plan are separated into categories, based on the three major land use types considered by the Plan, and by anticipated jurisdictional control. These categories are 1) rural residential development, at a gross density of 20 acres per unit and including small scale commercial development such as wineries and bed and breakfast establishments; 2) the expansion of viticulture and other cultivated agriculture as a result of Plan policies; and 3) urban development adjacent to existing city development.

Potential mitigation measures are considered in broad terms as well, with an emphasis on determining a range of mitigation measures that would reduce potential impacts to less than significant levels. Mitigation measures that could be implemented by Livermore or Pleasanton for urban development impacts are also noted. If no feasible mitigation measure is likely to reduce potential impacts to less than significant levels, these impacts are noted as unavoidable. A mitigation monitoring program, in compliance with State law, will be included in the Final EIR.

Section 15168 of the CEQA guidelines expressly contemplates this type of environmental review (a "Program EIR"), which is intended to be used as a basis for a series of actions. Should individual development projects be proposed within the Plan Area, this EIR can be used to focus environmental review on site-specific issues, relying on this document to cover general and cumulative impact issues and feasible mitigation measures. This is referred to as "tiering", and can be used effectively to streamline regulatory procedures and avoid repetitive discussions of environmental effects in successive environmental review.





## **II. SUMMARY**

### **Project Under Review**

The purpose of the EIR is to inform local decision makers, other reviewing agencies, and the public of the potential environmental effects that may result from the adoption and implementation of the revised draft South Livermore Valley Area Plan (SLVAP), a land use policy document for approximately 15,500 acres of currently unincorporated lands south and east of the City of Livermore (the Plan Area).

The proposed Plan creates no new entitlements for additional development, nor does it establish a holding capacity, but instead establishes a set of criteria for judging development proposals in the Plan Area, whether in Alameda County, or annexed to either Livermore or Pleasanton. In general, these criteria seek to limit development to peripheral areas that will minimize impacts on agricultural areas, require development projects to directly enhance agricultural activities in the area, and limit development to those projects that will further the Plan's objective preserving and enhancing viticulture and other cultivated agriculture.

Potential environmental effects of the proposed South Livermore Valley Area Plan are primarily related to the amount of additional development that could occur as a result of adoption of the Plan. However, because the Plan does not establish densities, nor a holding capacity, the Plan strategy of maximizing agriculture in the Plan Area through development incentives could be achieved through a number of combinations of development types and densities, making a range of development possible. Therefore, this EIR takes the conservative tact of estimating the maximum amount of development possible under the Plan; using Plan criteria, existing land use patterns, and planning staff estimates. This allows a "worst-case" projection of the effects of full development on the land, expressed in terms of housing units and related development. This approach does not entitle land owners to this level of development, nor does it require the County or cities to approve this level of development, or any development at all, for that matter. It simply provides the public and decision makers with an upper benchmark of potential environmental impacts that could result from adoption of the proposed South Livermore Valley Area Plan, and permits the early identification of cumulative impacts that could occur as a result of the Plan. Other possible combinations of development types and locations would be expected to have less environmental effects.

## Summary of Impacts and Mitigation Measures

The proposed Plan could result in the creation or expansion of three major types of land uses. These are 1) urban development at a gross density of up to two units per acre; 2) rural residential development at a gross density of 20 acres per unit; and 3) expansion of viticultural or other cultivated agricultural acreage in the Vineyard Area. Commercial uses could also be developed under the proposed Plan, including small-scale uses such as wineries and bed-and-breakfast establishments, and retail uses associated with a Wine Center.

The following is a summary of significant environmental impacts that could result from the adoption and implementation of the proposed South Livermore Valley Area Plan, assuming maximum development occurred. Following each identified impact are mitigation measures already included in the proposed Plan, and, if needed, additional mitigation measures that would be necessary to reduce identified impacts to less than significant levels. If no mitigation measures are available, the impact is noted as unavoidable.

For brevity, impacts identified as less than significant in this report are not included in the following summary. Please refer to the body of this report for a complete description of impacts and proposed mitigation measures.

### A. Land Use

**IMPACT A-1.** The proposed Plan could result in smaller, less efficient parcels for farming, especially if large tracts of existing vineyards are subdivided into 20 acre parcels.

**Proposed Plan Mitigation:** The proposed Plan requires that rural "homesites, ancillary uses and parcel lines (be) sited to maximize productive use of the land for intensive cultivated agriculture." This policy could permit clustering and other techniques to allow the retention of larger acreage of vineyards, as long as gross densities do not exceed 20 acres per unit.

**IMPACT A-2.** The proposed Plan could result in inefficient parcels that may not be agriculturally viable.

**Proposed Plan Mitigation:** The proposed Plan requires planting of vineyards or other cultivated agriculture, and assurances that it will continue to be farmed through agricultural easements, prior to subdivision of property within the Vineyard Area.

**IMPACT A-3.** The proposed Plan could result in the cumulative loss of up to 10% of existing vineyards, together with a corresponding loss of lands identified as Prime, Unique, or of Statewide Importance.

**Proposed Plan Mitigation:** The proposed Plan policy to site rural homesites, ancillary uses and parcel lines to maximize productive use of the land for intensive cultivated agriculture would mitigate this impact on existing parcels where not all of the land is presently under cultivation by encouraging clustering on uncultivated areas. Use of the Land Trust to purchase easements or fee title on existing cultivated parcels could also reduce the potential for loss of cultivated land. However, there still could be considerable loss on parcels completely under cultivation. Therefore, the following mitigation measure is recommended.

**Mitigation Measure A-3:** Add a policy to the proposed Plan that would permit and encourage the transfer of allowable rural homesites and ancillary uses from cultivated parcels to uncultivated parcels within the Vineyard Area.

**IMPACT A-4:** The proposed Plan policies allowing PD zoning, additional residences and small commercial establishments such as bed-and-breakfasts on lands currently under cultivation would be contrary to County Williamson Act policies.

**Mitigation Measure A-4:** Amend the County Williamson Act policies to allow PD zoning, additional residences and small commercial establishments as permitted under the proposed Plan.

**IMPACT A-7:** Rural residential development at a maximum gross density of 20 acres per unit could be contrary to current Livermore General Plan designations.

**Mitigation Measure A-7:** Prior to annexation, amend the Livermore General Plan to comply with the proposed Plan policies.

**IMPACT A-8:** The proposed Plan could result in urban development of lands identified by the State as Important Farmlands.

**Proposed Plan Mitigation:** The proposed Plan prohibits urban development within the Vineyard Area in areas currently under vineyard cultivation or under Williamson Act contract.

**IMPACT A-9:** The proposed Plan could result in new urban development adjacent to existing or new vineyards.

**Mitigation Measure A-9a:** The City of Livermore, through the development approval process, should ensure that urban development projects within the Vineyard Area include

adequate buffer areas from existing or new vineyards by siting parks, landscaped areas, and roads between residential areas and agricultural areas. For residential areas directly adjacent to existing or new vineyards, a minimum building setback of 100 feet should be established.

**Mitigation Measure A-9b:** The City of Livermore should enact a right-to-farm ordinance, similar to Alameda County's, to reduce the threat of legal conflicts between urban and vineyard development.

**Mitigation Measure A-9c:** Jurisdictions should require full disclosure statements for all new urban development that is, or could become, adjacent to existing or future vineyard lands. Disclosure statements would inform prospective buyers of existing or future farm operations, the right-to-farm ordinance, and possible nuisances that these operations may have on nearby residences.

**IMPACT A-10:** The proposed Plan could result in urban development areas outside of the existing Sphere of Influence for the City of Livermore.

**Mitigation Measure A-10:** Prior to annexation of proposed urban development areas that meet the proposed Plan criteria, the City of Livermore should apply to LAFCO for amendment of the city SOI to include relevant areas.

**IMPACT A-11:** Urban development within the Vineyard Area and Alden Lane Transitional Areas could create conflicts with adjacent quarry operations.

**Mitigation Measure A-11:** Prior to approving development in these areas the cities of Pleasanton and Livermore should ensure that potential conflicts will be reduced by requiring new development to include measures such as soundwalls, berms, buffer zones, and placement of outdoor use areas to minimize noise and dust impacts, or staging of development until after quarrying in the immediate area is completed. Potential new residents should be made aware of potential conflicts and the quarry's right to mine through disclosure notices placed on property deeds.

**IMPACT A-12:** Urban development within the Plan Area would conflict with both Livermore and Pleasanton General Plan designations.

**Mitigation Measure A-12:** The cities of Pleasanton and Livermore should amend their General Plans to conform with the proposed Plan policies, allowing appropriate urban development in the Plan Area if it is linked to the preservation and enhancement of agriculture in the South Livermore Valley.



## **B. Population, Housing and Employment**

**IMPACT B-1:** New vineyards, wineries and small commercial establishments will require relatively low-wage employees, and new rural residential development is unlikely to be affordable to these workers.

**Mitigation Measure B-1a:** Require new rural residential development to pay in-lieu affordable housing fees, similar to those required of the Ruby Hill development.

**Mitigation Measure B-1b:** Encourage the provision of on-site affordable housing by conditionally permitting agricultural employee housing, consistent with existing County Agricultural zoning.

## **C. Geology, Seismicity and Soils**

**IMPACT C-2:** Implementation of the proposed SLVAP could increase the number of structures and people within the area, increasing the risk to life and property from ground shaking and associated secondary effects such as landsliding, liquefaction, and differential settlement.

**Mitigation Measure C-2:** The County should require geotechnical studies to be performed on a project-by-project basis and recommended measures from those studies to be implemented in all areas known to be subject to landslide and seismic hazards. This includes identified hazard areas on State landslide hazard maps, and when available, State seismic hazard maps, in conformance with the requirements of SHAMA.

**IMPACT C-3:** Implementation of the proposed SLVAP could result in the expansion of viticulture or other cultivated agriculture into areas with moderate to severe erosion potential.

**Proposed Plan Mitigation:** The proposed Plan only encourages cultivated agriculture in areas with slopes up to 25 percent; no bonus density incentives are given for steeper slopes that are put into production.

**Mitigation Measure C-3:** The County, through site plan review and in consultation with the Soil Conservation Service and other appropriate agencies, should encourage agricultural land users to incorporate erosion control measures to minimize loss of topsoil on slopes, including contour farming, drip irrigation where it can be used, planting of vegetation between crops to stabilize soil, and other appropriate methods.

**IMPACT C-5:** Implementation of the proposed SLVAP could result in additional septic systems in areas with severe septic tank limitations.

**Proposed Plan Mitigation:** New rural development in the Plan Area is required to show, to the satisfaction of the County and Zone 7, that all proposed homesites can be served by septic systems.

**Mitigation Measure C-5:** Require that any commercial development proposed to be on a septic system be required to show, to the satisfaction of the County and Zone 7, that it can be adequately served by a septic system.

**IMPACT C-6: Additional rural residential and commercial development developed as a result of the proposed Plan could result in a loss of agricultural soils.**

**Proposed Plan Mitigation:** The proposed Plan requires that a minimum of 90% of new rural residential parcels be cultivated and agricultural conservation easements be dedicated for its permanent protection.

The proposed Plan also calls for homesites, ancillary uses and parcel lines to be sited to maximize productive use of the land for intensive cultivated agriculture.

**IMPACT C-8: Implementation of the proposed SLVAP could increase the number of structures and people within the area, increasing the risk to life and property from ground shaking and associated secondary effects such as landsliding, liquefaction, and differential settlement.**

**Mitigation Measure C-8:** Pleasanton and Livermore should require geotechnical studies to be performed on a project-by-project basis and recommended measures from those studies to be implemented for all proposed development in areas known to be subject to landslide and seismic hazards. This includes identified hazard areas on State landslide hazard maps, and when available, State seismic hazard maps, in conformance with the requirements of SHAMA.

**IMPACT C-9: Implementation of the proposed SLVAP could result in urban development on top of significant mineral resource deposits, eliminating access to these resources.**

No mitigation measure is available. Loss of access to a significant mineral resource is an unavoidable adverse impact of the proposed Plan.

**IMPACT C-10: Implementation of the proposed SLVAP could result in the loss of soils suitable for intensive agriculture to urban development.**

**Proposed Plan Mitigation:** The proposed Plan requires that development within the three transitional areas mitigate loss of agricultural soils by paying mitigation fees of \$10,000 per acre for cultivable soils that are developed. These fees are to be used by the Land Trust to buy agricultural conservation easements in the South Livermore Valley.

The proposed Plan also requires that urban development within the Vineyard Area mitigate loss of agricultural soils by planting and dedicating easements elsewhere in the Vineyard Area on an acre/acre basis, and that for every urban residential unit approved, an additional acre within the Vineyard Area be planted in intensive agriculture and protected with agricultural easements.

#### D. Hydrology and Water Quality

**IMPACT D-1:** The proposed Plan could result in additional rural residences, wineries and other commercial establishments within areas subject to flooding.

**Mitigation Measure D-1:** Require site development review for all new rural residential and/or commercial development within the Plan Area, to ensure that new structures are located outside of the FEMA-designated floodplain area.

**IMPACT D-2:** Agricultural activities encouraged by the proposed Plan could result in increased soil erosion and sedimentation within the arroyos, reducing their capacity for groundwater recharge.

**Proposed Plan Mitigation:** The land use standards for the consideration of new rural residential development only encourage new agricultural cultivation in areas less than 25% in slope. In addition, the proposed Plan states that environmentally sensitive areas, such as creeks, shall be avoided.

**Mitigation Measure D-2a:** Encourage proper erosion control techniques, such as intercropping, contour plowing, or terracing, on new cultivated agricultural land during the rezoning process, in consultation with the Soil Conservation Service. (see Mitigation Measure C-3 above).

**Mitigation Measure D-2b:** Require, through the site review process, that agricultural parcels adjacent to arroyos, maintain a minimum 100 foot uncultivated buffer from the top of bank to reduce the potential for transport of cultivated soils into the arroyos.

**IMPACT D-3:** Additional rural residences, wineries and cultivated agriculture could result in the degradation of groundwater quality, especially nitrate levels.

**Proposed Plan Mitigation:** New rural residential development must show, to the satisfaction of the County and Zone 7, that all proposed homesites can be served by septic systems.

**Mitigation Measure D-3a:** Require that commercial uses, such as wineries or bed-and-breakfasts, that will be on individual septic systems, meet Zone 7 and

County Health requirements as part of the conditional use permit process. (see also Mitigation Measure C-5 above).

**Mitigation Measure D-3b:** Restrict and discourage potentially high agricultural nitrate sources, such as horse farms or cattle feed lots, through use of agricultural easements on new 20 acre parcels.

**Mitigation Measure D-3c:** Encourage agricultural practices that minimize excess nitrogen loading, such as avoidance of over-fertilization, appropriate timing of nitrogen fertilization to maximize nitrogen uptake, or intercropping with legumes. These practices can be encouraged by encouraging the use of experienced vineyard operators through maintenance contracts.

**IMPACT D-5:** Plan implementation could result in new urban development within areas subject to flooding.

**Mitigation Measure D-5a:** The City of Livermore should require any proposed urban development projects within a designated 100-year flood plain to eliminate the flood hazard through channel modification, restricting flood flows, or avoidance of flood prone areas. Any modification of the designated flood plain will require a detailed flood study. This study would be used to justify flood plain map revisions subject to the review and regulatory jurisdiction of FEMA. Map revision and floodplain actions must be filed with the district FEMA office in San Francisco.

**Mitigation Measure D-5b:** Prior to approval of additional urban development within the Del Valle inundation area, the City of Livermore should update the emergency service evacuation plan to account for the additional population within the area.

**IMPACT D-6:** Urban development within the Plan Area could potentially increase flood frequency and intensity downstream.

**Mitigation Measure D-6:** Require that any proposed urban development within the Plan Area supply a master drainage plan indicating how runoff will be managed. Offsite post-project runoff volumes should be limited to existing conditions, through the use of storm water detention ponds or other means, unless a detailed hydraulic analysis of the existing downstream drainage system determines that there is enough existing capacity to handle the additional runoff.

**IMPACT D-7:** Urban development construction activity could result in decreased surface water quality.

**Mitigation Measure D-7a:** Require that urban development proposals within the Plan Area include an approved erosion control plan to minimize the impacts from erosion and

sedimentation during grading. This plan should include procedures such as: (a) restricting grading to the dry season; (b) protecting all finished graded slopes from erosion using such techniques as hill slope benching, erosion control matting and hydroseeding; (c) protecting downstream storm drainage inlets from sedimentation; (d) use of silt fencing to retain sediment on the project site; and (e) any other suitable measures outlined in the Association of Bay Area Governments' (ABAG) Manual of Standards.

**Mitigation Measure D-7b:** Require that urban development projects include post-construction inspection of downstream drainage culverts for accumulated sediment. If sediment accumulation has occurred, these drainage structures should be cleared of debris and sediment.

**IMPACT D-8:** Surface water quality could be affected by increases in urban runoff.

**Mitigation Measure D-9a:** Require that urban development projects within the Plan Area incorporate grass-lined ditches and swales whenever practicable.

**Mitigation Measure D-9b:** Require that urban development projects incorporate trash racks, grease traps and catch basins as drainage elements, and that a program of regular vacuum sweeping of streets and parking areas be implemented, to reduce urban runoff pollutants.

## E. Vegetation and Wildlife

**IMPACT E-1:** Expansion of cultivated agriculture and related development could result in the loss of riparian, wetland, oak woodland or Diablan sage scrub habitat.

**Proposed Plan Mitigation:** New areas of cultivated agriculture resulting from Plan policies must protect sensitive or unique environmental characteristics, such as oak groves or creeks.

**Mitigation Measure E-1:** See Mitigation Measure D-2b above regarding creek setbacks. Require a larger setback where necessary to prevent removal of riparian habitat.

**IMPACT E-2:** Expansion of cultivated agriculture could result in the conversion of up to 3,260 acres of primarily grassland habitat, with a consequent reduction in relative habitat values, including habitat for six wildlife species of concern, and possible destruction of plant species of concern, if they occupy these areas.

**Mitigation Measure E-2a:** Destruction of plant and wildlife species of concern by agricultural expansion could be mitigated by requiring a field survey by a qualified biologist. Plant surveys should be conducted during the spring growing season, prior to initial tilling. Should populations of plant species of concern be found, mitigation measures could include avoiding the populated areas, or removal of the plants to other

locations, if possible. Wildlife surveys should be conducted following established CDFG procedures. Mitigation measures available if wildlife species of concern are found would include avoidance or reduction in acres placed under cultivation.

**Mitigation Measure E-2b:** Use the proposed South Livermore Valley Land Trust to protect critical habitat areas through purchase of fee title or conservation easements. A portion of the funds used to establish the Land Trust should be used to pay for a detailed biological survey of potential agricultural lands in the Plan Area, to be conducted by a qualified biologist in consultation with Alameda County, the CDFG, and the USFWS. The survey should, to the extent possible, identify specific parcels, or portions of parcels, that represent critical habitat for species of concern. In addition, the survey should identify parcels, or portions of parcels, that would help maintain the biological integrity of the Plan Area, by establishing large areas of relatively undisturbed habitat connected to important wildlife corridors. Once identified, parcels with critical habitat should be given high priority when the Land Trust establishes a program for land or easement acquisition.

This program could be incorporated into a larger-scope Habitat Conservation Plan for all of Eastern Alameda County, as part of the on-going General Plan update.

While the above mitigation measures would reduce potential impacts of plant and animal species of concern, no mitigation measures are available for general habitat loss from agricultural expansion. Therefore, this is considered an unavoidable adverse impact of the proposed Plan.

**IMPACT E-4:** Agricultural use of 3,250 acres of the Plan Area could result in contamination of aquatic habitats and eutrophication of aquatic systems by fertilizers, herbicides and pesticides.

**Mitigation Measure E-4:** Refer to hydrology mitigation measures D-2a, D-2b, D-3b, D-3c, and D-4 above.

**IMPACT E-5:** Urban development resulting from implementation of the proposed SLVAP could result in the loss of riparian, wetland and/or oak woodland habitat.

**Mitigation Measure E-5:** Require project-specific biological surveys to be conducted for all urban development proposals in the Plan Area. The surveys, to be conducted by a qualified biologist in consultation with the CDFG and the USFWS, should identify all significant riparian and wetland areas, and should include a oak tree preservation plan, if warranted. Riparian areas and wetland areas shall be avoided to the extent possible. A minimum setback from top of bank of 100 feet should be maintained for all arroyos to maximize their use as wildlife corridors. Should encroachment on identified wetlands or riparian areas be necessary, applicable permits from the CDFG and Army Corps of Engineers will be required.

**IMPACT E-6:** Urban development resulting from implementation of the proposed SLVAP would result in the loss of up to 1,600 acres of grassland habitat.

**Mitigation Measure E-6:** Site-specific surveys required by Mitigation Measure E-5 above should also include surveys for plant and animal species of concern. Should sensitive species be found, mitigation measures, in consultation with CDFG and USFWS, could include preservation of critical areas, on or off-site habitat enhancement, or reduction or rejection of the proposed project.

While the above mitigation measure would reduce potential impacts of plant and animal species of concern, no mitigation measures are available for general habitat loss from urban development. Therefore, this is considered an unavoidable adverse impact of the proposed Plan.

## **F. Traffic and Circulation**

**IMPACT F-2:** Rural residential development could result in traffic safety problems due to increased turning movements on congested roads.

**Mitigation Measure F-2:** As part of the site development review for any rural residential projects along Vallecitos Road, access driveways onto Vallecitos Road should be limited as much as possible through use of other access routes or joint driveways. New access points onto Vallecitos will require approval from the Alameda County Traffic Engineer.

**IMPACT F-3:** Urban development resulting from implementation of the proposed SLVAP could contribute to congestion at intersections within and in the vicinity of the Plan Area

**Mitigation Measure F-3:** Prior to the approval of urban development projects in the Plan Area, project-specific traffic studies should be required by the lead agency to determine the project impact on nearby intersections. Projects that will contribute to intersections that already exceed LOS D, or that will cause intersections to exceed LOS D during peak hours, should be required to mitigate the impact, either by paying for necessary road improvements or by reducing the project size.

**IMPACT F-4:** Urban development resulting from implementation of the proposed SLVAP could contribute to congestion on designated CMA road segments within and adjacent to the Plan Area.

**Mitigation Measure F-4a:** Urban development projects in the Plan Area should be required to incorporate bicycle and pedestrian facilities identified in the Alameda County Bicycle Master Plan and the LARPD Trail Master Plan.

**Mitigation Measure F-4b:** LAVTA should be consulted as part of individual project approval process regarding the potential to expand bus routes to serve urban development in the Plan Area. If LAVTA considers expansion to be feasible, project circulation should be designed to provide loop routes and to incorporate adequate bus pullouts, as needed.

**IMPACT F-5:** Urban development resulting from the implementation of the proposed SLVAP could require improvements to local roadways within the Plan Area.

**Mitigation Measure F-5:** Project-specific traffic studies, as discussed in Mitigation Measure F-3 above, should include an assessment of future traffic volumes on Plan Area local roads and needed physical improvements. Annexations involving proposed urban development should include the entire right-of-way of adjacent County roads, so that necessary improvements can be funded and built. Improvements should consider the agricultural character of the Plan Area. New development should not be sited so that homes directly front on roads that are anticipated to exceed 4,000 vpd.

## G. Air Quality

**IMPACT G-2:** Additional acreage of cultivated agriculture in the Plan Area could result in higher levels of PM<sub>10</sub> due to blowing dust from exposed soils, as well as localized airborne pesticide aerosols and smoke from waste burning.

**Mitigation Measure G-2a:** Encourage farmers to utilize farming techniques that will minimize exposure of soils, especially during dry and windy weather.

**Mitigation Measure G-2b:** Encourage all urban residential development to provide landscaping barriers between residences and areas of active agricultural activities (such as packing sheds, equipment storage areas, etc.) that could generate dust, odors or chemical mists. Where practical, the landscaping barriers should be provided within an easement on the property of the residential development. Such barriers should consist of dense trees and shrubs, to provide a windbreak and to partially capture blowing agricultural contaminants.

**Mitigation Measure G-2c:** Require that the contract of each home buyer within an urban development and whose property lies adjacent to or within 100 yards of agricultural property indicate that the residence is located near an intensive agricultural use zone, and that blowing dust, smoke, and pesticide/fertilizer aerosols may be present in the air moving from the agricultural zone to the residential area.

**IMPACT G-3:** Urban development in the Plan Area would result in increased emissions of criteria pollutants, including ozone precursors and suspended particulates.



**Mitigation Measure G-3a:** Encourage expanded transit opportunities and facilities within any newly urbanized areas of Livermore and Pleasanton, including placement of bus stops at transportation nodes (schools, commercial areas, parks, community centers), and design road layouts with bus pullouts. Include convenience commercial uses (neighborhood grocery and sundry stores) in new urban developments to the extent possible. Require that mitigation measures for traffic congestion described in Section F. be implemented, including those for bicycle and pedestrian access and improvement of circulation; in the general sense, these will do most to reduce the impact of the project.

**Mitigation Measure G-3b:** Require new residential development to install insulation according to Pacific Gas and Electric energy conservation standards, promote the use of solar heating, and limit residences to one fireplace or woodstove per residence. The use of EPA-certified wood stoves and specially built fireplace inserts rather than open fireplaces should be encouraged, as these greatly reduce emissions and increases heating efficiency.

**These mitigation measures would not be able to reduce Impact G-3 to a level of insignificance, therefore, this is an potential unavoidable adverse impact of the proposed Plan.**

**IMPACT G-5: Additional urban development within the Plan Area would likely entail large-scale construction activities that would contribute to suspended particulate levels.**

**Mitigation Measure G-5:** Construction activities resulting from Plan implementation should be required to follow standard dust suppression measures, including watering of unpaved surfaces, multiple times daily as required; use of chemical dust palliative on disturbed working surfaces (provided that the surfaces do not drain into surface water areas); re-vegetation of disturbed surfaces and stockpiles of soil as soon as possible after disturbance; and timely construction of improvements and landscaping.

## **H. Noise**

**IMPACT H-1: New rural residences near Plan Area roads could be sited within existing or future 60 dB  $L_{dn}$  noise contours.**

**Mitigation Measure H-1:** Require that new rural homesites are located a minimum of 100 feet from the edge of pavement of local Plan Area roads; and a minimum of 200 feet from major roads, including Vallecitos Road, S. Livermore Avenue, Arroyo Road, and Holmes Street. If rural homesites are located within these distances, site-specific noise studies should be conducted to ensure that State guidelines will be met.

**IMPACT H-2: Urban development sited adjacent to Plan Area roads could be within existing or future 60 dB  $L_{dn}$  noise contours.**

**Mitigation Measure H-2:** Require site specific noise studies for any development that proposals that would place homes within the distances discussed in Mitigation Measure H-1 above. Projects should be required to comply with noise study mitigation measures, including use of soundwalls or berms, siting of homes so that outdoor use areas are sheltered from noise sources, and interior insulation, if required.

**IMPACT H-3:** Construction of urban development in the Plan Area could result in temporarily elevated noise levels that could affect nearby existing residences.

**Mitigation Measure H-3:** Restrict construction which employs equipment powered by internal combustion engines within 500 feet of existing residences to the hours of 8:00 am to 5:00 pm, Monday through Friday.

**IMPACT H-4:** Residential development located south of Alden Lane, adjacent to the existing quarry operation along the Arroyo del Valle, and residential development along Vineyard Avenue, adjacent to property under quarry permit, could be exposed to excessive noise levels.

**Mitigation Measure H-4a:** Require that new residential development constructed within a quarter mile of the boundaries of all properties with quarry permits include a clause in the sales contract for each home, indicating that the residence is located near an existing or future quarry, and that the homebuyer recognizes that the property may be subject to noise impacts resulting from close proximity to the quarry.

**Mitigation Measure H-4b:** Require residential development adjacent to quarry property to maintain a 250 foot buffer from the quarry property line that includes a 6 foot earth berm and appropriate landscaping. All residential lots adjacent to the setback should be sited so that homes face the quarry property, providing additional noise shielding for backyard activity areas. Home construction should be required to incorporate appropriate insulation and windows to provide an interior noise level of 45 dB L<sub>dn</sub> or less.

**IMPACT H-5:** Implementation of the proposed SLVAP could result in additional residential development adjacent to agricultural operations that could be subject to complaints regarding noise.

**Mitigation Measure H-5:** Require that new residential development in the Plan Area that will be, or could be, adjacent to agricultural operations include a clause in the sales contract of each home, indicating that the residence could be located near an agricultural operation, and that the homebuyer recognizes that the property may be subject to noise, dust, odors or other impacts resulting from the operation. The clause should also alert the potential homebuyer to the Alameda County Right to Farm ordinance.

## **I. Cultural and Historical Resources**

**IMPACT I-1: The proposed South Livermore Valley Area Plan could result in rural residential development and additional cultivation in areas where there are known or potential significant archaeological resources.**

**Mitigation Measure I-1a:** Proposed structures or roads on property that contains archaeological sites should be sited in consultation with a professional archaeologist to avoid damaging the archaeological sites.

**Mitigation Measure I-1b:** Whenever there is evidence of an archaeological site within a proposed project area, an archaeological survey by qualified professionals shall be required as a part of the environmental assessment process.

**Mitigation Measure I-1c:** If any archaeological sites are found during construction, all work in the immediate vicinity shall be suspended pending site investigation by qualified professionals. If, in the opinion of a qualified professional, the site will yield new information or important verification of previous findings, the site shall not be destroyed.

**IMPACT I-2: Rural development allowed in the proposed SLVAP could result in potential destruction of historical resources.**

**Mitigation Measure I-2:** Encourage preservation and reuse of historical structures.

**IMPACT I-3: Construction of buildings or infrastructure associated with development could disturb undiscovered archaeological sites.**

**Mitigation Measure I-3:** See Mitigation Measure I-1c above.

**IMPACT I-4: Urban development allowed under the SLVAP could disturb or destroy some of the historical resources in the Plan Area.**

**Mitigation Measure I-4a:** Require that any proposals to remove historic structures in the Plan Area be reviewed by qualified professionals.

**Mitigation Measure I-4b:** Encourage urban development projects in the Plan Area to preserve historic structures. Appropriate measures for preserving historic structures include renovation or moving it to another location.

## **J. Visual Quality**

**IMPACT J-1: Implementation of the proposed SLVAP could result in new rural residences or other structures on visually prominent ridges, in existing vineyards, or other sensitive**

areas.

**Proposed Plan Mitigation:** Proposed Plan policies include requirements for site planning, site development review, and development of design standards. In addition, only areas less than 25% slope can have additional rural development.

**Mitigation Measure J-1:** Develop comprehensive design guidelines for new rural structures in the Plan Area that would emphasize the existing visual character, including use of wood or stone materials, architectural features such as porches and verandas, and careful siting so that structures are subordinate to the landscape and do not block public views from adjacent roads. The design guidelines should also include guidelines for fences to limit or prohibit use of property line fences in existing vineyard areas.

**IMPACT J-2:** Implementation of the proposed SLVAP could result in urban development that would substantially change the character of the area.

**Mitigation Measure J-2:** Require that proposed urban development projects in the Plan Area be subject to project-specific visual studies that recognize the need to protect visually sensitive areas. Require that proposed urban development projects be sited and designed to minimize views from scenic corridors, through use of topographic and vegetative screening, and limit or prohibit development in visually sensitive areas that would substantially change the character of these areas.

**IMPACT J-3:** New urban development could reduce or block views from adjacent existing residences.

**Mitigation Measure J-3:** Require project-specific visual studies of proposed urban projects in the Alden Lane area and the Wetmore Road/Marina Avenue area to determine if views from existing residences will be blocked. Use design techniques, such as height limits or house placement to reduce significant view blockage as much as possible.

## K.1 Water Supply

**IMPACT K.1-1:** Water demand from new agricultural acreage brought into production as a result of Plan policies could exceed existing water supply.

**Proposed Plan Mitigation:** The proposed Plan requires that the proponent shows, to the satisfaction of the County and Zone 7, that adequate water supplies are available for irrigation needs. Plan policy also "encourages the development of additional sources of irrigation water for vineyards and other cultivated agriculture by investigating wastewater reclamation and development of other supply and delivery systems."

**IMPACT K.1-2: Water supply of imported water during periods of peak demand may not be adequate for the needs of irrigated agriculture.**

**Proposed Plan Mitigation:** The proposed Plan requires that the proponent shows, to the satisfaction of the County and Zone 7, that adequate water supplies are available for irrigation needs. Plan policy also "encourages the development of additional sources of irrigation water for vineyards and other cultivated agriculture by investigating wastewater reclamation and development of other supply and delivery systems."

**IMPACT K.1-3: Pumping of groundwater by agricultural, rural residential and other rural uses could result in the long-term depletion of the groundwater basin.**

**Mitigation Measure K.1-3:** Zone 7 should consider developing a pump monitoring and cost allocation system to cover the cost of new water in the event that additional supplies are needed and can be secured and stored in the groundwater basin.

**IMPACT K.1-4: Groundwater supplies may not be available for rural residential, bed-and-breakfast and winery uses in all locations of the Vineyard Area.**

**Proposed Plan Mitigation:** The proposed Plan requires that the proponent shows, to the satisfaction of the County and Zone 7, that adequate water supplies are available for domestic needs.

**Mitigation Measure K.1-4:** Amend Policy V.2.B. as follows: "The proponent shows, to the satisfaction of the County and Zone 7, that adequate water supplies are available for both domestic, commercial (wineries and bed-and-breakfasts), and irrigation needs."

**IMPACT K.1-6: Water demand from new urban development could exceed existing water supply.**

**Proposed Plan Mitigation:** The proposed Plan requires that the proponents show, to the satisfaction of the County and Zone 7, that adequate water supplies are available for domestic needs. (Mitigation Measure K.1-4 amends this policy to include commercial uses.)

**Mitigation Measure K.1-6:** In an effort to conserve water, the water retailers are encouraged to require proponents of development projects to implement an off-set program utilizing one or more of the water conserving best management practices.

## K.2 Wastewater

**IMPACT K.2-1: Use of on-site septic systems by rural residents, bed and breakfast establishments, and wineries could result in groundwater contamination.**

**Proposed Plan Mitigation:** The proposed Plan requires that the proponent shows, to the satisfaction of the County and Zone 7, that all proposed homesites can be served by individual septic systems.

**Mitigation Measure K.2-1:** Amend Policy V.2.B. as follows: "The proponent shows, to the satisfaction of the County and Zone 7, that all proposed homesites, bed-and-breakfast establishments, and wineries can be served by individual septic systems.

### **K.3 Schools**

**IMPACT K.3-2:** Urban population growth could result in the addition of approximately 1,380 school children to the Livermore Valley Joint Unified School District.

**Mitigation Measure K.3-2:** The City of Livermore, through the development approval process, should ensure that urban development projects within the Plan Area pay for needed school improvements and provide school sites as needed.

**IMPACT K.3-3:** Urban population growth could result in the addition of approximately 250 school children to the Pleasanton Unified School District.

**Mitigation Measure K.3-3:** The City of Pleasanton, through the development approval process, should ensure that urban development projects within the Plan Area pay for needed school improvements.

### **K.4 Police Services**

**IMPACT K.4-2:** Urban population growth would result in increased demand for City of Livermore and City of Pleasanton police services.

**Mitigation Measure K.4-2 (a):** The City of Livermore should provide adequate police services for the portion of the Plan Area incorporated into the City.

**Mitigation Measure K.4-2 (b):** The City of Pleasanton should provide adequate police services for the portion of the Plan Area incorporated into the City.

### **K.5 Fire Services**

**IMPACT K.4-1:** Rural residential population growth would result in increased demand for fire service in unincorporated Alameda County.

**Mitigation Measure K.4-1:** Alameda County should ensure through the development review process that all new development be designed to minimize risks to life and property through the implementation of the provisions of the Fire Protection Master Plan.

**IMPACT K.4-2: Urban population growth would result in increased demand for City of Livermore and City of Pleasanton fire services.**

**Mitigation Measure K.4-2 (a):** The City of Livermore should provide adequate fire services for the portion of the Plan Area incorporated into the City.

**Mitigation Measure H.4-2 (b):** The City of Pleasanton should provide adequate fire services for the portion of the Plan Area incorporated into the City.

## **K.6 Parks and Recreation**

**IMPACT K.6-2: Rural development under the Plan could conflict with proposed trails under the LARPD Trail Master Plan.**

**Mitigation Measure K.6-2:** The County should ensure, through the development approval process, that rural development projects within the Vineyard Area do not conflict with or preclude proposed LARPD trails.

**IMPACT K.6-3: Urban development under the Plan would create additional demand for park and recreation services and facilities.**

**Mitigation Measure K.6-3 (a):** The City of Pleasanton should ensure, through the development approval process, that urban development projects within the East Vineyard Avenue transitional area pay appropriate development fees and/or land dedication for park and recreation services and facilities. The City should work with development proponents to implement General Plan policies and land use which may be designated for park and recreation use in the East Vineyard Avenue transitional area.

**Mitigation Measure K.6-3 (b):** The City of Livermore, in conjunction with the Livermore Area Recreation and Park District should ensure, through the development approval process, that urban development projects within the Vineyard and transitional areas pay appropriate development fees and/or land dedication for park and recreation services and facilities.

**IMPACT K.6-4: Urban development in the Vineyard Area could conflict with proposed plans for the Ravenswood historic receiver site.**

**Mitigation Measure K.6-4:** The City of Livermore should work with LARPD to implement park policies. The City should also encourage urban development to include funding for a wine museum as part of the Ravenswood historic complex.

**IMPACT K.6-5: Urban development in the Vineyard Area could conflict with planned expansion for Sycamore Grove Park.**

**Mitigation Measure K.6-5:** The City of Livermore should work with LARPD to implement park policies.

**IMPACT K.6-6:** Urban development under the Plan could conflict with proposed trails under the LARPD Trail Master Plan.

**Mitigation Measure K.6-6 (a):** The City of Livermore should ensure, through the development approval process, that urban development projects within the Vineyard Area do not conflict with or preclude proposed LARPD trails. Specifically, the City should ensure that sufficient room for a trail in the Alden Lane transitional area along the north side of the quarry site in the Arroyo del Valle be provided.

**Mitigation Measure K.6-6 (b):** The City of Pleasanton should ensure, through the development approval process, that urban development projects within the transitional East Vineyard Avenue Area do not conflict with or preclude proposed EBRPD or LARPD trails.

### **Alternatives to the Project**

Four alternatives to the proposed South Livermore Valley Area Plan are evaluated in this DEIR. These include the preliminary draft plan first proposed by Alameda County in January, 1991; the Citizens Advisory Committee plan proposed in April of 1989; a viticultural zoning alternative; and the required no-project alternative.

**Preliminary Draft Plan:** New urban development would be generally limited to areas of poor soils, as defined by the Soil Conservation Service, and would be required to mitigate and enhance viticulture. A maximum of 4,705 additional urban residences could be developed on 3,700 acres. Urban development could be either annexed by the cities, or remain unincorporated.

**Citizens Advisory Committee Plan:** New urban development would generally be limited to an area directly adjacent to Livermore and to an area just east of Vallecitos Road, totalling about 1,400 acres. Maximum development potential would be virtually identical to the proposed Plan. Urban development would be either annexed by the cities, or remain unincorporated.

**Viticultural Zoning:** No new urban development would be permitted. New development would be limited to the subdivision of agricultural lands into 20 acre parcels as an incentive for the expansion of viticulture.



**No Project:** Current General Plan designations and zoning would remain in place, generally requiring 100 acres per residence. Large-scale unincorporated urban development similar to Ruby Hill would be considered on a case-by-case basis. Incremental annexation and development of portions of the Plan Area would continue.







### **III. PROJECT DESCRIPTION**

#### **Regional Location**

The South Livermore Valley is located in eastern Alameda County, approximately 45 miles southeast of San Francisco, at the southeast edge of the Tri-Valley (**Figure III-1**). Once primarily an agricultural area, the Tri-Valley region, containing the cities of San Ramon, Dublin, Pleasanton and Livermore, is rapidly urbanizing. The Tri-Valley is served by two interstate freeways. I-580 connects the area with Tracy and other Central Valley communities to the east and to Hayward, Oakland and San Francisco to the west. I-680 runs through the western portion of the Tri-Valley, providing connections to Fremont and San Jose to the south and Walnut Creek and Concord to the north.

#### **Project Boundary**

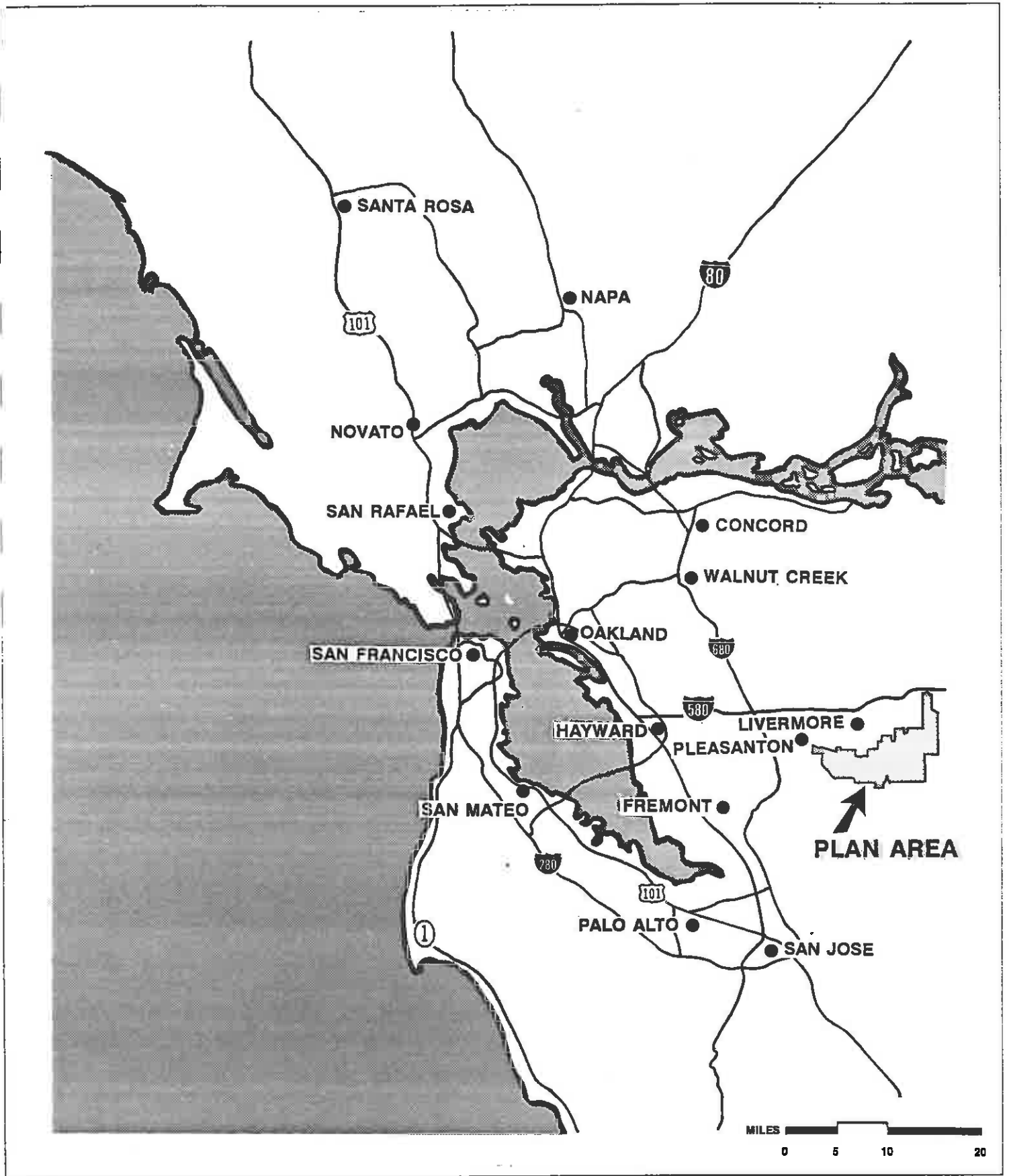
The South Livermore Valley Area Plan encompasses approximately 15,500 acres in unincorporated Alameda County. The Plan Area forms a wide crescent extending from the southeastern city limits of Pleasanton along East Vineyard Avenue, around the southern and eastern city limits of Livermore, to I-580 at the Greenville Road interchange (**Figure III-2**). The Area Plan boundary was drawn with the intent of including as much of the flatter, potentially cultivable lands to the south of Livermore as possible, while following property lines. In general, the northern boundary of the Area Plan is defined by the current Livermore city limits, extending west to Pleasanton to include properties along Vineyard Avenue, and extending east to 1 mile beyond Greenville Road, excluding the Lawrence Livermore National Labs. The northern boundary also excludes unincorporated properties along Buena Vista Avenue, a rural residential enclave that extends south from East Avenue. The south and east boundaries generally follow the base of the hills that define the southeast edge of the Livermore Valley. Because the boundary follows property lines, however, some steep and hilly areas are included within the Plan Area.

#### **The South Livermore Valley Area Plan**

The following is a summary of the proposed South Livermore Valley Area Plan (SLVAP). The proposed Plan is shown in **Figure III-3**. The text of the draft document can be found in **Appendix A**.

The draft SLVAP seeks the recognition, protection, promotion and enhancement of the South Livermore Valley as a unique and historic wine region. Specific objectives include:





**SOUTH LIVERMORE  
VALLEY AREA PLAN  
ENVIRONMENTAL IMPACT REPORT**

ALAMEDA COUNTY, CALIFORNIA



ALAMEDA COUNTY PLANNING DEPARTMENT

FIGURE III-1

**REGIONAL LOCATION**





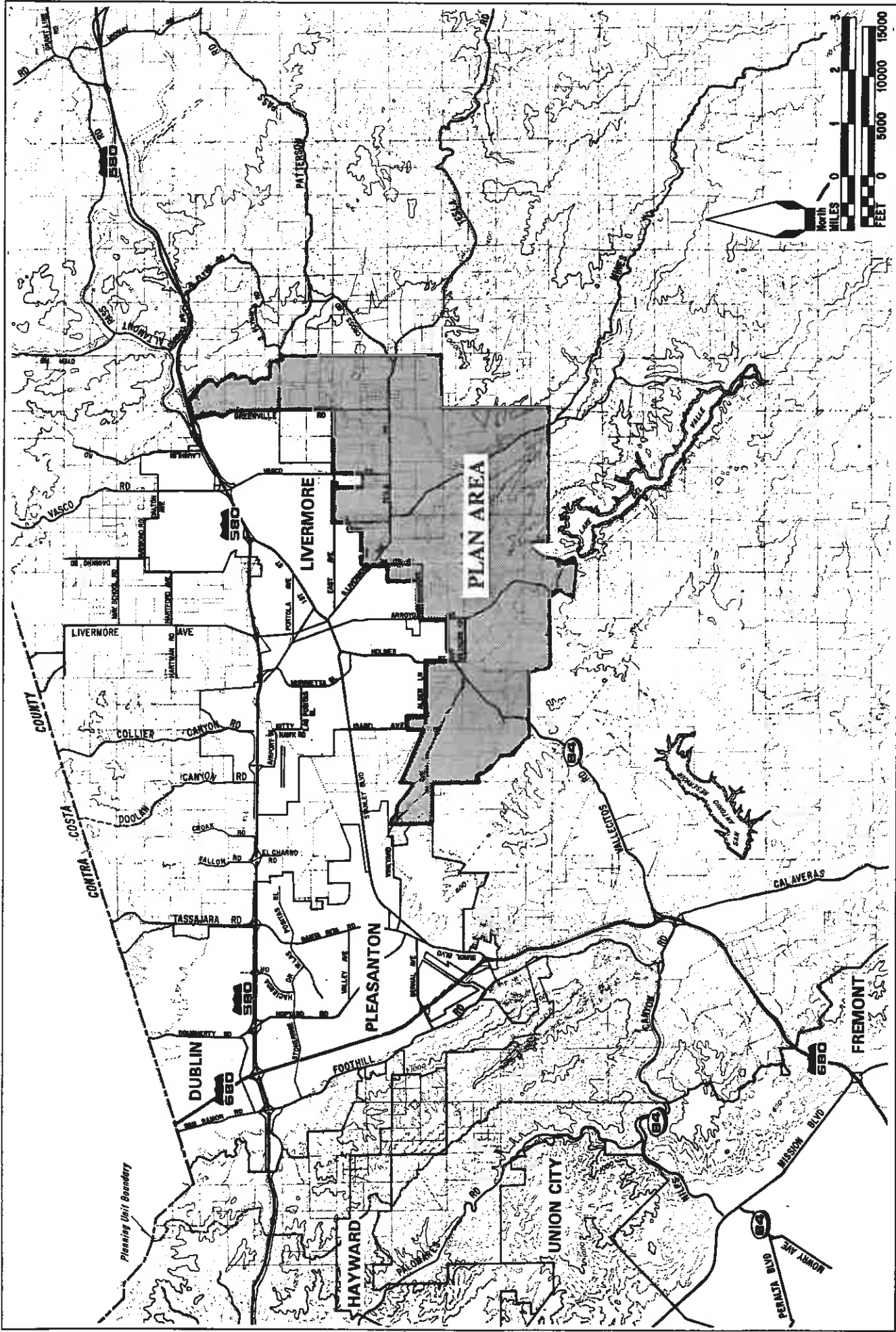


FIGURE III-2

PROJECT VICINITY



**SOUTH LIVERMORE  
VALLEY AREA PLAN**  
ENVIRONMENTAL IMPACT REPORT

ALAMEDA COUNTY PLANNING DEPARTMENT

ALAMEDA COUNTY, CALIFORNIA



1. Expansion of cultivated agricultural, particularly viticultural, use from the current 2,100 acres to a minimum of 5,000 acres.
2. Development of additional wineries and other uses that promote the area as a premier wine-producing area.
3. Formation of a land trust to permanently protect productive lands.
4. Prohibition of additional development unless it will directly further the Plan purpose of expanding and enhancing cultivated agriculture.
5. Limitation on further urbanization within the Plan Area to areas under City jurisdiction and to development that substantially enhances cultivated agriculture.
6. Creation of a permanent boundary and open space buffer between the cities of Pleasanton and Livermore in the South Livermore Valley.

To meet these goals and objectives, the proposed Area Plan includes policies for the preservation and enhancement of agriculture and establishes land use policies and standards for four distinct subareas. The following is a description and summary of policies for each of these subareas.

**Vineyard Area:** Approximately 12,200 acres, inclusive of lands east of the proposed State Route 84 alignment, south of the Livermore city limits, and south of East Avenue, extending one mile east of Greenville Road.

Current agricultural zoning would be retained, generally requiring 100 acres per residence. A "Cultivated Agricultural Overlay District" would be established, allowing consideration of subdivisions that would result in a maximum gross density of 20 acres per dwelling for lands less than 25% in slope, if certain conditions are met. These conditions include 1) planting of wine grapes or other cultivated agriculture, and dedication of agricultural easements, on a minimum of 90% of the land; 2) protection of sensitive or unique environmental areas; and 3) securing adequate water supplies for both domestic and irrigation needs. Wineries, bed-and-breakfast establishments, and other appropriate small-scale commercial uses would be conditionally permitted within the Vineyard Area. All new residences and commercial establishments would be subject to site development review by the County.

*III. Project Description*  
South Livermore Valley Area Plan DEIR

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The proposed Area Plan also includes policies for annexation and/or development at urban densities within the Vineyard Area. A set of criteria is proposed, with a policy that the County will actively discourage annexations that do not meet these criteria. Annexations could only occur if the properties have dedicated agricultural easements permanently limiting development to a gross density of one residence per 20 acres, or if urban development is proposed that would significantly contribute to the Plan goals and objectives. Criteria for appropriate urban development include 1) the availability of necessary public services; 2) Williamson Act contracts will not need to be cancelled; 3) existing vineyards will not be displaced; 4) adjacency to existing urban development; and 5) both mitigation of the loss of agricultural soils and significant enhancement of cultivated agriculture in the South Livermore Valley.

Specific mitigation and enhancement criteria for urban development include planting vineyards or other cultivated agriculture on lands protected by agricultural easements within the Vineyard Area at a rate of one acre per acre developed, plus an additional acre for every unit approved. Mitigation and enhancement acreage can be subdivided to a maximum gross density of 20 acres per unit, if a per unit fee of \$10,000 per urban dwelling is paid to a newly established South Livermore Valley Land Trust. In addition, urban development must include at least one facility that would promote the South Livermore Valley as a premium wine producing region, such as a conference center, resort hotel, cultural arts center, or wine museum, together with ancillary retail facilities.

**Ruby Hill:** Approximately 1,050 acres, inclusive of lands west of the proposed State Route 84 alignment and south of East Vineyard Avenue.

This area, which corresponds to all areas approved for urban development in the Ruby Hill project, would be developed according to the provisions of Alameda County's 1837th Zoning District, approved by the County Board of Supervisors in June, 1991, of which this area is a part. The Zoning District permits up to 850 homes, a golf course, inn and small retail area in this area, and requires that 467 acres of vineyards to be planted, the restoration of two wineries, and the payment of a minimum of \$8.5 million in agricultural mitigation fees. Pleasanton initiated the annexation of this area and the intervening Vineyard Avenue Corridor in February, 1992.

**Transitional Areas:** Due to their physical or visual isolation from the Vineyard Area and their proximity to existing urbanization, three separate areas are designated as "Transitional Areas". These include the Vineyard Avenue Corridor, between the current city limits of Pleasanton and Ruby Hill (approximately 240 acres); the Alden Lane area, between Holmes Street, Isabel Avenue and the Arroyo del Valle (approximately 250 acres); and the Patterson Pass Road area, south of Patterson Pass Road, east of

Greenville Road and north of East Avenue (approximately 640 acres). The Plan assumes that these areas will be eventually annexed and developed within Pleasanton or Livermore. While no densities or land uses are specified, development within these areas would be required to compensate for loss of cultivable soils through payment of agricultural mitigation fees to a South Livermore Valley Land Trust, to be used to purchase agricultural easements in other parts of the Plan Area.

Approximately 385 acres along the Arroyo del Valle, north of Vineyard Avenue, (mostly owned by RMC Lonestar, Inc.) are under permit to be mined for aggregate resources. An approved reclamation plan anticipates that these lands will become part of a "chain of lakes" to be used for water storage and flood control in the Livermore Valley. The quarry lands effectively separate both the Vineyard Avenue Corridor Transitional Area and the Alden Lane Transitional Area from the Vineyard Area.

**Livermore Gateway:** Approximately 665 acres located between Patterson Pass Road to the south and I-580 to the north, and between Greenville Road to the west and the South Bay Aqueduct to the east.

In recognition of the importance of Greenville Road as a direct corridor between I-580 and the Vineyard Area, appropriate design, landscaping and signage would be encouraged in this area. No changes to existing zoning or land use designations are anticipated by this Plan.

#### **Development Potential of the Proposed SLVAP**

The proposed Area Plan creates no new entitlements, nor does it specify densities or holding capacities for urban development. Rather, it proposes criteria to be used in the consideration of any new development within the Plan Area, with the goal of a minimum of 5,000 acres of protected vineyards and other cultivated agriculture. The actual amount of development, and the timing of development that occurs will depend on individual landowner desires, the ability to meet Plan criteria, and the review process of individual development projects by the lead jurisdiction.

In theory, the minimum goal of 5,000 acres of vineyards or other cultivated agriculture could be achieved with as few as 100 new rural residential dwellings, in addition to existing and approved development in the Plan Area. However, it is more likely that the proposed Plan will result in a combination of land uses, including rural residential/vineyard development, urban development within the Transitional areas, and urban development adjacent to the City of Livermore in the Vineyard Area.

In developing the proposed Plan, Alameda County Planning Department staff estimated the range of development that would be necessary to meet the Plan goal of 5,000 acres of vineyards. Since creation of 20 acre parcels would be the most efficient means of increasing vineyard acreage, on a per unit basis, this was assumed to be the major method of reaching the minimum Plan goal. The number of 20 acre parcels that would be created was given a range, based on an assumed market absorption rate of between 6-12 parcels per year. Urban development within the Vineyard Area was assumed to be limited to that necessary to meet any shortfall, while development within the Transitional Areas was assumed to be similar to adjacent areas.

The result of this analysis was an estimate of between 1,150-1,960 additional homes in the Plan Area, above existing and approved development. New Vineyard Area urban development would range from 600-1200 units, while rural residential development would range from 60-150 units. Transitional area development would range from 400-600 units. These development ranges would result in a total vineyard acreage of between 5,036 and 5,126 acres, and \$10.5 - \$24.5 million in funds for a Land Trust.

It is likely that new development within the Plan Area will be limited to the ranges discussed above. However, because the proposed Plan does not specify densities or an overall holding capacity, and provides for a range of combinations of land use types, a maximum development "worst case" analysis has been developed for the purposes of this EIR. While it is unlikely that the proposed Plan will result in the "worst case", this analysis permits the EIR to identify potential impacts that could occur as a result of the Plan, and to recommend mitigation measures that can be implemented to reduce or eliminate identified impacts. This analysis is especially useful since the actual amount of development that will occur will not be known until specific projects are proposed and approved. Since land use decisions within portions of the Plan Area may be made by Pleasanton, Livermore or Alameda County, a "worst case" analysis permits the early identification of cumulative impacts that could occur as a result of the Plan.

The proposed Plan could result in the creation or expansion of three major types of land uses. These are 1) urban development, in the three transitional areas, Ruby Hill, and/or the Vineyard Area; 2) rural residential development in the Vineyard Area; and 3) expansion of viticultural or other cultivated agricultural acreage in the Vineyard Area. Commercial uses could also be developed under the Plan, including small-scale uses such as wineries and bed-and-breakfast establishments, and retail uses associated with a Wine Center.

For the purposes of this EIR, Table III-1 below specifies the maximum potential development levels that could result from Plan implementation. These figures will be

used for analysis of potential environmental impacts of the proposed South Livermore Valley Area Plan. These potential development levels do not reflect entitlements or endorsements of particular land uses, nor existing County or city policies. Instead, they are estimates of the highest level of development for each category of land use that could occur in the Plan Area, given Plan criteria, adjacent development patterns, landowner expectations, and growth patterns. Assumptions and estimates used to derive these development levels can be found in **Appendix B**.

It should be noted that the maximum development potential shown for each category are not additive. That is, maximum rural residential and agricultural development would preclude the maximum development of urban uses, and visa versa. However, because environmental impacts will vary according to land use, the maximum development in each category has been estimated separately.

It should also be noted that agricultural operations, such as viticulture, are not normally under government purview. As such, the expansion of cultivated agriculture, and the environmental impacts that could result, are usually not addressed under CEQA. For instance, under existing agricultural zoning, landowners may choose to cultivate (or stop cultivating) crops with no regulation, or knowledge, by Alameda County. Since no government action is involved there is no CEQA requirements. However, because the proposed SLVAP has specific policies encouraging the expansion of agriculture, and requires agricultural expansion to mitigate impacts of development, the environmental impacts of agricultural expansion are addressed in this document.

















**TABLE III-1. Maximum Potential Land Uses in the South Livermore Valley Plan Area Resulting from Approved Projects and Implementation of the Proposed SLVAP<sup>1</sup>**

<b>RURAL DEVELOPMENT</b>	
<u>Residential</u> Approved Units (Crane Ridge) Potential New Units (SLVAP)  <p style="text-align: right;"><b>Total Potential New Rural Units (SLVAP):</b>  <b>Total Rural Units (approved and potential):</b></p>	10 units 290 units  290 units 300 units
<u>Commercial</u> Potential New Wineries (SLVAP) Potential New B&Bs (SLVAP)  <p style="text-align: right;"><b>Total Potential New Rural Commercial (SLVAP):</b></p>	20 @ 1,500 sq.ft. each 25 @ 2,000 sq.ft. each  80,000 sq.ft.
<b>VITICULTURE/CULTIVATED AGRICULTURE</b>	
Existing Acres Approved Acres (required from approved development) Potential New Acres (SLVAP)  <p style="text-align: right;"><b>Total Potential New Agricultural Acreage (SLVAP):</b>  <b>Total Agricultural Acreage (existing, approved, potential):</b></p>	2,100 acres 640 acres 3,260 acres  3,260 acres 6,000 acres
<b>URBAN DEVELOPMENT</b>	
<u>Residential</u> Approved Units (Ruby Hill) Transitional Area - Vineyard Corridor (SLVAP) Transitional Area - Alden Lane Area (SLVAP) Vineyard Area (SLVAP)  <p style="text-align: right;"><b>Total Potential New Urban Units (SLVAP):</b>  <b>Total Urban Units (approved and potential):</b></p>	850 units (900 acres) 385 units (120 acres) 500 units (250 acres) 1,625 units (812 acres)  2,510 units (1,182 acres) 3,360 units (2,500 acres)
<u>Commercial</u> Approved (Ruby Hill) Transitional Area - Patterson Pass Area (SLVAP) <sup>2</sup> Vineyard Area (SLVAP)  <p style="text-align: right;"><b>Total Potential New Urban Commercial (SLVAP):</b>  <b>Total Urban Commercial (approved and potential):</b></p>	50,000 sq.ft. 415 industrial acres 100,000 sq.ft.  100,000 sq.ft. 150,000 sq.ft.
<p><sup>1</sup> Rural and Urban Development are not additive. See text and Appendix B.  <sup>2</sup> Development of this industrial acreage is not anticipated until after 2010.</p>	

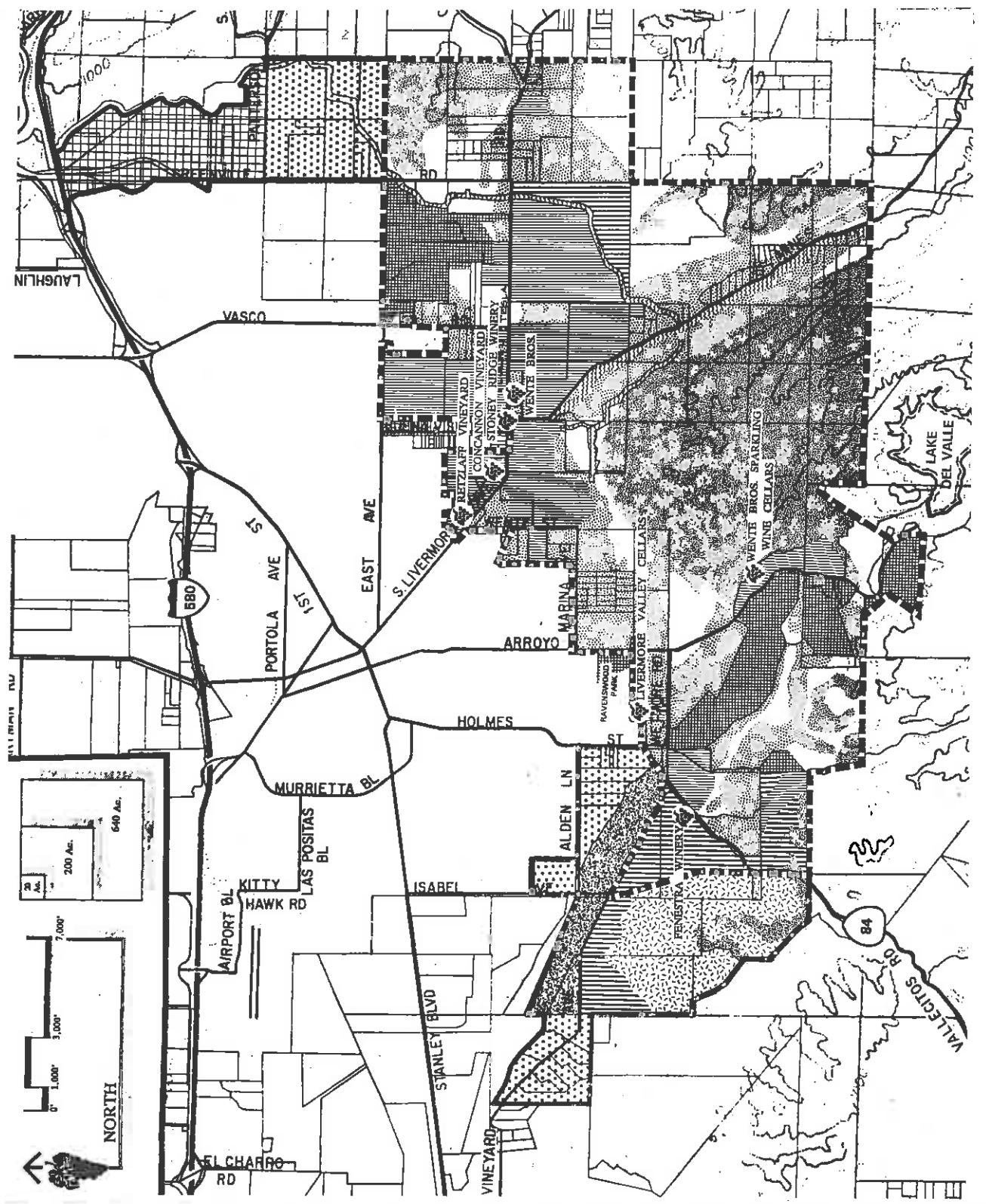


FIGURE III-3  
**PROPOSED SLVAP**

-  RUBY HILL
-  TRANSITIONAL AREAS
-  POTENTIALLY CULTIVABLE LANDS
-  CULTIVABLE LANDS
-  VINEYARD AREA
-  NEW VINEYARDS \*
-  EXISTING VINEYARDS
-  GATEWAY AREAS
-  PUBLIC LANDS
-  LANDS IN THE ARROYOS
-  STEEP SLOPES
-  QUARRY

\* Required for approved projects

**SOUTH LIVERMORE VALLEY AREA PLAN**  
 ENVIRONMENTAL  
 IMPACT REPORT  
 ALAMEDA COUNTY, CALIFORNIA









## **IV. ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES**

### **A. LAND USE**

#### **1. EXISTING SETTING**

While primarily composed of agricultural, rural residential and vacant private lands, the Plan Area also contains or is adjacent to significant public and quasi-public lands and facilities. Several significant development projects have also been approved in the area.

#### **Property Ownership**

The South Livermore Valley Area Plan is primarily in private ownership. Property ownership is widely distributed in the Plan Area, both in the size of individual parcels and the size of private landholdings. Individual parcels range in size from less than an acre to over 700 acres. Approximately 1,570 acres within the Vineyard Area are in parcels of 40 acres or less, with approximately 10,000 acres in parcels of 100 acres or larger (Figure A-1). While there are several hundred property owners within the Plan Area, some 5,400 acres are owned or controlled by three landowners. The Wentz family is the largest owner of property in the South Livermore Valley, with over 3,000 acres under its control. Signature Properties controls approximately 1,600 acres, and Sachau owns approximately 800 acres. Several other landowners have significant, though smaller landholdings, including Crohare, Lonestar, and Rose.

Institutional and public ownership total approximately 1,750 acres, including roads, railroads and utilities. Public sector owners include the United States government, the State of California, Alameda County, the East Bay Regional Park District, and the Livermore Area Recreation and Park District.

#### **Agricultural Uses**







The predominant land use in the Plan Area is agriculture. Vineyards presently occupy approximately 2,000 acres. The Wentz family owns approximately 1,300 acres of existing vineyards, with the remainder divided among over a dozen other viticulturalists. Other types of cultivated commercial agriculture, including walnut and olive orchards and nursery stock, occupy approximately 100 additional acres, although



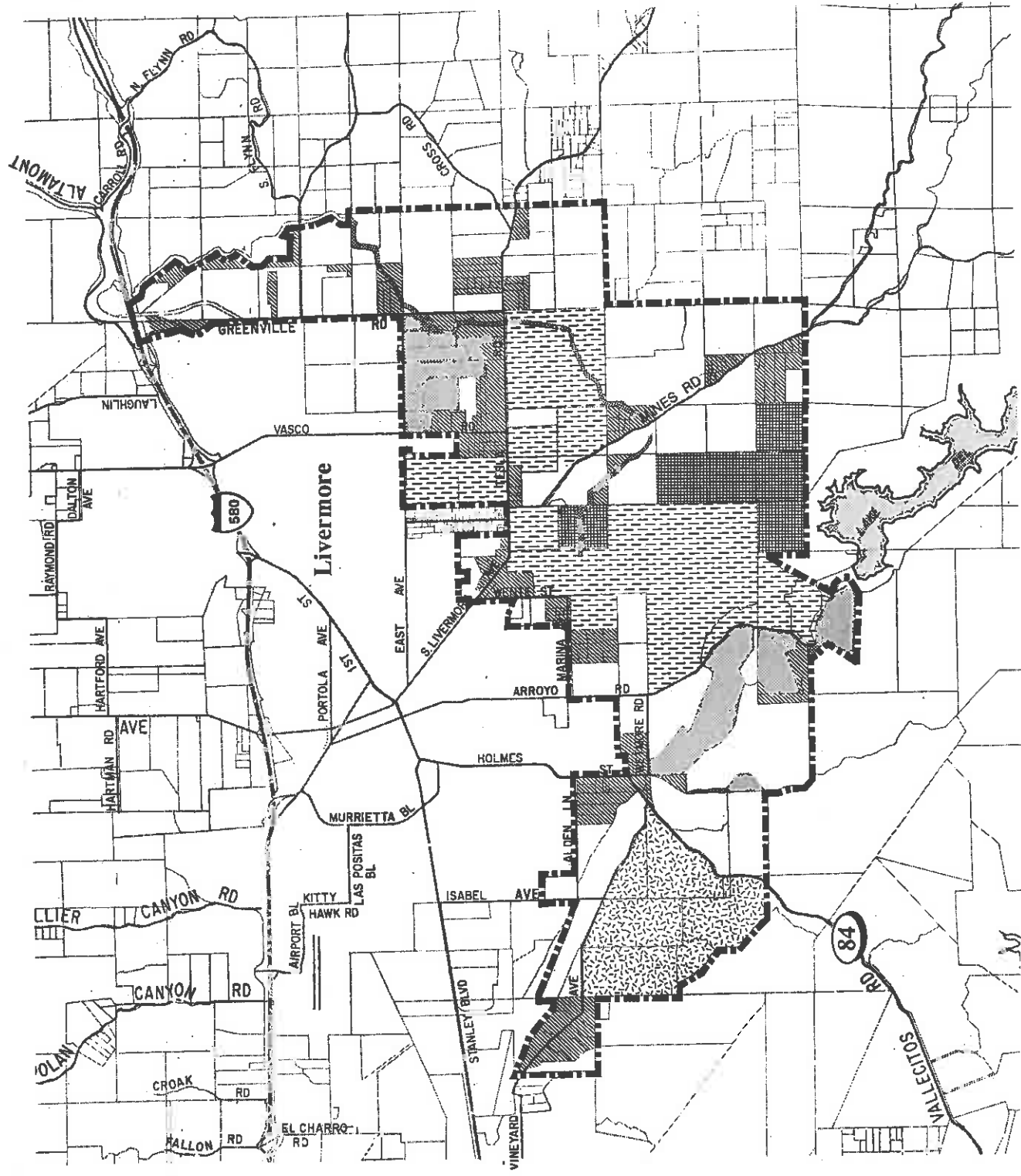
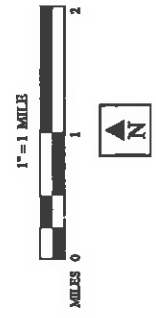


FIGURE IV A-1

# PROPERTY OWNERSHIP

-  PUBLIC OWNERSHIP
-  PARCELS LESS THAN 40 ACRES
-  WENTE
-  SIGNATURE PROPERTIES
-  SACHAU
-  OTHER

**SOUTH LIVERMORE VALLEY AREA PLAN**  
 ENVIRONMENTAL  
 IMPACT REPORT  
 ■ ■ ■ ■ ■  
 ALAMEDA COUNTY,  
 CALIFORNIA





some orchards have been abandoned. In addition, annual crops such as cereals, dry beans, and hay are grown, and a number of ranchettes along Mines Road are used primarily for horse pasture. Much of the remaining private land holdings are used for grazing (Figure A-2).

**State Designated Important Farmlands:** The California Department of Conservation Farmland Mapping and Monitoring Program identifies categories of agricultural and developed land as part of a continuing effort to monitor the conversion of the State's farmland to and from agricultural use. The most recent Important Farmland Series map for Alameda County (1988) identifies six categories of land within the Plan Area. These categories are based primarily on the current use of the land, rather than on the land's potential.

The three most significant agricultural cropland categories are Prime Farmland (P), defined as land with the best combination of physical and chemical features for the production of agricultural crops; Farmland of Statewide Importance (S), defined as land with a good combination of features available for agricultural production; and Unique Farmland (U), defined as land of lesser quality soils used for the production of the State's leading cash crops. Other categories mapped include Grazing Land (G), Urban and Built-up Land (D), and Other Land (X) for uses that do not fall into any of the other categories. Mapped categories are presented in Figure A-3.












There are approximately 1,200 acres of mapped Prime Farmland within the Plan Area. Farmlands of Statewide Importance comprise approximately 1,040 acres. Unique Farmlands cover about 500 acres.

With the exception of the Ruby Hill area, lands identified by the State as Prime, Unique, or of Statewide Importance within the Plan Area are almost all limited to lands currently under cultivation as vineyards, or required to be planted as part of the Ruby Hill project. Non-viticultural areas identified as Prime include approximately 10 acres adjacent to Holmes Street and approximately 20 acres currently used as an orchard just west of Wente Street. Approximately 20 additional acres of the orchard are identified as Unique, as are approximately 15 acres south of Marina Avenue within a small-lot rural residential area.

Approximately 300 of the 480 acres identified as Prime, Unique or of Statewide Importance within the Ruby Hill project will be developed as part of the approved project. The remainder will be planted in vineyards as part of the project requirements.



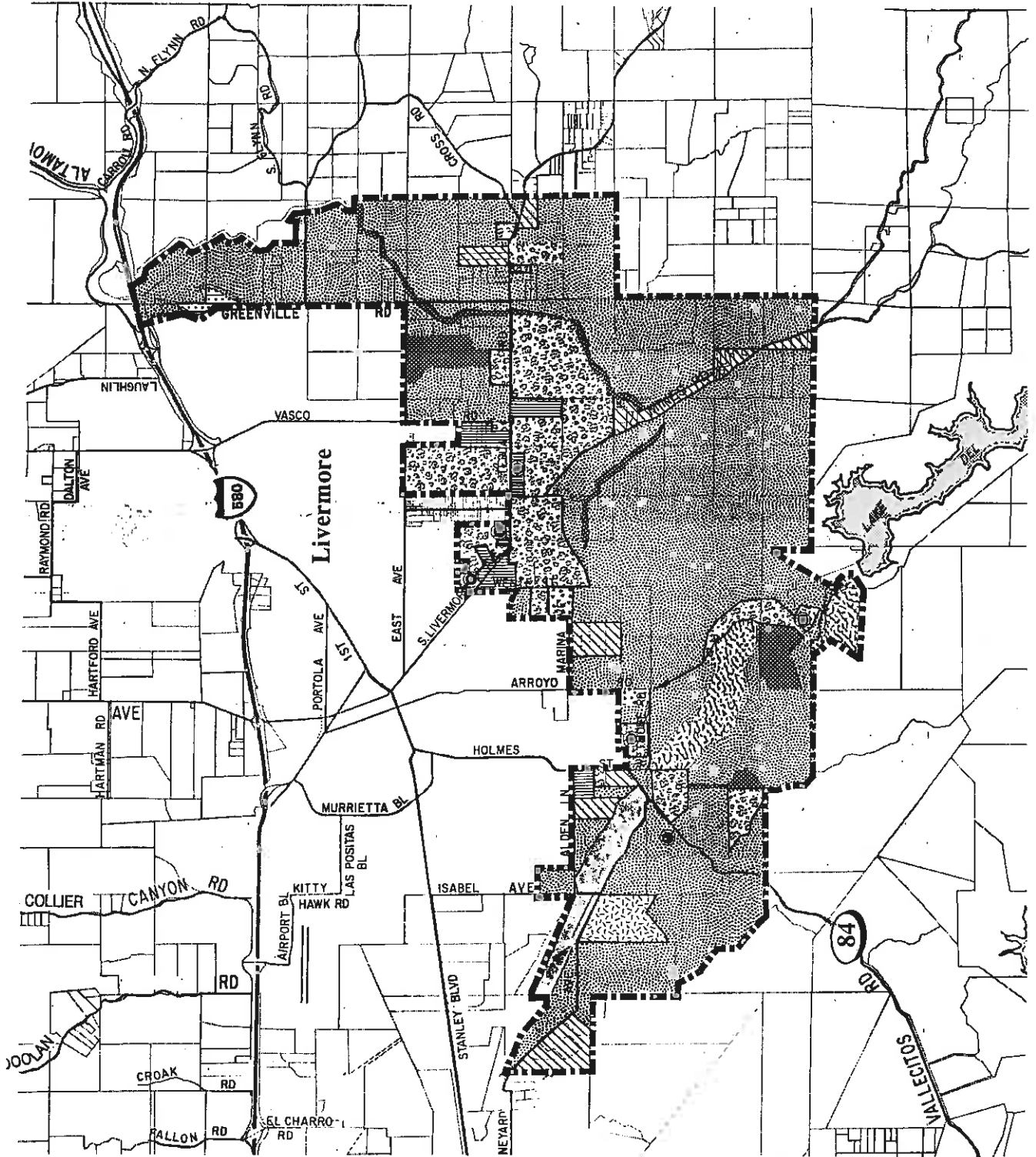
**FIGURE IV A-2  
EXISTING LAND USES**

-  Existing Vineyards
-  Abandoned Vineyards
-  Grazing Land/Fenced Pasture
-  Orchards
-  Park
-  Large Lot Residential
-  Quarry
-  Industrial/Utility
-  Commercial/Other Use
-  Wineries
-  Government Facilities

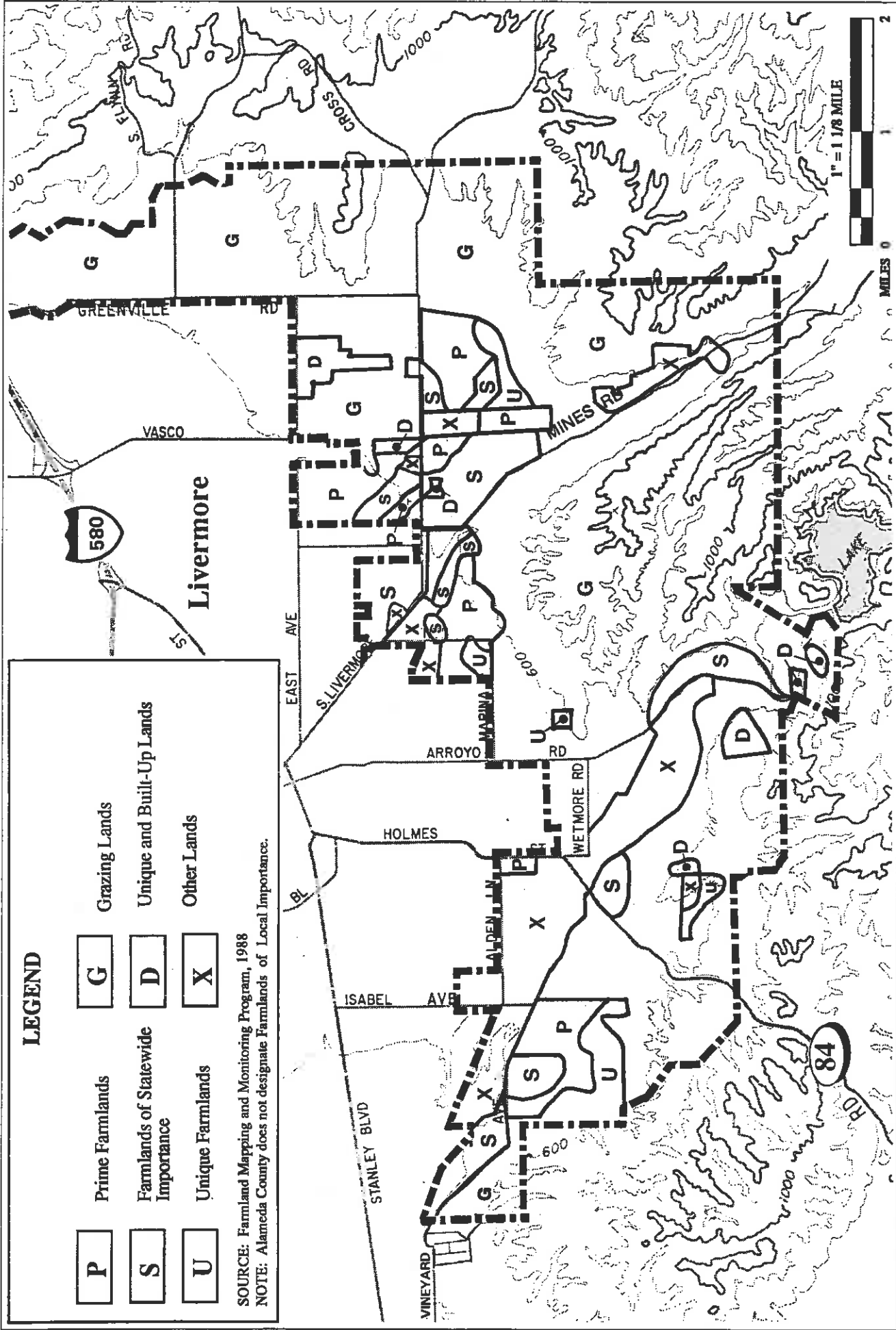
**SOUTH LIVERMORE  
VALLEY AREA PLAN**  
ENVIRONMENTAL  
IMPACT REPORT  
ALAMEDA COUNTY,  
CALIFORNIA



ALAMEDA COUNTY PLANNING DEPARTMENT











The remainder of the approximately 2,740 acres of identified important farmlands in the Plan Area are currently used for viticulture.

**Williamson Act Contracts:** A majority of the private land holdings within the Plan Area are under Williamson Act contract. The Williamson Act (Government Code Section 51200 et seq) enables agricultural land owners to receive lower property tax assessments in exchange for agreeing not to develop their land other than with agricultural uses.

Under Alameda County Williamson Act policies, uses of property under contract are restricted to agricultural uses, including wineries, and one single-family residence per 40 acres; or less than 40 acres if the residence or property is accessory to an existing intensive commercial agricultural use. County policies also require that lands under contract be zoned "A" (Agricultural), unless the land has not been used for intensive commercial agricultural use for the past 10 years, or the zoning specifically restricts the land to agricultural uses through dedication of agricultural easements. County policy also states that new structures should not take lands out of cultivation, and should be limited to a development envelope of no more than two acres in size.

Williamson Act contracts are automatically renewed each year. However, owners or the County may choose not to renew a contract by filing a notice of non-renewal with the County Clerk. After ten years, the land is no longer encumbered by the contract. Once the notice is filed, property tax assessments are increased incrementally until they reach their full amount when the contract expires.



Figure A-4 shows the parcels that are currently enrolled in the Williamson Act program, and those parcels that have filed non-renewal notices, with the date that the contract expires. Approximately 9,200 acres within the Plan Area are under contract. Parcels totalling approximately 1,600 acres have non-renewed, the majority of which will expire by the year 2000.

Under certain circumstances, the County or a city can choose to cancel a Williamson Act contract with a property owner, permitting development to occur immediately. However, contract cancellation require that a number of findings be made, including that no other proximate non-contracted land is available for development. Findings required for cancellation of a Williamson Act contract can be found in Appendix C.

**Wineries:** There are currently seven commercially producing wineries within the Plan Area. These include the Wente Brothers winery on Tesla Road, the Wente Brothers Cresta Blanca Sparkling Cellars on Arroyo Road, the Concannon winery and Cedar

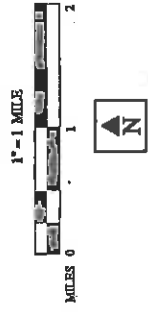


FIGURE IV A-4  
WILLIAMSON ACT LANDS

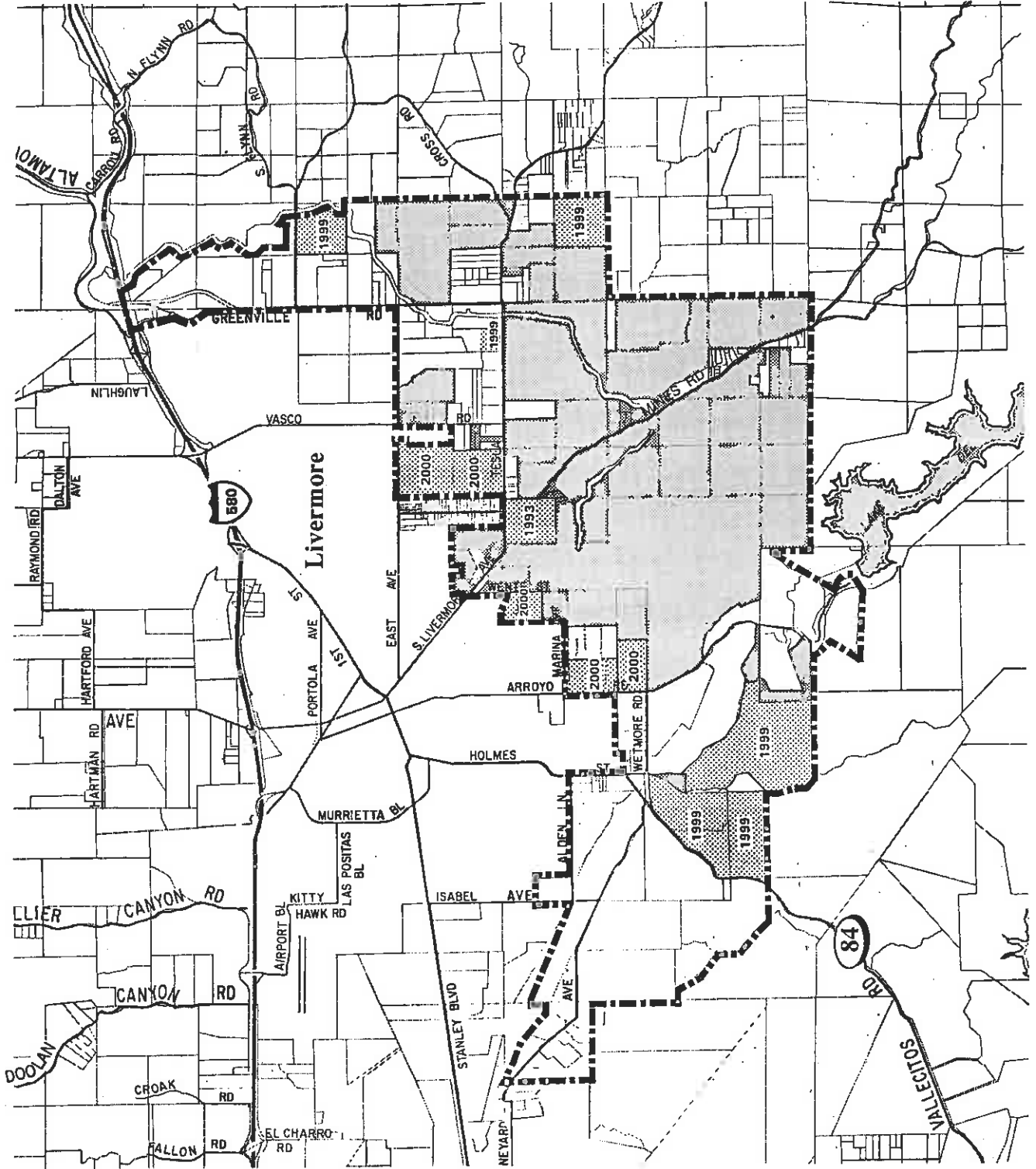
-  WILLIAMSON ACT PARCELS
-  NON-RENEWAL FILED  
(DATE DENOTES YEAR CONTRACT EXPIRES)

SOURCE: Alameda County Planning Department.

**SOUTH LIVERMORE VALLEY AREA PLAN**  
ENVIRONMENTAL  
IMPACT REPORT  
ALAMEDA COUNTY,  
CALIFORNIA



ALAMEDA COUNTY PLANNING DEPARTMENT





Mountain winery on Tesla Road, the Retzlaff winery on South Livermore Avenue, the Fenestra winery on Vallecitos Avenue, and Livermore Valley Cellars on Wetmore Road.

Wente Brothers is by far the largest producer, with an annual production of 350,000 cases. Concannon is the second largest winery in the area, with a current annual capacity of about 70,000 cases. The remaining wineries each produce 3,000-4,000 cases per year.

Four wineries are scheduled to be restored or opened in the near future. Wente Brothers, in partnership with Ivan Tamas, expect to open a new winery on Mines Road in June, 1992. Stony Ridge winery, which currently produces about 20,000 cases per year, recently moved a building to a small parcel on Tesla Road, and plans to open a winery in it in Summer, 1992. As a condition of approval, the Ruby Hill development is required to restore the Ruby Hill winery on Vineyard Avenue. It is anticipated that when completed, the Ruby Hill winery will produce 50,000 cases annually. In addition, the Ruby Hill development is required to renovate the Fenestra Winery, with an anticipated annual production of 10,000 cases.

### **Residential Uses**

There are approximately 150 existing residences within the Plan Area. While homesites are widely scattered, there are several relatively dense clusters of rural residences on smaller parcels of 5 to 10 acres. These include approximately 20 parcels south of Marina Avenue, parcels lining the southern portion of Mines Road, and numerous homes along Tesla Road, east of Greenville Road. Smaller parcels are also found along Holmes Street and Nicobria Lane, south of Alden Lane. Rural residences on larger parcels, averaging 20 acres in size, can be found on the south side of Vineyard Avenue near Pleasanton and along Vasco Road.

### **Quarries**

Approximately 385 acres along Vineyard Avenue are under permit to be mined by RMC Lonestar for aggregate resources. Active mining activities within the Plan Area are currently concentrated near Isabel Avenue. As part of the reclamation plan for the extensive quarry operations between Pleasanton and Livermore, the permit requires that mined lands be converted into a "chain of lakes" that will be used by the Alameda County Flood Control and Water Conservation District Zone 7 (Zone 7) for water storage, groundwater recharge, and flood control. While the permit does

not indicate a time period when mining must be completed, the reclamation plan assumes that it will be completed by the year 2030.

### **Public and Quasi-Public Lands and Facilities**

Public and quasi-public lands and facilities account for approximately 1,750 acres within the Plan Area. The largest public land owner is the U.S. government. The Sandia National Laboratory, a nuclear weapons-related research facility under the purview of the U.S. Department of Energy, is located on 439 acres just south of East Avenue in the northeast portion of the Plan Area. The facility occupies approximately half of the site, the remainder having been recently purchased by the federal government as a security buffer. Sandia Labs employ about 1,500 people at the facility, which is accessed via East Avenue.

The U.S. Veterans Administration owns and operates the 169 acre Veteran's Medical Center on Arroyo Road, near the southern edge of the Plan Area. The Center employs approximately 550 people.

The Livermore Area Recreation and Parks District (LARPD) owns and operates the 364 acre Sycamore Grove Regional Park and the adjoining 32 acre Veteran's Park in the central portion of the Plan Area, just west of Arroyo Road. The East Bay Regional Park District (EBRPD) soon will acquire 105 acres at the south end of Arroyo Road in a land exchange with Alameda County. Alameda County owns the Wetmore Ranch property, a 77 acre vacant parcel located between Wetmore Road and the Livermore city limits.

Zone 7 owns and operates two water treatment plants within the Plan Area on a combined acreage of about 46 acres. One treatment plant is located just south of Patterson Pass Road and the other is located east of Vallecitos Road. The State-owned South Bay Aqueduct occupies approximately 120 acres as it passes through the eastern portion of the Plan Area before going underground near Wente Street. Public roads occupy approximately 245 acres. Utility easements that transverse the area (primarily P.G.&E. powerlines) cover about 150 acres. There are also about 65 acres of railroad easements in the northeast portion of the Plan Area along Greenville Road near Interstate 580.

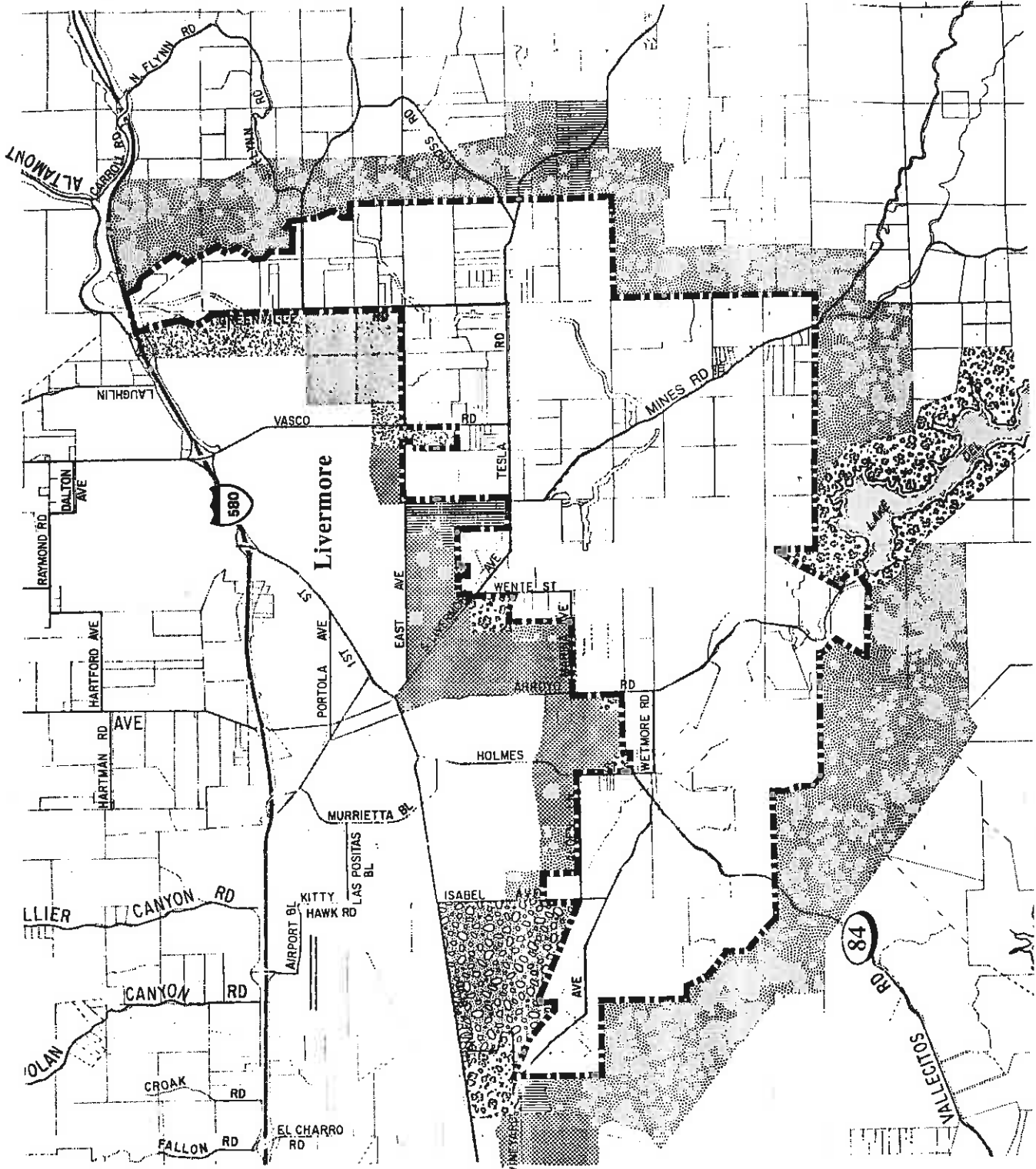
### **Surrounding Land Uses**

The Plan Area, due to its large size, is adjacent to a number of different land uses (Figure A-5). In general, the area is bordered by residential and industrial

FIGURE IV A-5  
SURROUNDING  
LAND USES

- LAWRENCE LIVERMORE NATIONAL LAB
- INDUSTRIAL/VACANT
- PARK
- QUARRY
- AGRICULTURE & GRAZING
- LOW DENSITY SUBURBAN
- LARGE LOT RURAL RESIDENTIAL

**SOUTH LIVERMORE VALLEY AREA PLAN**  
ENVIRONMENTAL  
IMPACT REPORT  
ALAMEDA COUNTY,  
CALIFORNIA







development within the city of Livermore to the north, and undeveloped ranch and park lands to the south, east, and west. The city of Pleasanton borders the extreme western corner of the area. The northwest portion of the Plan Area is bordered by active and inactive quarry operations. East of Isabel Avenue, the area is bordered by low density residential development within the city of Livermore. Housing densities average approximately 2 units to the acre, although individual lots bordering the Plan Area may be larger. East of So. Livermore Avenue, the Plan Area is adjacent to the Buena Vista Avenue unincorporated rural residential area, with lot sizes of 1-5 acres. East of Vasco Road, bordering uses are industrial, the most prominent being the Lawrence Livermore National Laboratory, located in unincorporated Alameda County northwest of Greenville Road and East Avenue. Development on the west side of Greenville Avenue are primarily industrial and warehouse uses. On the east, the Plan Area borders private ranch and grazing lands. These are generally large parcels, ranging from 40 to over 100 acres, with the exception of the Tesla Road area, where parcel sizes are smaller. The Plan Area borders additional private ranch lands to the south and east, as well as Lake Del Valle Regional Park, which is adjacent to the Plan Area near Arroyo Road.

### **Approved Projects**

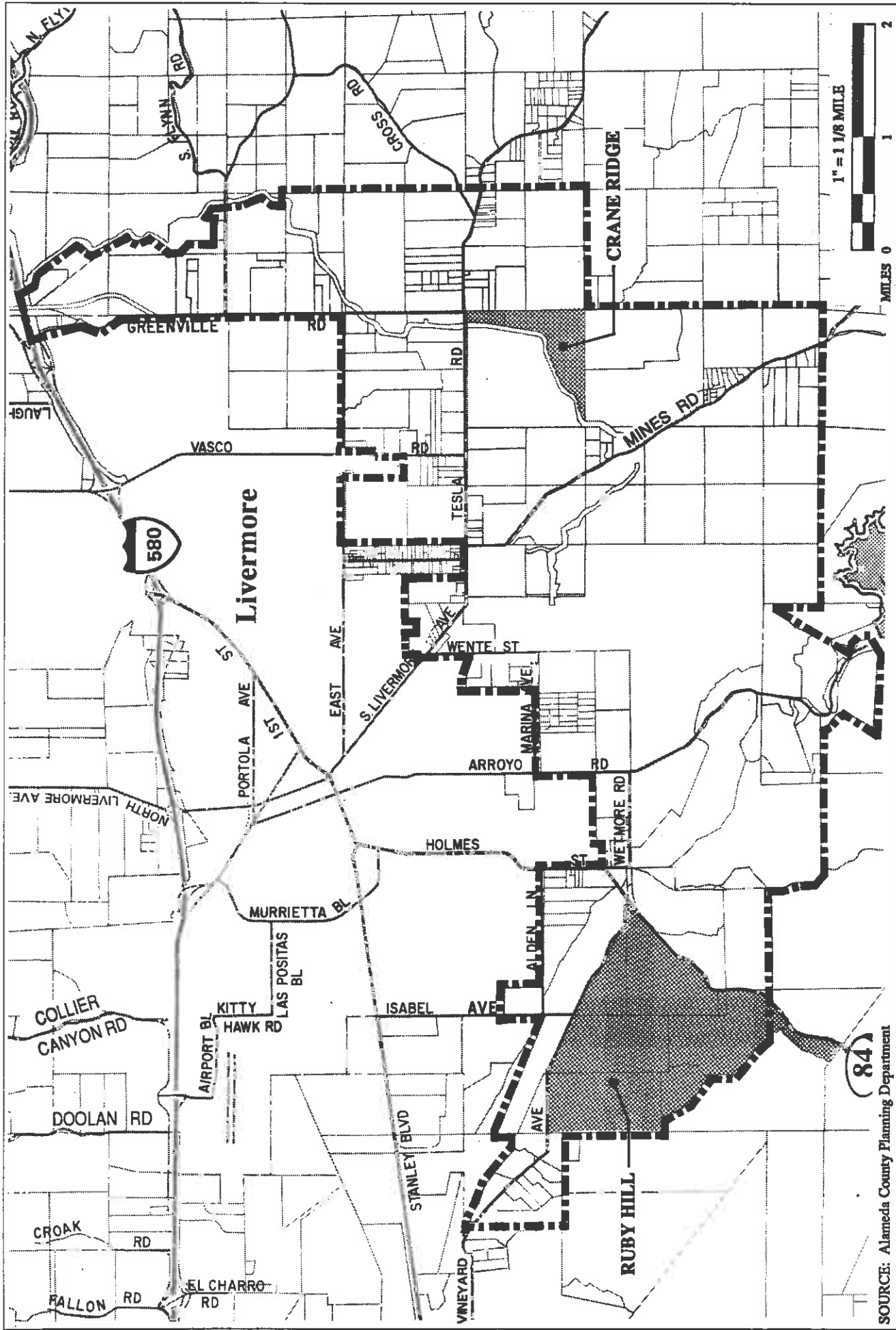
Two significant development projects have been approved in the Plan Area, although as of March, 1992 neither had filed final subdivision maps (Figure A-6). In June, 1991, the Alameda County Board of Supervisors approved the Ruby Hill project, permitting the construction of up to 850 homes, a championship golf course, an inn and a five-acre retail center. Pleasanton has initiated the annexation of the portions of the site slated for urban development. It is anticipated that construction could begin as early as Spring, 1993, although the project is currently the subject of a lawsuit between Livermore and Alameda County.

The Crane Ridge project was approved in 1991 by the Alameda County Board of Supervisors, permitting the construction of ten homes on five parcels on a 184 acre site to the southwest of the intersection of Greenville and Tesla Road. Vineyards are required to be planted on 90% of each parcel, with agricultural easements dedicated to the County.

### **Land Use Policies and Programs**

Alameda County currently regulates land uses within the Plan Area, all of which is unincorporated. However, both Livermore and Pleasanton have policies regarding





SOURCE: Alameda County Planning Department

**SOUTH LIVERMORE VALLEY AREA PLAN**  
 ENVIRONMENTAL IMPACT REPORT

■■■  
 ALAMEDA COUNTY, CALIFORNIA



ALAMEDA COUNTY PLANNING DEPARTMENT

**APPROVED DEVELOPMENT PROJECTS**

FIGURE IV A-6





parts of the Plan Area, and are actively seeking annexation of territory within the area.

**Alameda County Land Use Policies:** County land use policies pertinent to the Plan Area are contained in the Livermore-Amador Valley Planning Unit (LAVPU) General Plan, as amended. Adopted in 1977, the LAVPU governs unincorporated land use in the eastern portion of Alameda County, including the Plan Area (Figure A-7).

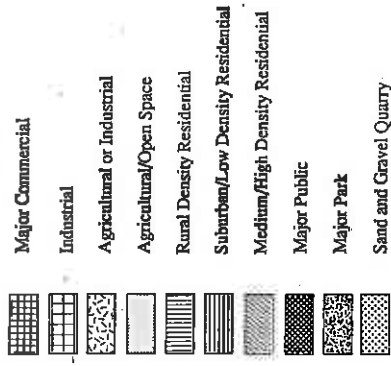
Relevant policies and objectives found in the LAVPU General Plan, as amended, are summarized below:

- Promote existing cities as centers of urban growth, encouraging development contiguous to established urban areas in order to efficiently provide services. Consideration may be given to development in non-urban areas where found to promote agriculture. Otherwise, all urban development shall be within incorporated areas.
- Limit residential development in rural areas to minimize adverse effects on groundwater resources, preserve large tracts of agricultural land and efficiently provide public services, unless deemed desirable to promote the agriculture industry.
- Ensure land uses are mutually compatible.
- Limit development in areas of valuable resources, such as prime agricultural soils, sand and gravel, watersheds, and permeable soils for groundwater recharge.
- Limit the rate and amount of urban growth so that it will not exceed the ability to provide services and to prevent further deterioration of air quality.
- Use land controls to limit the extent of commercial and business development in areas outside the existing central areas of the three valley communities.
- Protect and promote viticulture and other intensive forms of cultivation by providing incentives to place and retain agricultural land in cultivation and related activities which stimulate agricultural activity and name recognition. Allow development that is directly linked to and actively preserves existing



FIGURE IV A-7

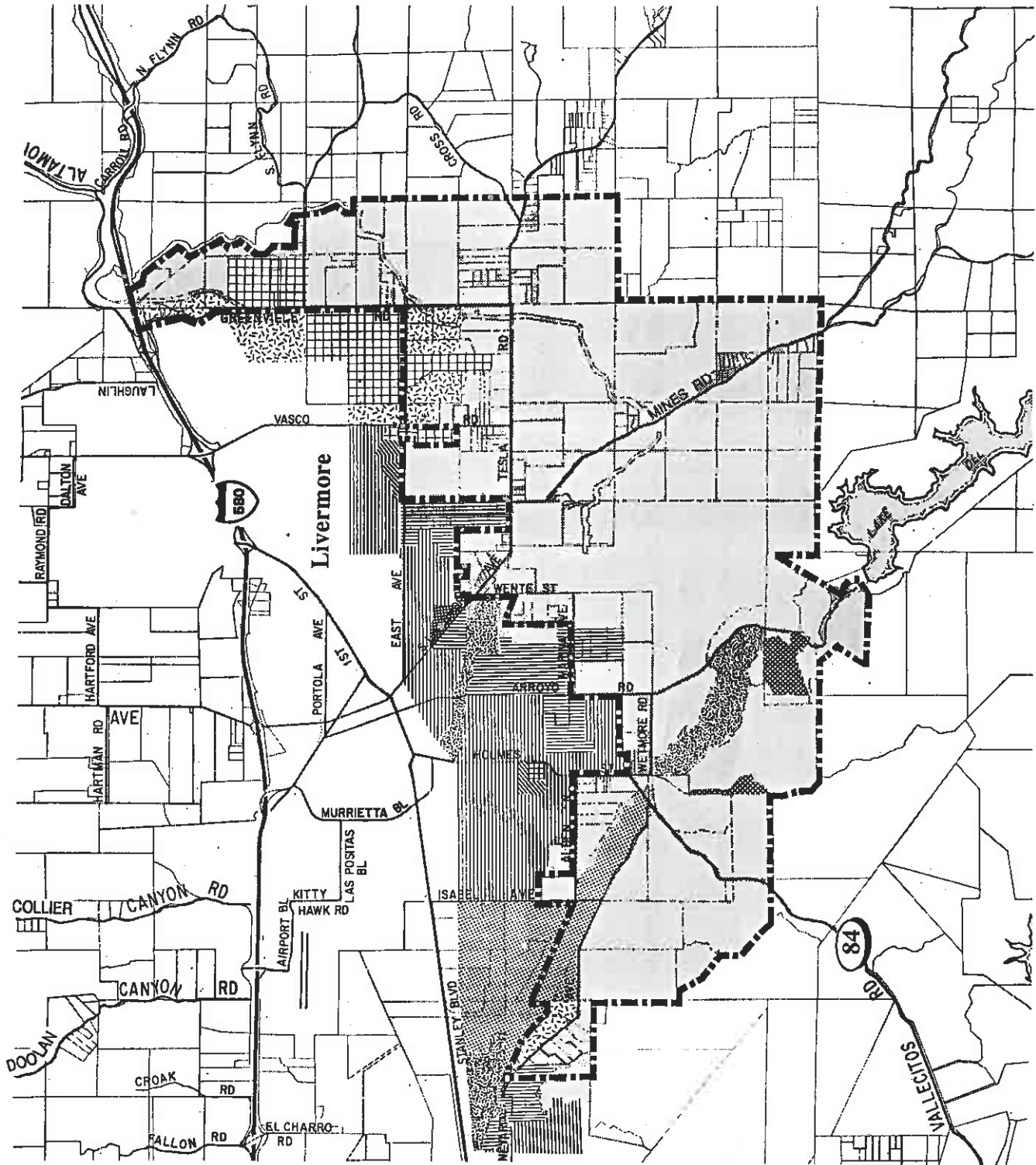
# ALAMEDA COUNTY GENERAL PLAN DESIGNATIONS



SOURCE: Alameda County Planning Department

## SOUTH LIVERMORE VALLEY AREA PLAN ENVIRONMENTAL IMPACT REPORT

ALAMEDA COUNTY,  
CALIFORNIA







irrigated or prime vineyards or other intensive commercial cultivated agriculture. Development densities are not to exceed 0.9 units per gross acre and may not occur on slopes over 25% or on existing vineyards or other cultivated agriculture. Proposed projects must meet the following five criteria:

- Preserve existing agriculture and/or promote development of new intensive cultivation, emphasizing viticulture.
- Ensure continuation of intensive cultivation by granting agricultural or open space easements over the land to be protected and cultivated.
- Provide for renovation or construction of wineries to be operated in connection with production.
- Generate a long-term beneficial fiscal impact to Alameda County.
- Provide a fair and equitable return to land owners.

Alameda County is in the process of revising the General Plan for the eastern portion of the County. A draft of the East County General Plan is tentatively scheduled for release in July, 1992. It is anticipated that the South Livermore Valley Area Plan will be incorporated as a section of the new East County document.

**Alameda County Zoning:** The vast majority of the Plan Area is currently zoned "A" (Agricultural), permitting most agricultural uses with a 100-acre minimum parcel size per residential unit. Several areas have different zoning. The Sandia site is zoned for industrial uses, and over 300 acres in the Livermore Gateway area north of Patterson Pass Road is zoned "PD" (Planned Development), permitting the development of an industrial park, contingent on some services being provided by the City of Livermore. A number of smaller parcels, mostly near to or adjacent to the City of Livermore, are zoned "R-1-L-B-E", permitting a residence and limited agriculture on parcels ranging from five to fifty acres in size.

**City Spheres of Influence:** Both Livermore and Pleasanton include portions of the Plan Area within their respective sphere of influence (SOI). The SOI defines the primary area within which urban development is to be encouraged around a city, and is determined by the County Local Area Formation Commission (LAFCO). Before a city may annex land adjacent to its boundaries, that land must be within its SOI as set by LAFCO. If a city wishes to annex land outside of its SOI, the city must request that LAFCO amend the sphere to include the area to be annexed.

The purpose of a sphere of influence is to encourage "planned, well-ordered, efficient urban development patterns, the preservation of open space lands, and the discouragement of urban sprawl." In preparing findings to establish or amend a SOI, LAFCO must consider:

- (1) The present and planned uses in the area, including agricultural and open-space lands.
- (2) The present and probable need for public facilities and services in the area.
- (3) The present capacity of public facilities and the adequacy of public services which the agency provides or is authorized to provide.
- (4) The existence of any social or economic communities of interest in the area if LAFCO determines that they are relevant to the agency.  
(California Government Code Section 56000, et seq.)

**Figure A-8** indicates the current spheres of influence of both the cities of Livermore and Pleasanton as they relate to the Plan Area. Pleasanton's SOI includes the Vineyard Corridor Transitional Area, and approximately 640 acres of the Ruby Hill Area. Livermore's SOI is more restricted, generally following the city limits in the western portion of the Plan Area, with pockets of lands totaling approximately 400 acres west of South Livermore Avenue. East of this point, Livermore's sphere includes all lands north of Tesla Road, to Greenville Road. The Livermore SOI then includes all lands to a point approximately 1/2 mile east of Greenville Road north to I-580.

**City of Livermore General Plan and Zoning:** **Figure A-9** illustrates current city General Plan designations in the Plan Area. Livermore's General Plan Area roughly corresponds to the city's SOI within the proposed SLVAP. Livermore General Plan designations within the Plan Area include "Limited Agriculture", with a 20 acre minimum site area for lands generally west of Arroyo Road and lands adjacent to the Sandia Labs; "Viticulture", with a 100 acre minimum site area for existing vineyards along Tesla Road; "Rural Residential", with a 1-5 acre site requirement for areas along Marina Avenue and Wetmore Road; and "General Agriculture", with a minimum site area of 100 acres for remaining designated areas. A small area near I-580, between Greenville Road and the railroad, is designated for "High Intensity Industrial" uses.

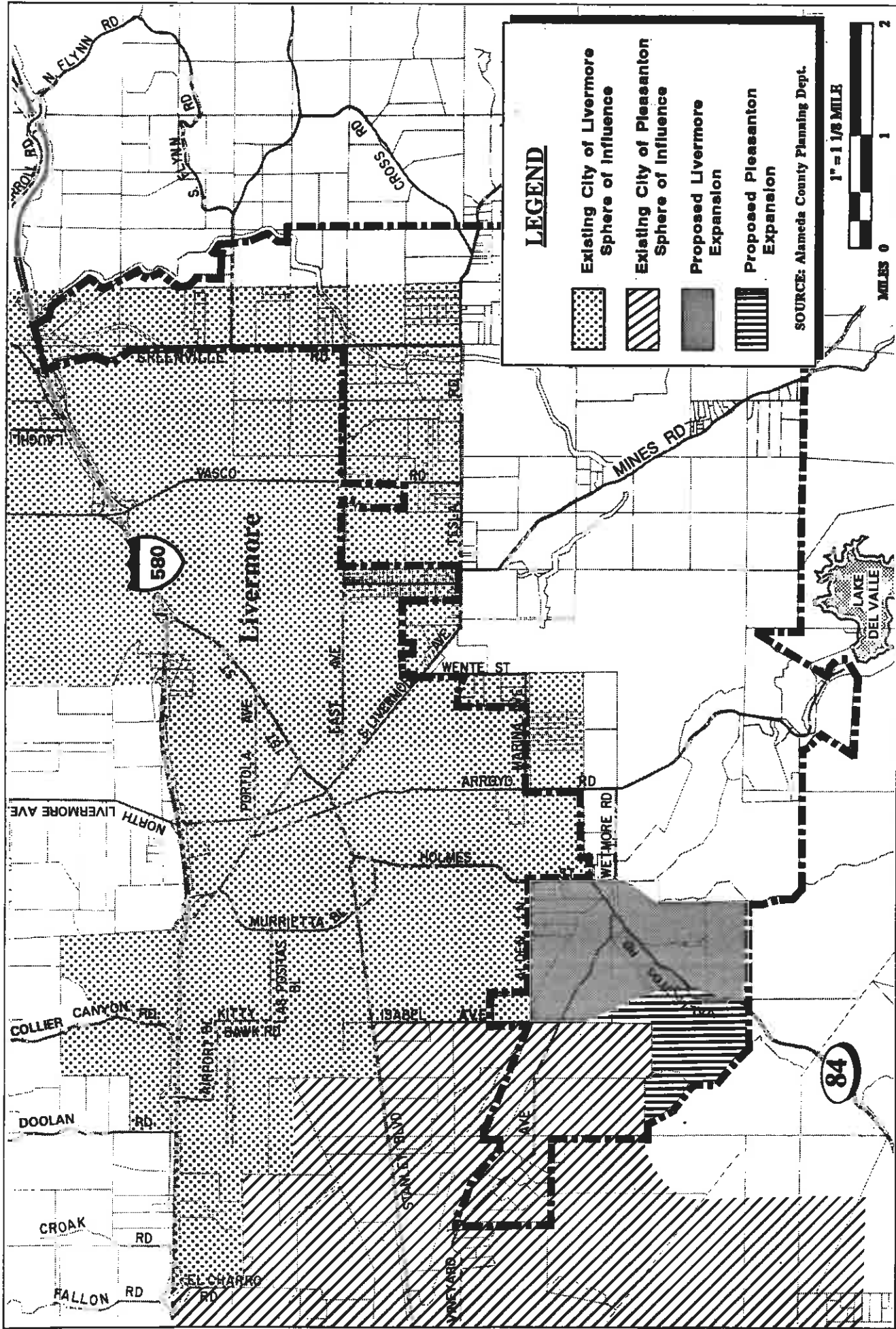


FIGURE IV A-8  
CITY SPHERES OF INFLUENCE



ALAMEDA COUNTY PLANNING DEPARTMENT

SOUTH LIVERMORE  
VALLEY AREA PLAN  
ENVIRONMENTAL IMPACT REPORT

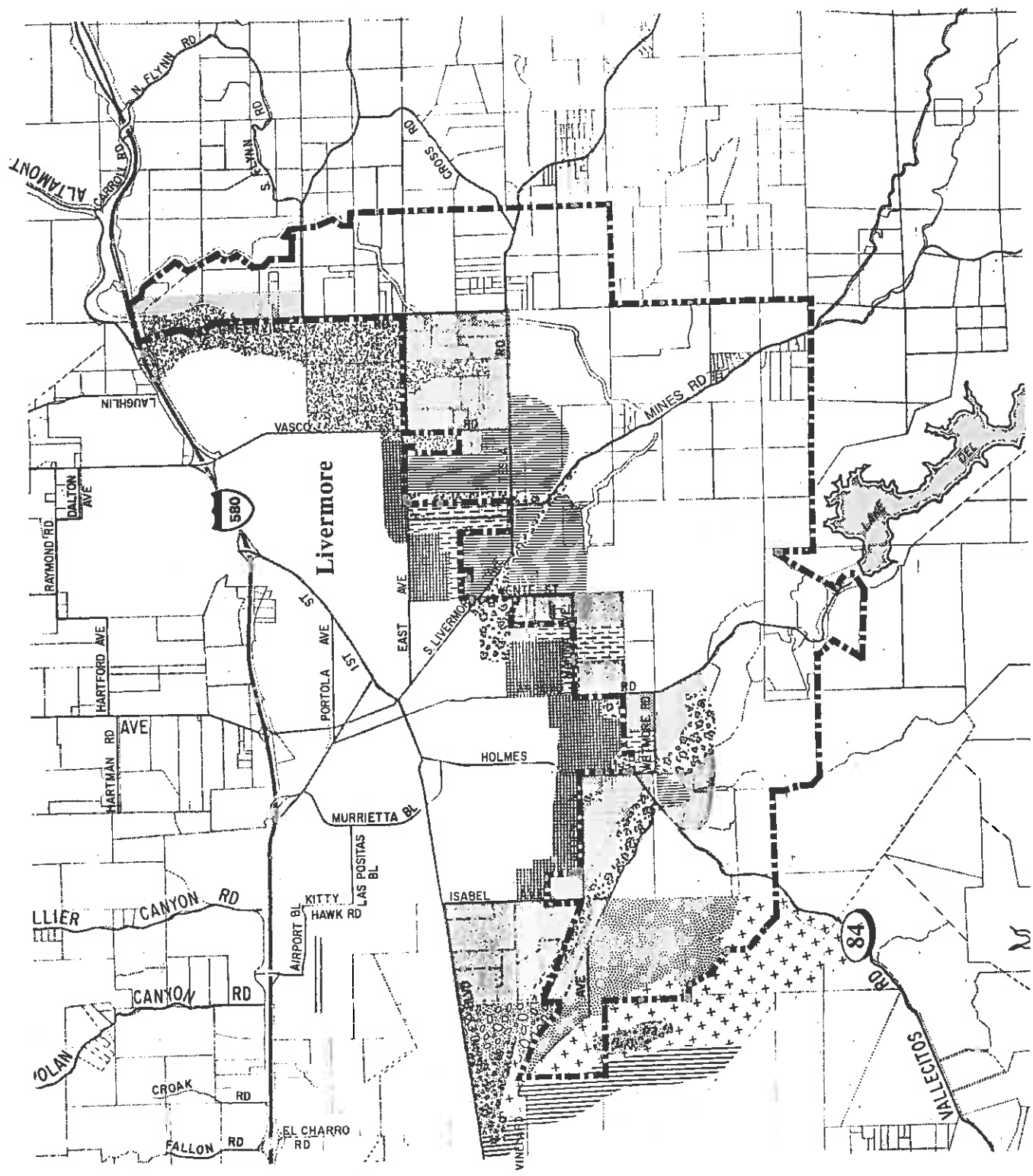
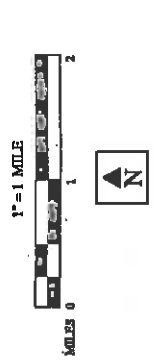
ALAMEDA COUNTY, CALIFORNIA



**FIGURE IV A-9**  
**CITY GENERAL**  
**PLAN DESIGNATIONS**

- LIVERMORE**
- GENERAL AGRICULTURE  
100 ACRE MINIMUM
  - LIMITED AGRICULTURE  
20 ACRE MINIMUM
  - VITICULTURE  
100 ACRE MINIMUM
  - INDUSTRIAL
  - RURAL - 1-5 ACRES
  - PARKS & RECREATION
  - SUBURBAN RESIDENTIAL
- PLEASANTON**
- AGRICULTURE & GRAZING
  - QUARRY
  - PUBLIC HEALTH & SAFETY
  - PARK
  - RURAL RESIDENTIAL

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**VALLEY AREA PLAN**  
 ENVIRONMENTAL  
 IMPACT REPORT  
 ALAMEDA COUNTY,  
 CALIFORNIA





The Livermore General Plan also indicates that several hundred acres on either side of Marina Avenue, although presently designated for "General Agriculture" or "Rural Residential", are within the long range development boundaries for residential development.

The emphasis on agriculture in the City's General Plan Land Use Element is intended to define the limits of urbanization during the planning period (1976 through 2000) and to "respect the integrity of agricultural lands surrounding the community." The City's Environmental Resource Management Element also states that the City's agricultural resource policies and land use designations reflect Livermore's interest in encouraging expansion of viticulture in the City's Planning Area by protecting cultivable soil resources and the area's historical identity as a wine-producing region.

Livermore is currently considering initiating an expansion of the city SOI and annexation of approximately 800 acres of the Plan Area. The proposed SOI would include the entire Alden Lane Transitional Area as well as approximately 600 acres along the west side of the proposed State 84 route. The City is currently in the process of negotiating with property owners in the area. The City has also stated the intention of amending the General Plan to conform with the draft proposed South Livermore Valley Area Plan.

**City of Pleasanton General Plan and Zoning:** The City of Pleasanton General Plan Area extends into the western portion of the South Livermore Valley Area Plan as far as the proposed route for State Route 84, including the Vineyard Corridor Transitional Area and most of Ruby Hill. The General Plan designates the Ruby Hill property as Agriculture and Grazing, prohibiting development except for the construction of a single family house on existing lots of record. The Pleasanton General Plan also recommends that the County's agricultural zoning for the Ruby Hill area be continued if annexed by Pleasanton.

The Vineyard Corridor Transitional Area is within several General Plan designations, including Public Health and Safety, Agriculture and Grazing, Sand and Gravel, Parks and Recreation, and Rural Residential. Most of these designations preclude further development, although Rural Residential permits 0-2 d.u./acre. The total allowable development in the Transitional Area under existing General Plan designations is approximately 20 units.

In February, 1992, the City of Pleasanton initiated an amendment to the SOI and annexation of the Ruby Hill property up to the proposed State Route 84 alignment,

including the Vineyard Corridor Transitional Area.

### **Proposed Development Projects**

While neither is currently an "active" proposal, County staff is aware of two development projects in the Plan Area. The first is the Topham development, which proposed 108 single-family units on approximately 58 acres just south of Alden Lane within the Alden Lane Transitional Area. The project went before the City of Livermore as a General Plan Amendment in 1990, but was never acted on by the City. While an EIR document was prepared for the project, it was never certified by the City.

The second project, Vineyard Trails, is still in the conceptual stages of planning. Five landowners adjacent to Livermore's city limits along Arroyo Road and Marina Avenue have discussed a conceptual plan concept with City of Livermore and County officials for some 1,200 homes clustered around a wine center/retail area on approximately 600 acres that would center on the intersection of Wetmore and Arroyo Roads.

## **2. CRITERIA OF SIGNIFICANCE**

For the purposes of this EIR, land use impacts would be considered significant if adoption and implementation of the South Livermore Valley Area Plan could result in:

- . loss of a significant amount cultivated lands or of State-identified Farmlands;
- . conflicts with present and planned uses in the area, including agricultural and open space lands;
- . conflicts with existing land use policies and zoning; or
- . incompatible land uses or nuisance impacts.

## **3. IMPACTS AND MITIGATION MEASURES**

The following land use impacts could result from adoption and implementation of the proposed South Livermore Valley Area Plan. Unless noted otherwise, proposed



mitigation measures would reduce impacts to less than significant levels.

### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT A-1. The proposed Plan could result in smaller, less efficient parcels for farming, especially if large tracts of existing vineyards are subdivided into 20 acre parcels.**

The proposed Plan would permit landowners with existing vineyards to subdivide them for residential use to a maximum gross density of 20 acres per unit, if agricultural easements are dedicated, and if adequate water and septic systems can be supplied. This could result in the subdivision of several large vineyards over 100 acres in size into twenty-acre parcels, each with a 2 acre homesite. Large vineyards generally are more efficient, resulting in economies of scale that may make them more economically viable than a number of smaller vineyards under separate ownership.

**Proposed Plan Mitigation:** The proposed Plan requires that rural "homesites, ancillary uses and parcel lines (be) sited to maximize productive use of the land for intensive cultivated agriculture." This policy could permit clustering and other techniques to allow the retention of larger acreage of vineyards, as long as gross densities do not exceed 20 acres per unit.

**Mitigation Measure A-1:** No further mitigation is warranted.

**IMPACT A-2. The proposed Plan could result in inefficient parcels that may not be agriculturally viable.**

There is no generally accepted size limitation for agriculturally viable parcels. While it has been suggested by some experts that 20 acre parcels may not be large enough to support agriculturally viable vineyards, others have indicated that many existing vineyards in Napa and Sonoma Counties are 20 acres, or smaller. Within the Plan Area, newer vineyards have tended to be smaller, such as the Retzlaff vineyards and winery on approximately 14 acres, and the recently opened Cedar Mountain Winery located on approximately 25 acres.

**Proposed Plan Mitigation:** The proposed Plan requires planting of vineyards or other cultivated agriculture, and assurances that it will continue to be farmed through agricultural easements, prior to subdivision of property within the Vineyard Area.

**Mitigation Measure A-2:** No further mitigation is warranted.

**IMPACT A-3.** The proposed Plan could result in the cumulative loss of up to 10% of existing vineyards, together with a corresponding loss of lands identified as Prime, Unique, or of Statewide Importance.

The proposed Plan would permit subdivision of existing vineyards to a gross density of one residence per 20 acres, if agricultural easements are dedicated on a minimum of 90% of the land. Thus, up to 10% of existing vineyards, or approximately 200 acres, could be developed. This would also result in a corresponding loss of State-identified Farmlands, since there is a close correspondence between existing vineyards and the three categories of State Farmlands.

**Proposed Plan Mitigation:** The proposed Plan policy to site rural homesites, ancillary uses and parcel lines to maximize productive use of the land for intensive cultivated agriculture would mitigate this impact on existing parcels where not all of the land is presently under cultivation by encouraging clustering on uncultivated areas. Use of the Land Trust to purchase easements or fee title on existing cultivated parcels could also reduce the potential for loss of cultivated land. However, there still could be considerable loss on parcels completely under cultivation. Therefore, the following mitigation measure is recommended.

**Mitigation Measure A-3:** Add a policy to the proposed Plan that would permit and encourage the transfer of allowable rural homesites and ancillary uses from cultivated parcels to uncultivated parcels within the Vineyard Area.

**IMPACT A-4:** The proposed Plan policies allowing PD zoning, additional residences and small commercial establishments such as bed-and-breakfasts on lands currently under cultivation would be contrary to County Williamson Act policies.

**Mitigation Measure A-4:** Amend the County Williamson Act policies to allow PD zoning, additional residences and small commercial establishments as permitted under the proposed Plan.

**IMPACT A-5: The proposed Plan could result in new vineyards adjacent to or near existing residential areas in Livermore, which could result in complaints about agricultural activities, such as spraying, odors, or noise from farm activities.**

This potential impact is generally limited by the location of existing residential development and existing vineyards to the area between Holmes Street and South Livermore Avenue along Livermore's southern edge. Existing roads separating vacant parcels from existing development further limit possible conflict areas to several parcels along Wetmore Road and Marina Avenue. In comparison, existing development backs up to existing vineyards, including Concannon, Retzlaff, Wente, Livermore Valley Cellars, and Ravenswood Park. While the City of Livermore generally requires a 100 foot setback for new residences from existing vineyards, there has not been a history of complaints regarding existing vineyard operations adjacent to urbanized areas.

**Mitigation Measure A-5:** None warranted.

**IMPACT A-6: Expansion of vineyards and other cultivated agriculture would result in the loss of grazing and vacant lands.**

The proposed Plan could result in up to 3,240 additional acres being planted with vineyards or other cultivated agriculture. Much of the vacant land that could be planted is presently used for grazing. However, this represents a small fraction of the approximately 255,000 acres of grazing lands available in Alameda County. Therefore, this is considered an insignificant impact.

**Mitigation Measure A-6:** None warranted.

**IMPACT A-7: Rural residential development at a maximum gross density of 20 acres per unit could be contrary to current Livermore General Plan designations.**

"Bonus density" rural residential development allowed under the proposed Plan would not be compatible with Livermore's "Viticulture" and "General Agriculture" minimum site requirements, including existing vineyards along Tesla and South Livermore Avenue. However, since these lands are under Alameda County jurisdiction, this is considered a less-than-significant impact, unless these lands are to be annexed by Livermore.

**Mitigation Measure A-7:** Prior to annexation, amend the Livermore General Plan to comply with the proposed Plan policies.

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land, and the development of up to 2,510 additional dwelling units in Pleasanton and Livermore.

**IMPACT A-8: The proposed Plan could result in urban development of lands identified by the State as Important Farmlands.**

Lands within the three Transitional Areas that are identified by the State as Important Farmlands are limited to approximately 10 acres of Prime farmland adjacent to Holmes Street. The remaining lands within the three Transitional Areas are classified as either Grazing or Other lands.

Within the Vineyard Area, State-identified Important Farmlands are all under vineyard cultivation, or are required to be planted as part of the Ruby Hill project, with the exception of approximately 40 acres of Unique farmland and 20 acres of Prime farmland. All of this acreage, with the exception of approximately 20 acres of Unique Farmland south of Marina Avenue, is under Williamson Act contract.

**Proposed Plan Mitigation:** The proposed Plan prohibits urban development within the Vineyard Area in areas currently under vineyard cultivation or under Williamson Act contract.

This mitigation measure effectively reduces possible impacts to loss of approximately 10 acres of Prime farmland in the Alden Lane Transitional Area, and 10 acres of Unique farmland south of Marina. This represents less than 1% of the Important Farmlands within the Plan Area, and about 0.1% of all County Important Farmlands.

**Mitigation Measure A-8:** No further mitigation is warranted.

**IMPACT A-9: The proposed Plan could result in new urban development adjacent to existing or new vineyards.**

Urban development within the Vineyard Area adjacent to the City of Livermore could potentially be located next to existing or new vineyards, increasing the potential for noise, dust, odors, spraying or other conflicts.

**Mitigation Measure A-9a:** The City of Livermore, through the development approval process, should ensure that urban development projects within the Vineyard Area include adequate buffer areas from existing or new vineyards by siting parks, landscaped areas, and roads between residential areas and agricultural areas. For residential areas directly adjacent to existing or new vineyards, a minimum building setback of 100 feet should be established.

**Mitigation Measure A-9b:** The City of Livermore should enact a right-to-farm ordinance, similar to Alameda County's, to reduce the threat of legal conflicts between urban and vineyard development.

**Mitigation Measure A-9c:** Jurisdictions should require full disclosure statements for all new urban development that is, or could become, adjacent to existing or future vineyard lands. Disclosure statements would inform prospective buyers of existing or future farm operations, the right-to-farm ordinance, and possible nuisances that these operations may have on nearby residences.

**IMPACT A-10:** The proposed Plan could result in urban development areas outside of the existing Sphere of Influence for the City of Livermore.

The entire Alden Lane Transitional Area and approximately half of the Patterson Pass Transitional Area are outside of Livermore's SOI. Most of the lands that could meet the criteria for urban development within the Vineyard Area (unplanted and not under Williamson Act contract) are also outside Livermore's SOI. Annexation and service provision by the city could not be accomplished until the SOI is amended to include these areas.

**Mitigation Measure A-10:** Prior to annexation of proposed urban development areas that meet the proposed Plan criteria, the City of Livermore should apply to LAFCO for amendment of the city SOI to include relevant areas.

**IMPACT A-11:** Urban development within the Vineyard Area and Alden Lane Transitional Areas could create conflicts with adjacent quarry operations.

The Alden Lane Transitional Area is directly adjacent to a 212 acre parcel under permit to be quarried for aggregate resources. The Vineyard Corridor Transitional Area is also directly adjacent to an area under permit to be quarried, including approximately 29 acres within the Transitional Area itself. Development of these Transitional Areas prior to completion of mining and reclamation of the adjacent quarry lands could result in noise and dust impacts to the new residents, which in

turn could result in complaints and lawsuits against the quarry operators. The permit for the quarries does not specify when mining activity must be completed, although the reclamation plan calls for completion of the "chain of lakes" by 2030. Alameda County is currently undertaking a 5 year review of the quarry permit for this area, which may further clarify the expected completion date for mining in this area.

**Mitigation Measure A-11:** Prior to approving development in these areas the cities of Pleasanton and Livermore should ensure that potential conflicts will be reduced by requiring new development to include measures such as soundwalls, berms, buffer zones, and placement of outdoor use areas to minimize noise and dust impacts, or staging of development until after quarrying in the immediate area is completed. Potential new residents should be made aware of potential conflicts and the quarry's right to mine through disclosure notices placed on property deeds.

**IMPACT A-12:** Urban development within the Plan Area would conflict with both Livermore and Pleasanton General Plan designations.

The Pleasanton General Plan designations for the Vineyard Corridor Transitional Area currently would not permit development beyond existing levels. The Livermore General Plan designations for the Alden Lane and Patterson Pass Transitional Areas, as well as the Vineyard Area, would also currently not permit development beyond existing levels.

**Mitigation Measure A-12:** The cities of Pleasanton and Livermore should amend their General Plans to conform with the proposed Plan policies, allowing appropriate urban development in the Plan Area if it is linked to the preservation and enhancement of agriculture in the South Livermore Valley.

## **B. POPULATION, HOUSING AND EMPLOYMENT**

### **1. EXISTING SETTING**

**Plan Area:** The South Livermore Valley Area Plan project area contains approximately 150 single-family units. Using the Association of Bay Area Government's (ABAG's) 1990 estimate of 2.82 persons per household for the City of Livermore, it is estimated that 420 persons currently live in the Plan Area.

Within the Plan Area, Sandia Labs employs approximately 1,500 persons. The Veteran's Administration Medical Center on Arroyo Road employs approximately 550 persons. Wente Brothers, including both wineries and a restaurant, employs approximately 225 full-time and about 20 part-time persons. Concannon Winery employs approximately 12 full-time and about 12-13 part-time persons. The other 4 smaller wineries each employ approximately 4 persons.

Wine grape harvesting in the Livermore Valley currently uses contract labor crews from the Central Valley. The crews, with several dozen persons, rotate between vineyards, their use being coordinated by the Livermore Valley Winegrowers Association.

**Livermore:** The 1990 population of the City of Livermore was 55,300, with 20,180 dwelling units. In 1990, approximately 72% of the dwelling units in Livermore were detached single-family units, and 65% of all housing was owner-occupied. The population is anticipated to grow to 73,100 by the year 2000 and 103,500 by the year 2010 (ABAG, 1992). The housing capacity for the City of Livermore under the existing Livermore General Plan is approximately 30,000 households.

There were about 27,000 jobs in Livermore in 1990, and approximately 30,900 employed residents, making the city a net exporter of workers. Projected employment in the year 2000 is estimated to be about 36,900, reaching 48,400 by 2010. ABAG estimates that employed residents will total about 58,200 in 2010, so that the city is expected to remain a net exporter of workers (ABAG, 1992).

**Pleasanton:** The 1990 population of Pleasanton was 52,000, with a projected population in the year 2000 of 65,800, and 79,800 by the year 2010. 1990 employment was 28,700, while the number of employed residents was 31,900, making the city a net exporter of workers. However, the number of jobs is projected to reach 41,800 by the year 2000, climbing to 56,300 by 2010, while the number of employed

residents will be 39,600 in the year 2000 and 56,300 by the year 2010, making the city a net importer of jobs before balancing out.

**Eastern Alameda County:** In 1990, approximately 130,800 lived in eastern Alameda County, comprising the communities of Livermore, Pleasanton and Dublin. The East County population is anticipated to grow to 181,000 by the year 2000, and 265,300 by the year 2010. While the region was a net exporter of workers in 1990, with 73,900 employed residents and 69,100 jobs, ABAG projects that jobs and employed residents will be almost balanced in 2010, with 150,700 jobs and 149,000 employed residents.

**Tri-Valley:** A study completed for the Tri-Valley Wastewater Authority on growth potential in the Tri-Valley area found that existing General Plans designate considerably more land to commercial/industrial uses that is likely to be developed, given the existing residential potential in the General Plans, and the future capacities of the transportation network (EPS, 1990). Even with all General Plan amendments being considered at that time, which would significantly increase the supply of housing relative to industrial and commercial land, an imbalance between employment and housing in the Tri-Valley would result. Without additional lands being designated for housing, or existing designations for commercial/industrial being changed to residential, especially higher density residential, the study concludes that it is unlikely that all commercial/industrial lands can be absorbed. The lack of housing, especially affordable housing, could result in the lack of a sufficient local labor force to support economic and fiscal development envisioned in existing General Plans, forcing in-commuting from other areas and the overtaxing of the region's highway system to support commuters. Lack of a sufficient labor force could result in incomplete buildout of planned industrial/commercial development; possible financial jeopardy to assessment districts; and disproportionate allocation of economic growth to communities where substantial growth has already occurred.

### **Housing Policies**

**Alameda County:** The 1977 LAVPU General Plan includes the goals of providing housing to meet the physical, economic and social needs of residents in the Planning Unit, and to promote low and moderate-cost housing. While the County currently does not have an affordable housing fee, recent large projects requiring a General Plan amendment have been required to pay in-lieu fees for affordable housing as conditions of approval. For instance, the approved Ruby Hill project is required to pay \$1,600 per dwelling to provide off-site affordable housing.



**City of Livermore:** Since 1987, Livermore's General Plan allows for an average residential growth rate of between 1.5% and 3.5% of the present population in a calendar year. The city formulates a three year housing plan through its Housing Implementation Program (HIP) to allocate the number of units built during the three year cycle. Between 1988 and 1990, the City's target maximum growth rate was 3.5%. Between 1991 and 1993, the City's target maximum growth rate is 2.5%.

The city uses the HIP to encourage the provision of low income units. For example, the 1991-1993 HIP reserved 20% of the available allocations for projects that included at least 20% low income units. In addition, the city requires that 10% of the units in a residential development be affordable to lower income households. As an alternative, developers may pay an in-lieu fee.

**City of Pleasanton:** Pleasanton's Growth Management Program permits the issuance of up to 650 residential building permits per year. The city has adopted and implemented an affordable housing fee of \$1,600 per market rate single-family home, and \$800 per market rate multi-family unit, and encourage rental projects to include 15% affordable units.

## **2. CRITERIA OF SIGNIFICANCE**

Under CEQA, a project may have a significant effect on the environment if it would induce substantial growth or concentration of population, or if it affects existing housing or creates a demand for additional housing. While not addressed by CEQA, for the purposes of this EIR it would be considered a significant impact if the proposed Plan would significantly contribute to a jobs/housing imbalance in the region.

## **3. IMPACTS AND MITIGATION MEASURES**

The following population, housing and employment impacts could result from the adoption and implementation of the proposed South Livermore Valley Area Plan. Unless otherwise noted, proposed mitigation measures would reduce impacts to less than significant levels.

### **3.1 Impacts of New Rural Residences and Vineyards**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20

additional wineries.

**IMPACT B-1: New vineyards, wineries and small commercial establishments will require relatively low-wage employees, and new rural residential development is unlikely to be affordable to these workers.**

Assuming an average of 10 new workers per winery and 2 new workers per B&B, the proposed Plan could result in up to 250 additional jobs as a result of rural commercial development. Additional seasonal labor may also be required for harvesting new vineyards. On the other hand, the large land costs, together with proposed Plan cultivation requirements, will generally result in high-cost, high value new residential development on 20 acre parcels. It is very unlikely that new homes would be affordable to the large majority of new employees.

**Mitigation Measure B-1a:** Require new rural residential development to pay in-lieu affordable housing fees, similar to those required of the Ruby Hill development.

**Mitigation Measure B-1b:** Encourage the provision of on-site affordable housing by conditionally permitting agricultural employee housing, consistent with existing County Agricultural zoning.

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in the development of up to 2,125 additional dwelling units, and 100,000 square feet of commercial space in Livermore, and up to 385 additional units in Pleasanton.

**IMPACT B-2: Proposed Plan implementation would increase the number of housing units and the population of Livermore and Pleasanton, and could result in additional jobs in Livermore.**

Using ABAG's multipliers, potential new urban development in Livermore as a result of Plan policies would result in a population increase of approximately 6,000 persons. This represents an increase of about 6% above the anticipated year 2010 Livermore population. Pleasanton's population could increase by approximately 1,085 persons, which represents an increase of about 1.3% above anticipated year 2010 population levels. Any increase in the number of jobs in Livermore would contribute to making the jobs/housing balance more equal.

**Mitigation Measure B-2:** None warranted.

## **C. GEOLOGY, SEISMICITY AND SOILS**

### **1. EXISTING SETTING**

The Plan Area lies along the southeastern margin of the Livermore Valley. Topographic relief in the area ranges from 400 feet above sea level near Pleasanton to 1,200 feet above sea level in the southeast. The flatter Valley floor in the north gives way first to gentle grassy foothills, then to steeper slopes in the southern portions of the area. Slopes along the southern edge of the Plan area can be steep, with slopes up to 75 percent. Areas with slopes steeper than 25% are illustrated in Figure C-1.

#### **Geology**

The Livermore Valley lies at the northern end of the Diablo Range in the Coast Range Geomorphic Province. The Coast Range Province is characterized by a complex system of northwest trending, sub-parallel ranges and valleys whose structural trends are controlled by the San Andreas Rift system.

The Livermore Valley was formed in the Pliocene Era as a result of movements along two members of the San Andreas Rift system, the Calaveras and the Riggs Canyon-Greenville faults. As the valley was formed, it received sand and gravel eroded from highlands to the southwest. Tectonic activity has since uplifted and exposed these gravels in portions of the Plan Area.

The rock units in the Plan Area consist of two main groups: Quaternary (2-3 million years old) alluvium/colluvium, and Tertiary (up to 65 million years old) marine and nonmarine sedimentary rocks. The Quaternary deposits are split into surficial deposits, older alluvium and the nonmarine Livermore gravels.

The surficial Quaternary deposits consist of stream alluvium, which is mostly sand and gravel (Qg), and alluvium (Qa). The older alluvium (Qoa) are alluvial fan terrace deposits. The Livermore gravels (QT1) are unconsolidated to semi-consolidated beds of gravel, sand, silt, and clay that may be as thick as 4,000 feet. Locally, the Livermore gravels may contain boulders more than a foot in diameter. The coarse grained gravel and cobble beds form the major portion of the unit and



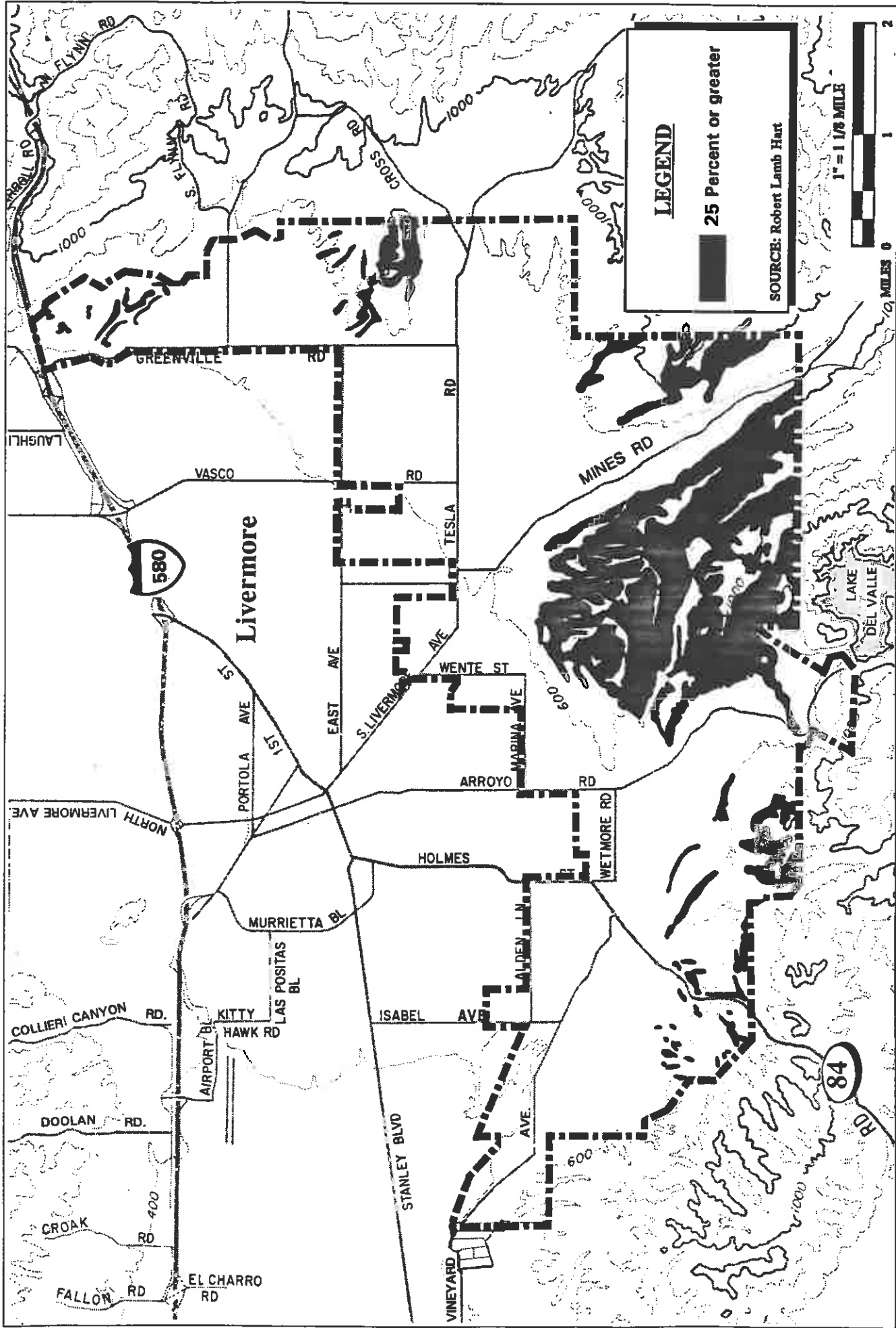


FIGURE IV C-1  
**SLOPES GREATER  
 THAN 25 PERCENT**



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**SOUTH LIVERMORE  
 VALLEY AREA PLAN**  
 ENVIRONMENTAL IMPACT REPORT

ALAMEDA COUNTY, CALIFORNIA



contain chert, sandstone shale, and quartzite within a fine-grained matrix. The exposed Livermore gravels are one of the main Quaternary units that allow recharge of the deep groundwater aquifers of the Livermore Valley (see also Section D, Hydrology).

The Tertiary rock units (Tn) predominate in the upland portions of the Plan Area. These rock units contain both marine and non-marine sedimentary units. The non-marine sedimentary unit is a weakly cemented pebble conglomerate of claystone and sandstone. The marine sedimentary rocks of the area are predominately white and tan sandstones. The distribution of rock units is illustrated in Figure C-2.

### Seismic Hazards

The South Livermore Valley is located in the seismically active San Francisco Bay Area. The repeated occurrence of earthquakes in the region is related to the accumulation of stress caused by motion occurring at the boundary of the North American and Pacific tectonic plate boundaries. Plate movement is indicated by a series of parallel northwest-trending fault systems through the region. Major faults in the series include the San Andreas, the Hayward, and the Calaveras Faults, which lie approximately 40 miles, 15 miles, and six miles to the west of the Plan area, respectively; and the Greenville Fault, which traverses the eastern portion of the Plan area. The Hayward, Calaveras, and Greenville Faults could each experience maximum credible earthquakes of Richter Scale magnitude 6.8 to 7.3 (California Division of Mines and Geology, 1982). By comparison, the magnitude of the 1989 Loma Prieta Earthquake has been estimated at magnitude 7.1 by the U. S. Geological Survey (U. S. G. S., The Next Big Earthquake..., 1990). Numerous shorter, non-parallel faults are also capable of producing earthquakes with magnitudes of 5 to 6. The significant fault zones in the vicinity of the Livermore-Amador Valley are shown in Figure C-3.

Potential seismic hazards include surface rupture along a fault, ground shaking, and secondary ground motion, such as landslides, liquefaction, lateral spreading and differential settlement.





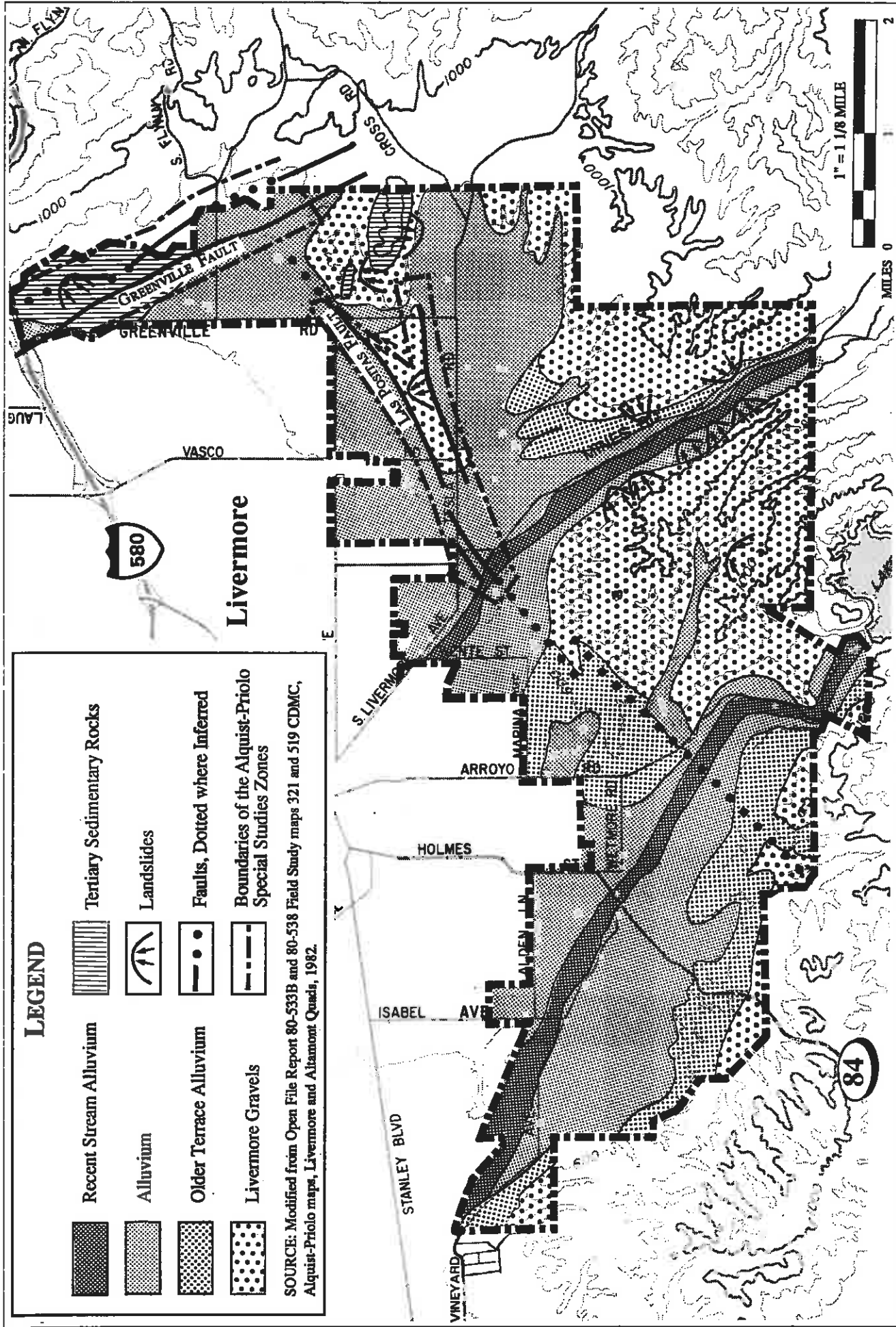


FIGURE IV C-2

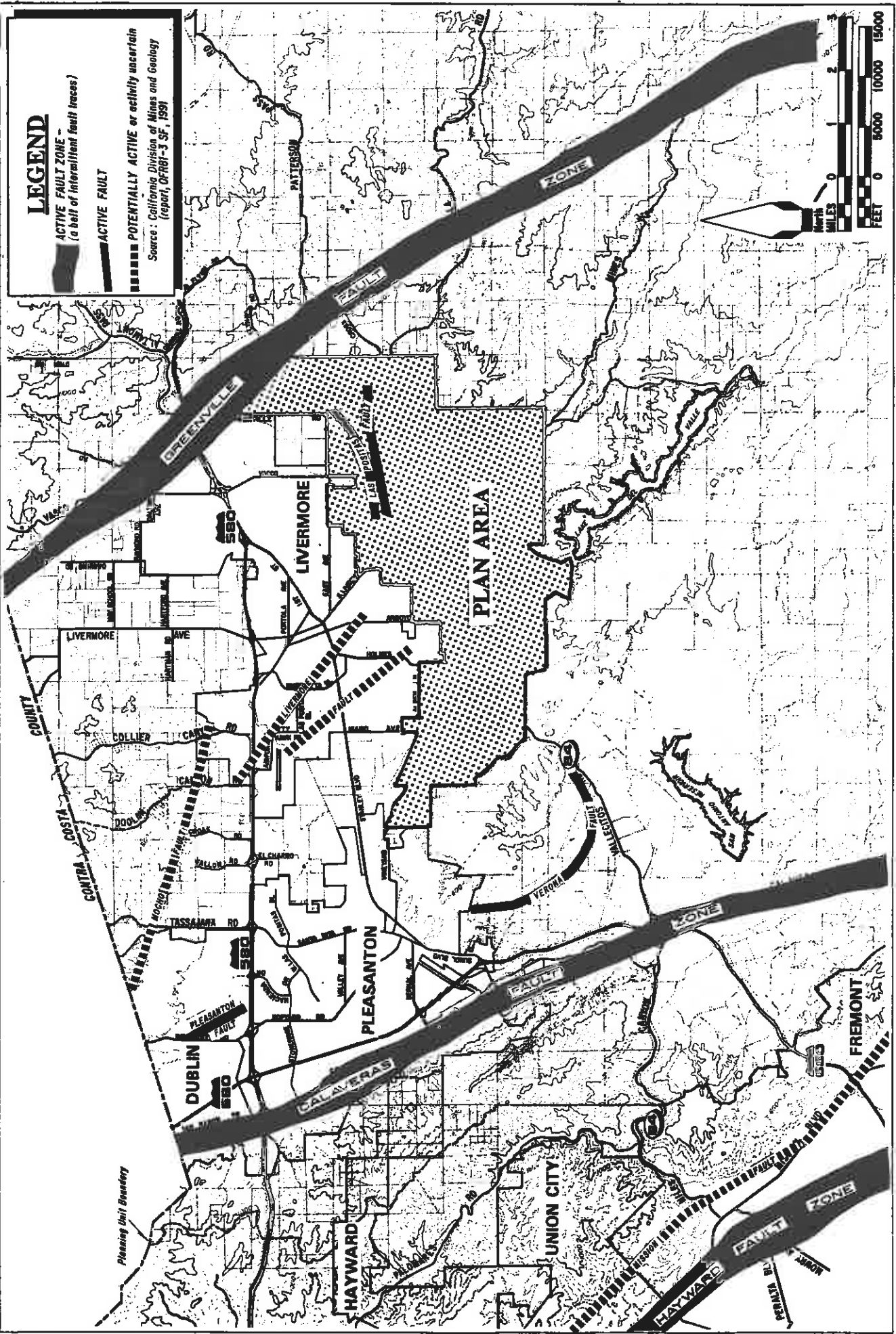
GENERALIZED GEOLOGIC MAP

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ENVIRONMENTAL IMPACT REPORT

ALAMEDA COUNTY, CALIFORNIA





**LEGEND**

ACTIVE FAULT ZONE  
(a belt of intermittent fault traces)

ACTIVE FAULT

POTENTIALLY ACTIVE or activity uncertain  
Source: California Division of Mines and Geology  
(report, OFR91-3 SF, 1991)



FIGURE IV C-3

**REGIONAL FAULT ZONES**



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ENVIRONMENTAL IMPACT REPORT**

ALAMEDA COUNTY, CALIFORNIA



**Surface Rupture:** As required by the Alquist-Priolo Special Studies Zone Act, the California Department of Mines and Geology (CDMG) has classified and mapped all known active faults in California capable of surface rupture. "Active" is defined as any fault that has had movement in the last 11,000 years. A Special Studies Zone is delineated around each active fault, within which specific geotechnical investigations are required for all proposed development to ensure that inhabited structures are not sited on top of fault lines or in surface rupture zones. The County is required by law to maintain maps of these zones on file. In general, structures are required to maintain a 50 foot setback from all fault traces, or as determined to be necessary by the special study. Two active fault Special Studies Zones have been delineated within the Plan area by the CDMG. The Greenville Fault traverses the eastern portion of the Plan area, generally east of Greenville Road and north of East Avenue. The Las Positas Fault traverses the eastern Plan area in a southeasterly direction, from Greenville Road to the Arroyo Mocho, generally north of Tesla Road. These zones are shown in Figure C-2.

**Ground Shaking:** The intensity of ground movement within the Plan area caused by an earthquake will be a function of the magnitude of the earthquake, the distance from the Plan area, and the soil and groundwater conditions within the Plan area. The amount of damage sustained will depend on the type and construction of structures.

Recent maps produced and distributed by the Association of Bay Area Governments (ABAG) in 1988 indicate that the geologic units within the Plan area have a "moderately high" to "high" susceptibility to ground shaking when subjected to earthquakes occurring on nearby faults. Expected maximum ground shaking intensities expected for the Plan area are generally classified as "strong", with some areas near Patterson Pass Road classified as "very strong" to "violent" in the event of an earthquake on the Greenville Fault, which passes through the area. In contrast, existing developed areas in Livermore can expect "weak" to "strong" intensities from earthquakes on any of the major faults, while developed areas in Pleasanton and Dublin would experience "very strong" to "violent" intensities, particularly for Calaveras Fault earthquakes (Pleasanton and Dublin are situated very near the Calaveras Fault).

**Additional Seismic Hazards:** Portions of the Plan area may be subject to other seismic hazards associated with ground shaking. The Seismic Hazards Mapping Act (SHAMA) of 1990 required the State Geologist to prepare maps identifying seismic hazard zones statewide to cover ground shaking, liquefaction, landslides, and other geotechnical aspects of earthquake effects. The maps, when they become available, must be kept on file with the County in a manner similar to the requirements for the Alquist-Priolo Zone maps, described above. Although most seismic hazard zones have not yet been mapped, the requirements of SHAMA already apply, including the requirement that geotechnical studies be performed for any development within an identified seismic hazard zone.

Lateral spreading and differential settlement occur when severe ground motions cause a rapid compaction and settlement of underlying soil. Unconsolidated sediments are the most susceptible to this type of geologic hazard. Areas in the Plan Area that may be subject to these hazards are generally limited to areas along stream corridors underlain by recent stream deposits, and certain recent debris flow or landslide deposits. These areas have not yet been mapped by the State Geologist. It is unlikely that large portions of the Plan Area would be affected by lateral spreading and settlement hazards.

Liquefaction is the transformation of sediments with low cohesion from a solid state to a liquefied state as the material is shaken during an earthquake. The shaking elevates the pore pressure and reduces shear stress within the sediments. The most susceptible sediments to liquefaction are clean, loose, water-saturated fine grained sands within 50 to 100 feet of the surface. Portions of the Plan Area that may be susceptible to liquefaction are limited to stream zones and sandy deposits adjacent to them. Liquefaction hazard zones have not yet been mapped by the State Geologist. Liquefaction is not anticipated to be a significant hazard in the South Livermore Valley.

### **Landslides**

Potential landslide areas have been identified in the hilly southern portions of the Plan area, especially along and northeast of Mines Road and in the extensive south central hilly district. Landslides occur when the shear stress of a soil or rock mass

exceeds its shear strength. Shear stress can be increased by increasing the weight of the soil and/or rock mass, saturation or surcharge of loading, or by decreasing needed support from the toe of the slope by erosion or grading. Zones of low shear strength are generally associated with the presence of low shear strength clays or bedding or fracture surfaces. Seismic vibrations can also cause landslides. The motion of the soil under saturated conditions can reduce shear strength and induce landslides. Mapped landslide hazard zones in the Plan area are shown in Figure C-4, and are based on maps provided by the Division of Mines and Geology (1991) in response to the Landslide Hazard Identification Act of 1983, which required preparation of general-purpose interpretive landslide maps (Barrows, 1992). Although the mapped zones are intended to generally cover landslide hazards without necessarily invoking a seismic origin, the mapped zones would experience additional forces during seismic events that could set them into motion.

### **Soil Conditions**

The USDA Soil Conservation Service (SCS) Alameda Area Soil Survey (1966) classifies the soils of the South Livermore Valley by soil associations and soil types, and gives specific information on agricultural suitability, erosion potential, engineering considerations, and septic tank limitations.

Most of the Plan Area is within two general soils associations. The Yolo-Pleasanton Association is located on nearly level flood plains and low terraces along the main arroyos, and contains soils most suitable for high-value agricultural use. The Positas-Perkins Association consists of nearly level to very steep soils located on high terraces. The eastern portion of the Plan Area extends into the Rincon-San Ysidro Association, consisting of nearly level soils on older fans and flood plains, and the Altamont-Diablo Association, consisting of moderately sloping to very steep soils on soft sedimentary rock.

The SCS recognizes almost 40 individual soil types within the Plan Area. Each soil type, in turn, has been rated by the SCS for general capability for farming, relative degree of suitability for intensive agriculture (the Storie Index), relative suitability for principle crops, including grapes, as well as general engineering characteristics such as erosion and shrink-swell potential, and septic tank limitations.





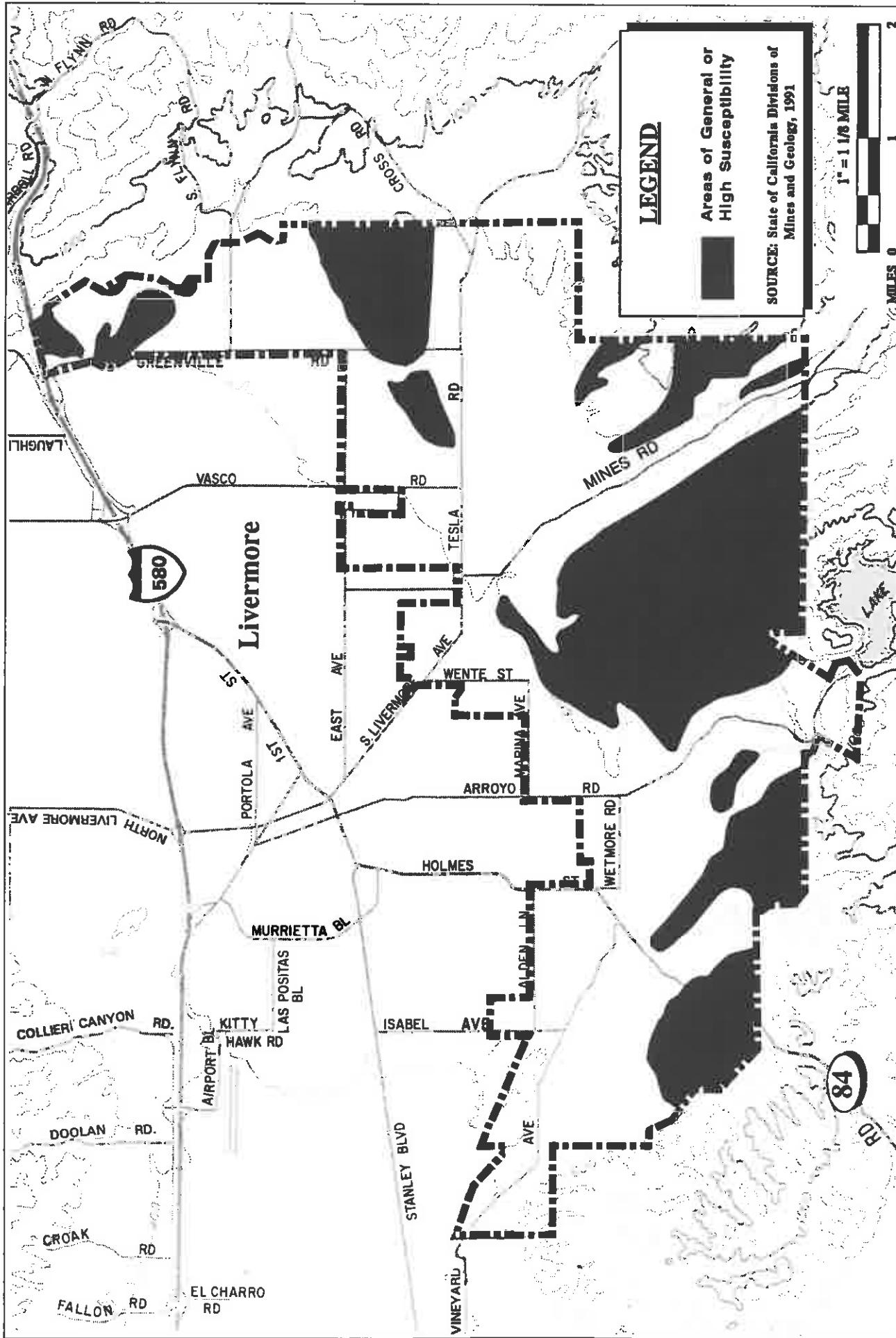


FIGURE IV C-4

**LANDSLIDE HAZARD ZONES**



ALAMEDA COUNTY PLANNING DEPARTMENT

**SOUTH LIVERMORE VALLEY AREA PLAN ENVIRONMENTAL IMPACT REPORT**

ALAMEDA COUNTY, CALIFORNIA



The Storie Index numerically rates such factors as depth, texture, slope, and drainage for each soil type, then multiplies the ratings together to get a relative rating of the suitability for general intensive agriculture. A soil type with an index rating of 80-100 is considered "excellent", 60-80 is "good", 40-60 "fair", 20-40 "poor", 10-20 "very poor" and less than 10 "not suitable". Other factors, such as availability of water for irrigation, climate, and markets are not considered.

The approximate acreage and relative percentage within each Storie Index category for the Plan Area are shown in Table C-1, and the geographic distribution of the categories are illustrated in Figure C-5. In general terms, the best soils are located in the flatter areas near Livermore, with the "very poor" and "not suitable" soils located in the hillier areas along the periphery of the Plan Area.

The Storie Index, however, is not necessarily a good predictor of where intensive agriculture, especially viticulture, can take place. An example is the Lm soil type (Livermore very gravely course sandy loam). Although this soil type has a Storie Index rating of 36 (poor), it is highly suited for vineyards, and underlies much of the existing vineyards along South Livermore Avenue, Tesla Road and Mines Road. Several existing vineyards within the Plan Area are also located, in part, on soils rated as "very poor" by the Storie Index.






Table C-1 also shows the capability classifications within the Plan Area. The capability classification indicates, in a general way, how suitable soils are for most kinds of farming - generally corresponding to the Storie Index. Class I soils can support the widest range of crops and have the least risk of being damaged by agriculture. The soils in the other classes have progressively greater natural limitations and are more at risk of being damaged. Classes I-IV are capable of being cultivated, if proper management techniques are used, while Classes VI-VII are generally unsuited for cultivation.

The SCS soil survey also rates the relative suitability of soils for principle crops, including grapes. These ratings generally follow the Storie Index ratings, although there are exceptions. For instance, as noted above, the Lm soil type is rated as "good" for grapes, while other soils types with "fair" Storie Index ratings are rated "very poor" for grapes. It should be noted that the relative suitability ratings are

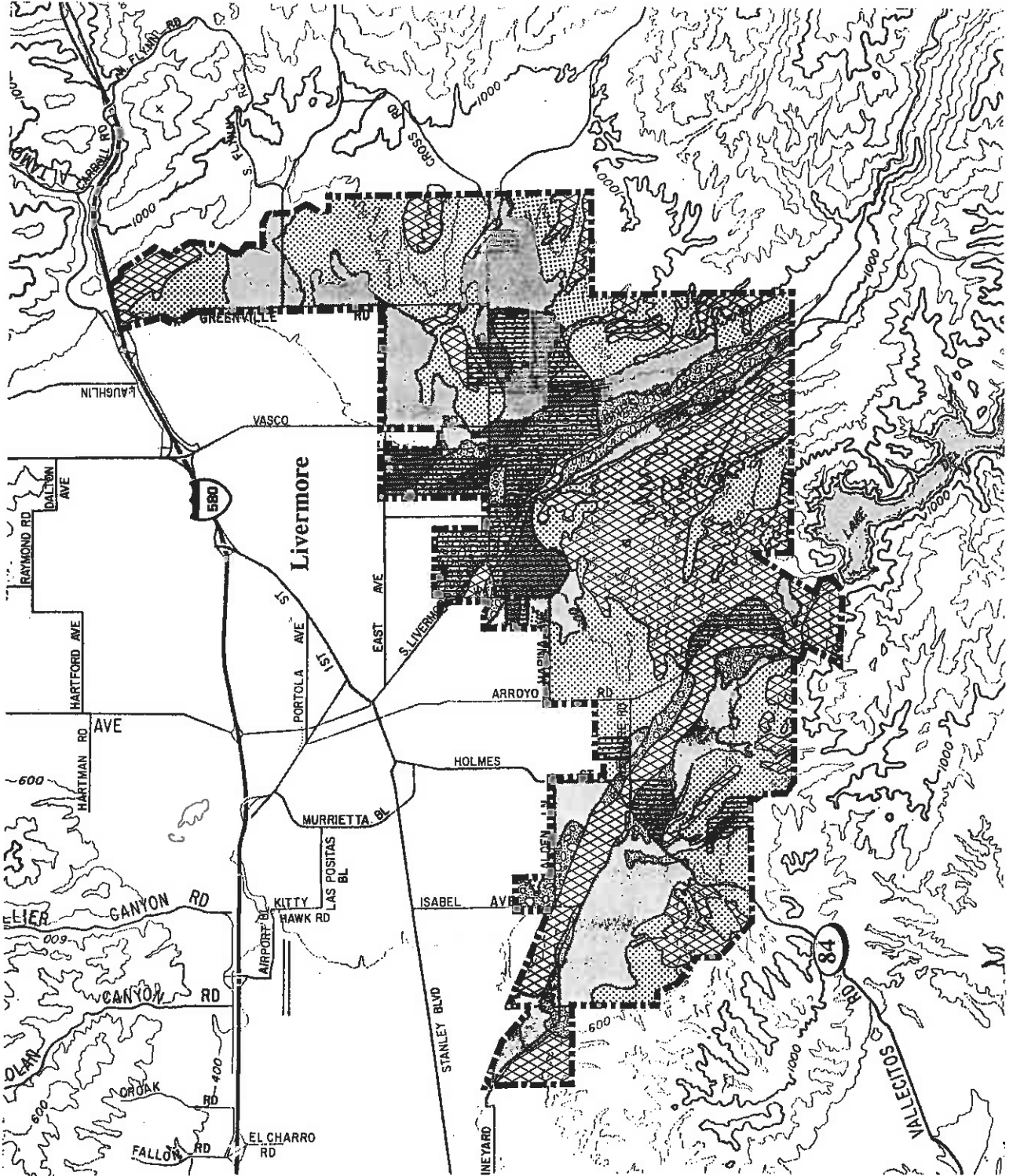
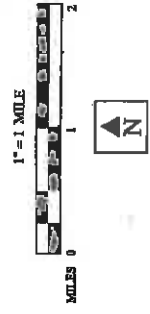


FIGURE IV C-5  
**SOUTH LIVERMORE  
 VALLEY SOILS**

**STORIE INDEX RATING**

	EXCELLENT TO GOOD
	FAIR TO POOR
	LIVERMORE VERY GRAVELLY COURSE SANDY LOAM
	VERY POOR TO NOT SUITABLE
	EXISTING VINEYARDS

**SOUTH LIVERMORE  
 VALLEY AREA PLAN**  
 ENVIRONMENTAL  
 IMPACT REPORT  
 ■ ■ ■ ■ ■  
 ALAMEDA COUNTY,  
 CALIFORNIA





based upon subjective judgements of each soil and its ability to produce the crops under the management systems at the time of the survey. According to SCS personnel, there were no data or field measurements of productivity of each soil made during the Alameda survey, which was conducted during the 1950's. Thus, these ratings do not indicate that a soil cannot be used for a particular purpose, they just give a relative comparison of how the soils will perform under common practices at the time the survey was done. Managers who are able to invest more in management and maintenance can overcome some of the soils limitations (SCS, 1991).

Similarly, management practices since the completion of the soil survey may have reduced the agricultural potential in some areas. For instance, property owners in the Patterson Pass area have indicated that use of local groundwater with a high boron content has raised the boron level in the soils of the area, which could negatively affect its use for viticulture (Cerna, 1991).

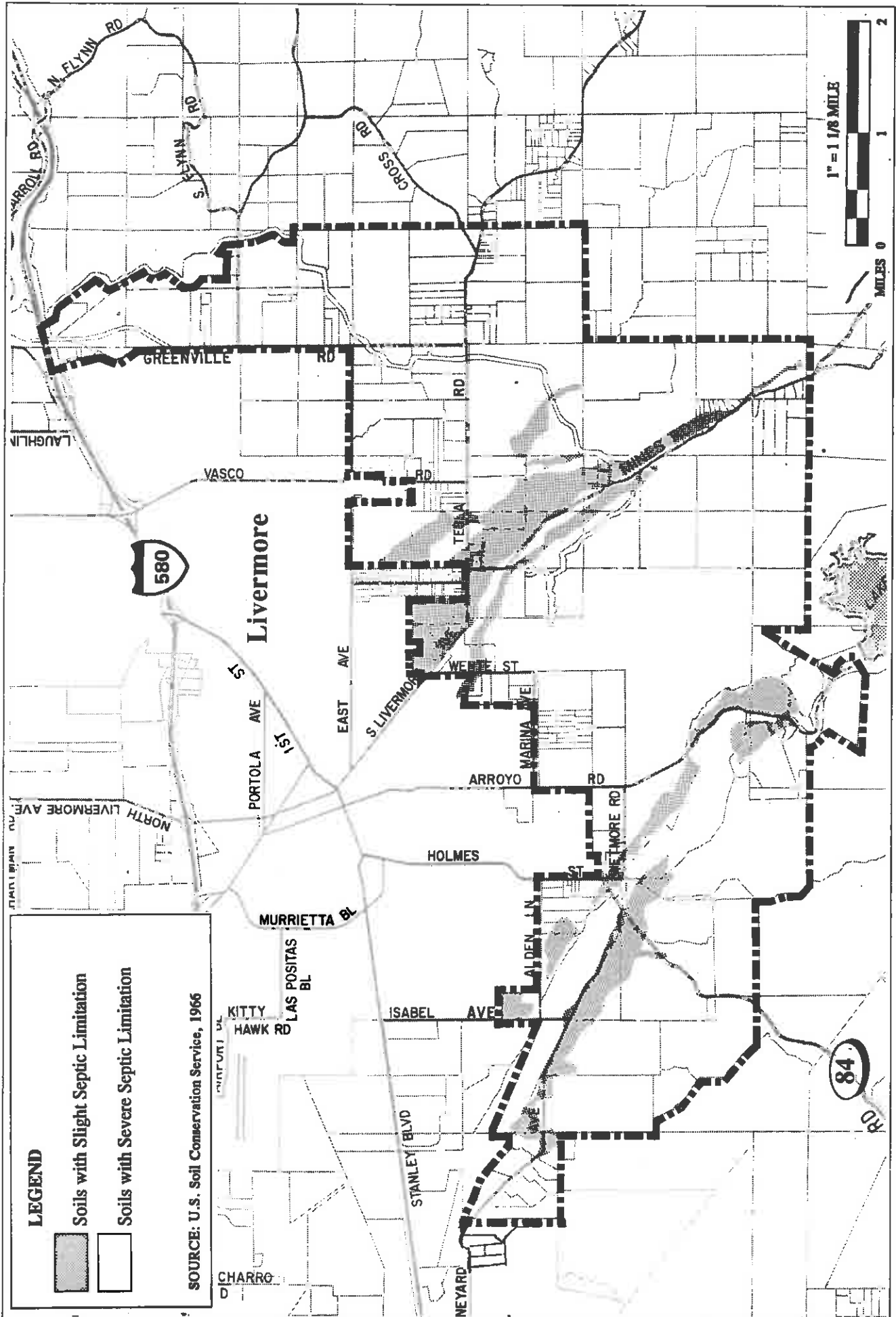
Table C-1 also indicates the relative susceptibility to erosion, potential for shrink-swell problems, and septic tank limitations. In general, the erosion hazard is slight to medium, with the exception of most soils rated "very poor" or "not suited" using the Storie Index. Shrink-swell potential is low to moderate for most soils with agricultural potential. Most soils can be expected to have severe limitations for septic tank use. Figure C-6 indicates the extent of soils with septic limitations.

### **Mineral Resources**

The State Mining and Geology Board has designated portions of the Plan Area as Regionally Significant Construction Aggregate Resource Areas, shown in Figure C-7. These areas are mineral resource zones which contain construction-grade sand and gravel deposits. The Surface Mining and Reclamation Act of 1975 (SMARA) requires that any land use decisions involving areas designated as being of regional or statewide significance must be in accordance with a lead agency's mineral resource management policies, and that the importance of the minerals to the market region as a whole must be considered. State guidelines generally consider intensive





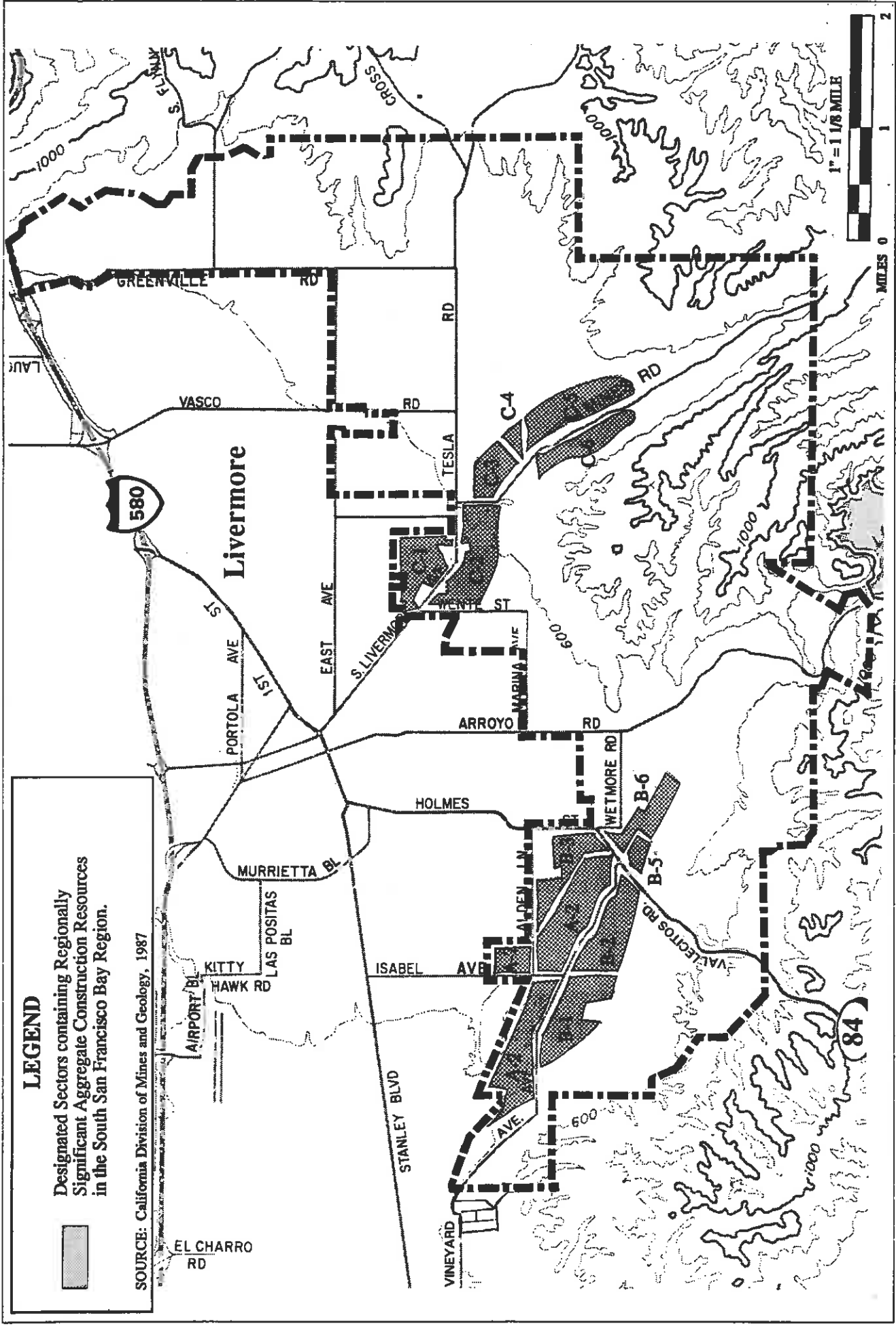


**FIGURE IV C-6**  
**SOILS WITH SEPTIC TANK LIMITATIONS**

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**SOUTH LIVERMORE VALLEY AREA PLAN**  
 ENVIRONMENTAL IMPACT REPORT  
 ALAMEDA COUNTY, CALIFORNIA





**LEGEND**

Designated Sectors containing Regionally Significant Aggregate Construction Resources in the South San Francisco Bay Region.

SOURCE: California Division of Mines and Geology, 1987

FIGURE IV C-7

**REGIONALLY SIGNIFICANT AGGREGATE RESOURCES**

ALAMEDA COUNTY PLANNING DEPARTMENT

**SOUTH LIVERMORE VALLEY AREA PLAN**  
ENVIRONMENTAL IMPACT REPORT

ALAMEDA COUNTY, CALIFORNIA



*C. Geology, Seismicity and Soils*  
**South Livermore Valley Area Plan DEIR**

industrial, commercial, or residential development at densities exceeding one unit per 10 acres in these zones to be incompatible with surface mining activities.

**Table C-1**  
**SOILS OF THE SOUTH LIVERMORE VALLEY**

<b>Storie Index Rating</b>	<b>Acres</b>	<b>% of Plan Area</b>	<b>Capability Unit</b>	<b>Shrink-Swell Potential</b>	<b>Erosion Hazard</b>	<b>Septic Limitation</b>
"Excellent" (80-100)	950	6%	I-II	Low - Moderate	Slight	Severe*
"Good" (60-80)	2,500	17%	II-III	Low-Moderate	Slight-Moderate	Severe*
"Fair" (40-60)	2,000	13%	III-IV	Moderate- High	Slight-Moderate	Severe
"Poor" (20-40)	4,200	28%	IV	Low-High	Slight-Moderate	Severe*
"Very Poor" (10-20)	2,600	17%	VI	Moderate-High	Severe	Severe
"Not Suited" (> 10)	2,800	19%	VII	Moderate-High	Severe	Severe
* Some soils types within this category have only slight septic tank limitations						

Alameda County has an adopted policy of ensuring the extraction of valuable mineral resources and reclamation of mined land to the fullest extent possible, while maintaining sound land use management (County of Alameda, General Plan: Conservation Element, 1976). Mineral resource extraction policies of the City of Livermore require consideration of and mitigation of potential environmental impacts of mineral resources. Pleasanton's General Plan recognizes the value of the aggregate resources, designates the area corresponding to the State-designated zone as "Sand and Gravel Harvesting", and includes a requirement for development adjacent to mining areas to include protective buffer zones.

## **2. CRITERIA OF SIGNIFICANCE**

For the purposes of this EIR, geologic impacts would be considered significant if adoption and implementation of the SLVAP could result in increased risk to life or property from seismic, slope or soils hazards in the area, or if significant mineral or soils resources could be impacted.

## **3. IMPACTS AND MITIGATION MEASURES**

The following geological and soils-related impacts could result from adoption and implementation of the proposed South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce identified impacts to less than significant levels.

### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT C-1: Implementation of the proposed SLVAP could result in additional development within the Greenville and/or Las Positas Special Studies Zone.**

The proposed Plan would permit subdivision of existing parcels for rural residential and winery development at a maximum gross density of 20 acres per unit, which could result in subjecting additional dwellings and other structures to potential seismic risks of surface fault rupture. The State and County requirements for special geotechnical studies to assess the hazard and to apply appropriate construction techniques and building setbacks in the Zones for each proposed development administratively reduces the risk, and impact, to a less-than-significant level.

**Mitigation Measure C-1: None warranted.**

**IMPACT C-2:** Implementation of the proposed SLVAP could increase the number of structures and people within the area, increasing the risk to life and property from ground shaking and associated secondary effects such as landsliding, liquefaction, and differential settlement.

The proposed Plan could result in additional rural residential development in a seismically active area. Existing building code and grading ordinance requirements significantly reduce the risk to life and property from groundshaking, especially since it can be anticipated that rural development will be wood frame construction, which is relatively resilient. However, in recognition of the potential danger of secondary impacts, if any, the following additional mitigation measure is recommended.

**Mitigation Measure C-2:** The County should require geotechnical studies to be performed on a project-by-project basis and recommended measures from those studies to be implemented in all areas known to be subject to landslide and seismic hazards. This includes identified hazard areas on State landslide hazard maps, and when available, State seismic hazard maps, in conformance with the requirements of SHAMA.

**IMPACT C-3:** Implementation of the proposed SLVAP could result in the expansion of viticulture or other cultivated agriculture into areas with moderate to severe erosion potential.

The proposed Plan could encourage intensive agriculture in inappropriate areas that are subject to erosion, such as the steep hillsides along Mines Road and in the south-central portion of the Plan Area. The combination of soil disturbance and heavy rainfall or irrigation could result in significant loss of topsoil and subsequent siltation and muddying of streams and arroyos.

**Proposed Plan Mitigation:** The proposed Plan only encourages cultivated agriculture in areas with slopes up to 25 percent; no bonus density incentives are given for steeper slopes that are put into production.

While this policy partially mitigates the impact, full mitigation would require an additional policy to help manage the agricultural practices on hillsides up to 25 percent in slope to prevent excessive erosion.

**Mitigation Measure C-3:** The County, through site plan review and in consultation with the Soil Conservation Service and other appropriate agencies, should encourage agricultural land users to incorporate erosion control measures to minimize loss of topsoil on slopes, including contour farming, drip irrigation where it can be used, planting of vegetation between crops to stabilize soil, and other appropriate methods.

**IMPACT C-4:** Implementation of the proposed SLVAP could result in structures, roads and utilities constructed in areas with high shrink-swell potential.

Basic soil studies, geotechnical studies and grading plans as currently required by the County Planning Department and Public Works Agency reduce this impact to a less than significant level.

**Mitigation Measure C-4:** None warranted.

**IMPACT C-5:** Implementation of the proposed SLVAP could result in additional septic systems in areas with severe septic tank limitations.

Much of the Plan Area is rated by the SCS as having soils with severe limitations for septic tanks.

**Proposed Plan Mitigation:** New rural development in the Plan Area is required to show, to the satisfaction of the County and Zone 7, that all proposed homesites can be served by septic systems.

**Mitigation Measure C-5:** Require that any commercial development proposed to be on a septic system be required to show, to the satisfaction of the County and Zone 7, that it can be adequately served by a septic system.

**IMPACT C-6:** Additional rural residential and commercial development developed as a result of the proposed Plan could result in a loss of agricultural soils.



The proposed Plan could result in up to 290 additional rural residences, each on a two-acre building envelope, as well as appurtenant commercial development. This could result in up to 580 acres of cultivable soil being covered.

**Proposed Plan Mitigation:** The proposed Plan requires that a minimum of 90% of new rural residential parcels be cultivated and agricultural conservation easements be dedicated for its permanent protection.

The proposed Plan also calls for homesites, ancillary uses and parcel lines to be sited to maximize productive use of the land for intensive cultivated agriculture.

**Mitigation Measure C-6:** No further mitigation is warranted.

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land and the development of up to 2,510 additional dwelling units in Pleasanton and Livermore.

**IMPACT C-7: Implementation of the proposed SLVAP could result in additional urban development within the Greenville and/or Las Positas Special Studies Zone.**

The Greenville Fault Special Studies Zone includes a portion of the Patterson Pass Transitional Area, which is recognized as a future area to be urbanized. Areas adjacent to Livermore that are within the Las Positas Fault Special Studies Zone could be urbanized under the proposed Vineyard Area criteria.

Urban development within these areas would result in subjecting additional dwellings and other structures to potential seismic risks of surface fault rupture. However, State and County requirements for special geotechnical studies to assess the hazard and to apply appropriate construction techniques and building setbacks in the Zones for each proposed development administratively reduces the risk, and impact, to a less-than-significant level.

**Mitigation Measure C-7:** None warranted.

**IMPACT C-8: Implementation of the proposed SLVAP could increase the number of structures and people within the area, increasing the risk to life and property from ground shaking and associated secondary effects such as landsliding, liquefaction, and differential settlement.**

The proposed Plan could result in additional urban development in a seismically active area. Existing building code and grading ordinance requirements significantly reduce the risk to life and property from groundshaking. However, in recognition of the potential danger of secondary impacts, if any, the following additional mitigation measure is recommended.

**Mitigation Measure C-8:** Pleasanton and Livermore should require geotechnical studies to be performed on a project-by-project basis and recommended measures from those studies to be implemented for all proposed development in areas known to be subject to landslide and seismic hazards. This includes identified hazard areas on State landslide hazard maps, and when available, State seismic hazard maps, in conformance with the requirements of SHAMA.

**IMPACT C-9: Implementation of the proposed SLVAP could result in urban development on top of significant mineral resource deposits, eliminating access to these resources.**

Approximately 180 acres of the Alden Lane Transitional Area are within State-designated Regional Significant Construction Aggregate Resource Areas. The area north of Alden Lane is within Sector A-2, while the area south of Alden Lane comprises Sector B-3. CDMG estimates that Sector B-3 contains 29 million tons of aggregate resources. Due to confidentiality requirements, no resource figures are available for Sector A-2. Sector B-3 represents approximately .7% of the identified aggregate resources in the South San Francisco Bay Area.

Other identified Aggregate Resource Areas within the Plan Area are either under vineyard cultivation, within park land, or would not meet the proposed Plan criteria for urban development.

Urban development in the Alden Lane Transitional Area would result in the loss of access to a significant mineral resource. No mitigation measures are available to reduce this impact to less than significant levels.

**Mitigation Measure C-9:** No mitigation measure is available.

**Loss of access to a significant mineral resource is an unavoidable adverse impact of the proposed Plan.**

**IMPACT C-10: Implementation of the proposed SLVAP could result in the loss of soils suitable for intensive agriculture to urban development.**

Under the proposed Plan, new urban development would be limited to the three Transitional Areas and to lands within the Vineyard Area adjacent to Livermore that are not presently under cultivation or under Williamson Act contract.

Approximately 100 acres of the Alden Lane area are rated "poor" on the Storie Index, although the soil type (Lm) is "good" for vineyards. The remaining portions of the Alden Lane area are rated "good" (125 acres) and "fair" (30 acres).

Approximately 80 acres within the Patterson Pass area, adjacent to Greenville Road, is rated "excellent". Approximately 160 acres are rated "good", adjacent to Patterson Pass Road. About 310 acres are rated "fair", and the remaining 90 acres are rated "poor".

Approximately 40 acres within the Vineyard Avenue area is rated "excellent" and another 30 acres is rated "good". The remaining areas, including all lands to the south of Vineyard Avenue, are rated "poor" or "very poor".

Lands adjacent to Livermore in the Vineyard Area that are rated "excellent" that are currently uncultivated are limited to approximately 40 acres west of Wente Avenue, and another 40 acres adjacent to South Vasco Road. Another 150 acres are rated "good". Remaining areas not under cultivation, including most lands not currently under Williamson Act contract, are rated "fair" or "poor", although much of the latter classification includes the Lm soil type.

**Proposed Plan Mitigation:** The proposed Plan requires that development within the three transitional areas mitigate loss of agricultural soils by paying mitigation fees of \$10,000 per acre for cultivable soils that are developed. These fees are to be used by the Land Trust to buy agricultural conservation easements in the South Livermore Valley.

The proposed Plan requires that urban development within the Vineyard Area mitigate loss of agricultural soils by planting and dedicating easements elsewhere in the Vineyard Area on an acre/acre basis, and that for every urban residential unit approved, an additional acre within the Vineyard Area be planted in intensive agriculture and protected with agricultural easements.

**Mitigation Measure C-10:** No further mitigation is warranted.

## **D. HYDROLOGY AND WATER QUALITY**

### **1. EXISTING SETTING**

#### **Climate**

The climate of the Tri-Valley region is Mediterranean, with wet winters and dry summers. Average rainfall in the Plan Area is about 14 inches. Most rainfall occurs between October and April, with relatively dry conditions for the remainder of the year. Temperatures range from below freezing at night in the winter to above 100 degrees Fahrenheit during the summer months. The predominant winds are from the west and southwest.

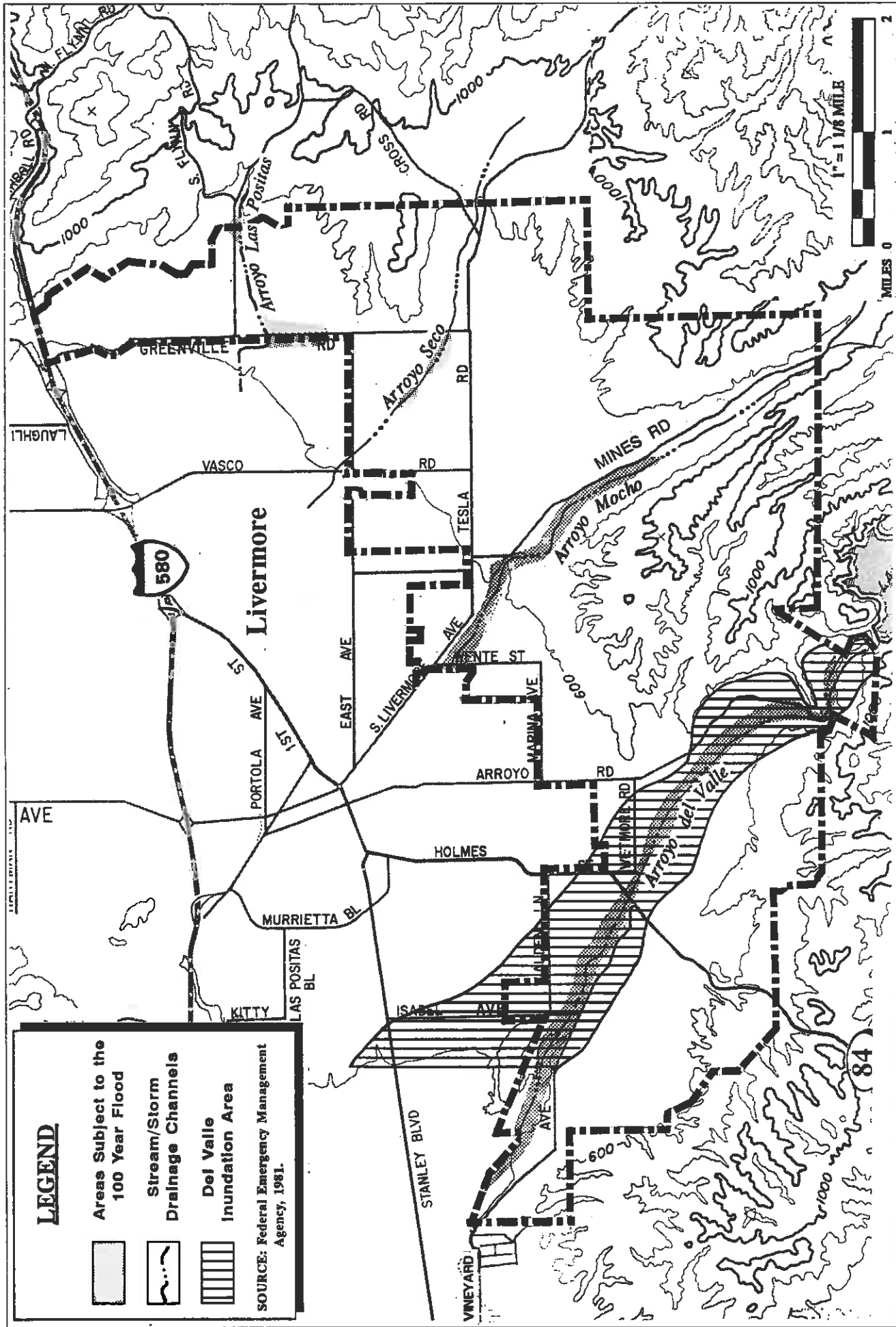
#### **Surface Water Features**

Four intermittent streams, generally flowing in a northwesterly direction, drain the Plan Area and the hills to the south and east (Figure D-1). The largest drainage is the Arroyo del Valle, which parallels Arroyo Road and East Vineyard Avenue through the central portion of the Plan Area before draining into Pleasanton. The Arroyo's watershed extends some 28 miles above the Plan Area, and includes approximately 149 square miles. The Arroyo del Valle is dammed just south of the Plan Area, and flows are controlled by releases from Lake del Valle. The magnitude of flow release is dependent on numerous factors including Department of Fish and Game instream flow requirements, reservoir storage capacity, inflow to the reservoir, and groundwater recharge requirements.




The Arroyo Mocho flows through the central and eastern portions of the Plan Area, paralleling Mines Road before passing into Livermore near South Livermore Avenue. The watershed area of Arroyo Mocho is about 36.7 square miles near the southern boundary of the Plan Area. Average daily flows range from 0 cubic feet per second (cfs) in September to 22 cfs in February.

The Arroyo Seco flows through the eastern portion of the Plan Area, roughly paralleling Tesla Road before veering northwest into Livermore near Vasco Road. The Arroyo Seco drains approximately 14 square miles above the Plan Area.





**LEGEND**

-  Areas Subject to the 100 Year Flood
-  Stream/Storm Drainage Channels
-  Del Valle Inundation Area

SOURCE: Federal Emergency Management Agency, 1961.

FIGURE IV D-1

**ARROYO FLOOD ZONES**

ALAMEDA COUNTY PLANNING DEPARTMENT

**SOUTH LIVERMORE VALLEY AREA PLAN ENVIRONMENTAL IMPACT REPORT**





The Arroyo Las Positas flows through the northeastern portion of the Plan Area, parallel to Patterson Pass Road before draining into the Lawrence Livermore Lab site to the west. The Arroyo Las Positas has a drainage area of approximately 5 square miles above the Plan Area.

There are also numerous ponds located within the Plan Area, the majority of which are used for private water storage for livestock watering. Water levels within the ponds are generally dependent on local runoff.

### **Flooding**

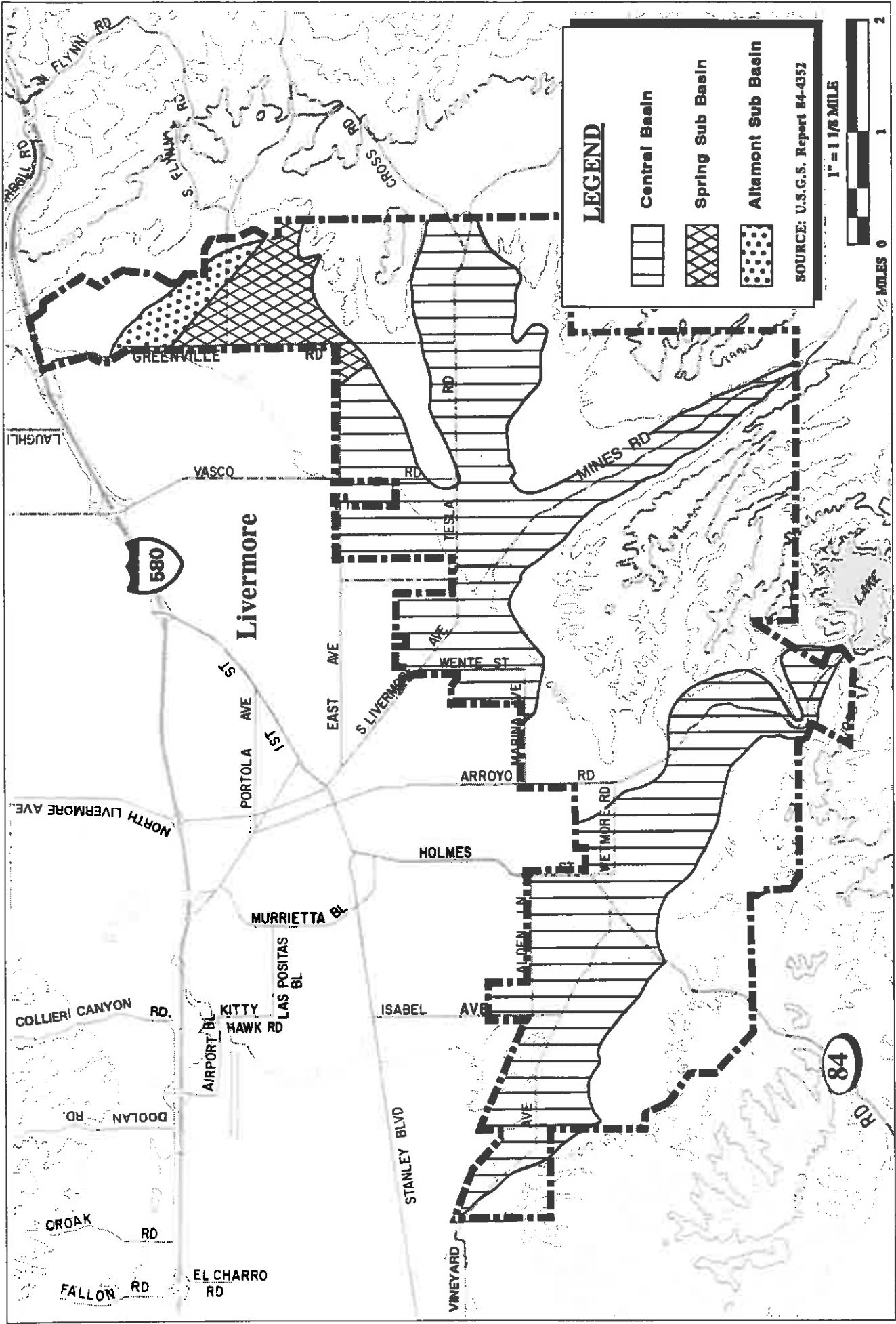
The Federal Emergency Management Agency (FEMA), through the National Flood Insurance Program, has mapped areas subject to 100-year and 500 year floods within the Plan Area (Figure D-1). Where not contained within the existing stream banks, these zones generally are limited to areas within several hundred feet of the major arroyos. The largest area subject to flooding is from the Arroyo Las Positas along Greenville Road, at the intersection with Patterson Pass Road, where the floodplain widens to approximately 1,500 feet due to a shallow channel.

The western portion of the Plan Area would be subject to inundation in the unlikely event that the Del Valle Reservoir dam were to fail. If the dam were to fail suddenly and completely, when the reservoir was completely full, an extensive area along the Arroyo del Valle, as well as most of Pleasanton and western portions of Livermore, would be flooded.

### **Groundwater Resources**

The Livermore-Amador Valley is underlain by an important groundwater basin, which has two relatively distinct water-bearing formations; an unconfined upper alluvial aquifer over a sequence of deeper semi-confined aquifers. Groundwater in the alluvium tends to move from the north and south toward the center of the basin and from east to west. Portions of the Plan Area are within the groundwater basin boundaries, which generally correspond to the flatter valley floor. The basin has been divided into subbasins by the California Department of Water Resources, based on fault traces and hydrologic discontinuities. Subbasins within the Plan Area include the Spring and Altamont subbasins in the eastern portion, Mocho I and II in the





**FIGURE IV D-2**  
**GROUND WATER BASINS**



ALAMEDA COUNTY PLANNING DEPARTMENT

**SOUTH LIVERMORE VALLEY AREA PLAN**  
 ENVIRONMENTAL IMPACT REPORT

ALAMEDA COUNTY, CALIFORNIA



central portion, and the Amador in the western portion (Figure D-2). For regulatory purposes, the Amador and Mocho subbasins, together with the Bernal subbasin in Pleasanton, are considered the "central basin", while the remaining subbasins, including the Spring subbasin, are considered "fringe" basins. Groundwater in the uplands and highlands areas surrounding the basin is very localized, very limited, and is generally of poor quality (Zone 7, 1982).

Until the completion of the South Bay Aqueduct, water users in the Livermore Valley relied on local surface and groundwater resources. One key reason for the establishment of Zone 7 was a serious overdraft problem and resultant declining water table elevations, over 100 feet in some areas. Over the years, Zone 7 has used surplus water from the South Bay Aqueduct and careful management practices to recharge the aquifers by releases to the Arroyo Mocho and Arroyo del Valle, returning the groundwater levels to acceptable levels. The Zone currently relies on the available groundwater only for peak demand periods during the summer months or drought conditions.

The total estimated operational storage capacity for the central basin is about 240,000 acre-feet. Zone 7 estimates that the safe yield of the basin is 13,200 acre-feet per year. Historically, Zone 7 has artificially recharged the basin up to a rate of 13,000 acre-feet per year using local runoff and SWP waters. Between 1974 and 1990, Zone 7 artificially recharged 94,000 acre-feet of water. As of January 1992, the central basin contained approximately 200,000 acre-feet. Zone 7 conservatively estimates that at least half that amount could readily be pumped and recharged (Zone 7, 1992). Please refer to Section K.1 (Water Supply) below for a more complete discussion on water use and availability.

Nearly three-quarters of all the groundwater recharge in the basin occurs within the Arroyo del Valle and Arroyo Mocho channels. Within the Plan Area, the reach of the Arroyo Mocho northwest of Mines Road, and the reach of the Arroyo del Valle south of Sycamore Grove Park are both major recharge areas.

### **Water Quality**

Surface water quality is highly variable, depending on the season, amount of flow, recharge releases, and local geology. A report released in 1984 found some

violations of at least one of the water quality objectives for public drinking water at all surface water sampling stations in the Livermore Valley. The dissolved-solids objective of 500 mg/L was the standard most often exceeded (USGS 1985).

In general, groundwater quality within the central basin meet water quality objectives, while fringe basins have generally poorer ambient water quality. In 1982, Zone 7 identified two areas, along Buena Vista Avenue and near Marina Avenue, within or adjacent to the Plan Area, where clusters of septic tanks have caused groundwater degradation. The Spring and Altamont subbasins, in the far eastern portion of the Plan Area, have high boron concentrations as a result of the local bedrock material. High levels of boron is detrimental to plant growth, which may restrict use of groundwater from these subbasins for agriculture, especially viticulture (Livingston, 1988).

Through nitrification and leaching, nitrogen from various sources can increase levels of nitrates in the groundwater. Well testing in the Livermore Valley found groundwater with nitrate concentrations greater than the drinking water standard of 10 mg/L in an area underlying much of Livermore and the Plan Area. The highest concentrations of nitrates were in the Buena Vista Avenue area, with levels double the drinking water standard (USGS, 1985). High nitrate levels can cause an illness in infants (methemoglobinemia or nitrate cyanosis), sometimes called "blue babies", and may be partially responsible for the occurrence of goiter.

A preliminary study on nitrate sources in the Livermore Valley (Zone 7, 1980) found that agricultural activities and residential wastewater are probably the most significant contributors of net nitrogen to the Valley's groundwater. While no comprehensive studies have been completed, a rough calculation of the nitrogen balance by Zone 7 estimated that agricultural activities may conceivably contribute 85% of the total net nitrogen load, with livestock being the single largest source (57%). Agricultural fertilizers and wastewater effluent from domestic sources each could contribute some 27% of total Valley nitrogen loading.

The Zone 7 report does not estimate the impact of vineyards on the Valley's nitrogen balance. According to a local viticulturalist, current farming techniques rely on mulching of plant materials, so that existing vineyards only require additional nitrogen fertilizers once every four to five years.

In order to protect groundwater quality within the Livermore-Amador Valley, particularly nitrate levels, Zone 7 has adopted policies requiring a minimum parcel size of 5 acres when using an on-site septic/leach field waste disposal system. New development at higher densities is required to either be served by an existing municipal sewer system or treat the wastewater on-site in a centralized treatment facility. Wastewater that is treated on-site for land application or irrigation use within the central basin must be demineralized to meet or exceed a standard of 250 mg/l for TDS. Wastewater is discussed in more detail in Section K.2 below.

## **2. CRITERIA OF SIGNIFICANCE**

For the purposed of this EIR, implementation of the proposed Plan would have a significant adverse impact if it would increase the potential for substantial flood damage, substantially affect groundwater recharge, or if it would result in a substantial degradation of surface or groundwater quality.

## **3. IMPACTS AND MITIGATION MEASURES**

The following hydrologic or water quality impacts could result from adoption and implementation of the South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce identified impacts to a less-than-significant level.

### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences with a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and breakfast establishments and 20 additional wineries.

**IMPACT D-1:** The proposed Plan could result in additional rural residences, wineries and or other commercial establishments within areas subject to flooding.

While areas subject to flooding within the Plan Area are generally limited to areas within several hundred feet of the arroyos, new rural development could be located in these areas.

**Mitigation Measure D-1:** Require site development review for all new rural residential and/or commercial development within the Plan Area, to ensure that new structures are located outside of the FEMA-designated floodplain area.

**IMPACT D-2:** Agricultural activities encouraged by the proposed Plan could result in increased soil erosion and sedimentation within the arroyos, reducing their capacity for groundwater recharge.

The proposed Plan could result in up to 3,260 acres of additional cultivated agriculture in the Plan Area. Erosion rates could increase substantially, if areas subject to severe erosion are cultivated, or if improper farming techniques are used. Eroding soils could then be washed into the arroyos, resulting in reduced capacity of the channels to recharge the groundwater basin.

**Proposed Plan Mitigation:** The land use standards for the consideration of new rural residential development only encourage new agricultural cultivation in areas less than 25% in slope. In addition, the proposed Plan states that environmentally sensitive areas, such as creeks, shall be avoided.

The following mitigation measures would further reduce this potential impact to a less-than-significant level.

**Mitigation Measure D-2a:** Encourage proper erosion control techniques, such as intercropping, contour plowing, or terracing, on new cultivated agricultural land during the rezoning process, in consultation with the Soil Conservation Service. (see Mitigation Measure C-3 above).

**Mitigation Measure D-2b:** Require, through the site review process, that agricultural parcels adjacent to arroyos, maintain a minimum 100 foot uncultivated buffer from the top of bank to reduce the potential for transport of cultivated soils into the arroyos.



**IMPACT D-3: Additional rural residences, wineries and cultivated agriculture could result in the degradation of groundwater quality, especially nitrate levels.**

The proposed Plan could result in up to 290 additional rural residences, as well as wineries and other commercial establishments, that would rely on septic tanks for wastewater disposal. However, new rural residences would be at a maximum gross density of 20 acres per unit, far above Zone 7's minimum requirement of 5 acres per unit.

New vineyards or other cultivated agriculture could potentially more than double the acreage within the Plan Area that is receiving nitrogen fertilizers. If intensive livestock use is permitted, nitrate production could be raised substantially.

**Proposed Plan Mitigation:** New rural residential development must show, to the satisfaction of the County and Zone 7, that all proposed homesites can be served by septic systems.

**Mitigation Measure D-3a:** Require that commercial uses, such as wineries or bed-and-breakfasts, that will be on individual septic systems, meet Zone 7 and County Health requirements as part of the conditional use permit process. (see also Mitigation Measure C-5 above).

**Mitigation Measure D-3b:** Restrict and discourage potentially high agricultural nitrate sources, such as horse farms or cattle feed lots, through use of agricultural easements on new 20 acre parcels.

**Mitigation Measure D-3c:** Encourage agricultural practices that minimize excess nitrogen loading, such as avoidance of over-fertilization, appropriate timing of nitrogen fertilization to maximize nitrogen uptake, or intercropping with legumes. These practices can be encouraged by encouraging the use of experienced vineyard operators through maintenance contracts.

**IMPACT D-4: Expansion of viticulture or other cultivated agriculture in the Plan Area could result in increased pesticide and herbicide use. These chemicals could potentially impact surface water and groundwater through leaching and runoff.**

Use of herbicides and pesticides will depend on the types of crops being grown and agricultural management practices. Currently, viticultural operations employ Class III pesticides every 2-3 years, using ground-based direct application. Wentz Brothers currently also has some 200 acres of certified organic grapes, and is considering expansion.

Although accidental spills or mishandling of pesticides could result in temporary surface water quality impacts, it is unlikely that normal, careful application would affect water quality.

**Mitigation Measure D-4:** No mitigation measures are warranted.

### 3.2 Impacts of New Urban Development

The proposed Plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land, and the development of up to 2,510 additional dwelling in Livermore and Pleasanton.

**IMPACT D-5:** Plan implementation could result in new urban development within areas subject to flooding.

Areas that could be urbanized as a result of the proposed Plan that are presently within the FEMA designated 100-year flood plain are generally limited to the Patterson Pass area. The Alden Lane Transitional Area and lands along the Arroyo del Valle are within the Del Valle dam failure inundation area.

**Mitigation Measure D-5a:** The City of Livermore should require any proposed urban development projects within a designated 100-year flood plain to eliminate the flood hazard through channel modification, restricting flood flows, or avoidance of flood prone areas. Any modification of the designated flood plain will require a detailed flood study. This study would be used to justify flood plain map revisions subject to the review and regulatory jurisdiction of FEMA. Map revision and floodplain actions must be filed with the district FEMA office in San Francisco.

**Mitigation Measure D-5b:** Prior to approval of additional urban development within the Del Valle inundation area, the City of Livermore should update the emergency service evacuation plan to account for the additional population within the area.

**IMPACT D-6:** Urban development within the Plan Area could potentially increase flood frequency and intensity downstream.

Urban development generally results in an increase in impervious surfaces from paving, roofs and soil compaction. These surfaces increase the rate, peak, and total volume of runoff to drainage systems. Unless drainage systems downstream have adequate capacity to carry increased flows, flooding can result.

Any development within the Plan Area will be subject to Zone 7 drainage fees in accordance with Resolution No. R-89-941. Drainage fees are used by Zone 7 to construct major drainage improvements within the Livermore Valley.

**Mitigation Measure D-6:** Require that any proposed urban development within the Plan Area supply a master drainage plan indicating how runoff will be managed. Offsite post-project runoff volumes should be limited to existing conditions, through the use of storm water detention ponds or other means, unless a detailed hydraulic analysis of the existing downstream drainage system determines that there is enough existing capacity to handle the additional runoff.

**IMPACT D-7:** Urban development construction activity could result in decreased surface water quality.

Exposed soils resulting from construction activities could increase erosion in the Plan Area, resulting in increased sediment discharge into adjacent drainage channels and arroyos. Increased sedimentation will reduce surface water quality and may accumulate in downstream drainage structures, requiring increased maintenance.

**Mitigation Measure D-7a:** Require that urban development proposals within the Plan Area include an approved erosion control plan to minimize the impacts from erosion and sedimentation during grading. This plan should include procedures such as: (a) restricting grading to the dry season; (b) protecting all finished graded slopes from erosion using such techniques as hill slope benching, erosion control matting and

hydroseeding; (c) protecting downstream storm drainage inlets from sedimentation; (d) use of silt fencing to retain sediment on the project site; and (e) any other suitable measures outlined in the Association of Bay Area Governments' (ABAG) Manual of Standards.

**Mitigation Measure D-7b:** Require that urban development projects include post-construction inspection of downstream drainage culverts for accumulated sediment. If sediment accumulation has occurred, these drainage structures should be cleared of debris and sediment.

**IMPACT D-8:** Surface water quality could be affected by increases in urban runoff.

Urban runoff may include pollutants from a variety of sources, including household products, home maintenance supplies, landscape materials and products (pesticides, herbicides, and fertilizers), oil and grease from automotive use, and heavy metals found in vehicle exhaust, weathered paint, and tires. Rapid runoff during storms, particularly during the first rainfall event or after an extended dry period, may generate pulses of polluted water which quickly pass through the surface water system. Runoff in the wetter months may cause higher suspended sediment concentrations and turbidity as a result of erosion. During dry weather, the quality of surface runoff may be affected by spills or leakage of chemicals, wash down of pavements, or leakage of sanitary sewers.

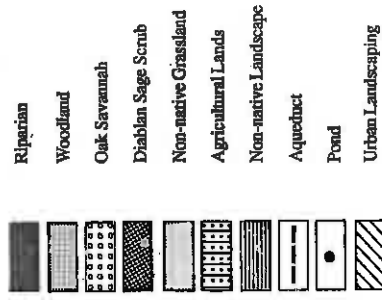
The City of Livermore recently raised sewer fees to fund the monitoring of storm water for pollutants and to begin a public information campaign aimed at reducing dumping of toxic substances into gutters and drains.

**Mitigation Measure D-9a:** Require that urban development projects within the Plan Area incorporate grass-lined ditches and swales whenever practicable. These types of ditches have been known to reduce potential pollutants by the filtering action of the grass and filtration into the subsoil. Kercher et al. (1983) and Yousef et al. (1985) reported moderate to high removal of particulate pollutants in low gradient, densely vegetated swales. However, soil characteristics may control on-site effectiveness. Nevertheless, moderate removal of pollutants can probably be expected during small storms.

**Mitigation Measure D-9b:** Require that urban development projects incorporate trash racks, grease traps and catch basins as drainage elements, and that a program of regular vacuum sweeping of streets and parking areas be implemented, to reduce urban runoff pollutants.

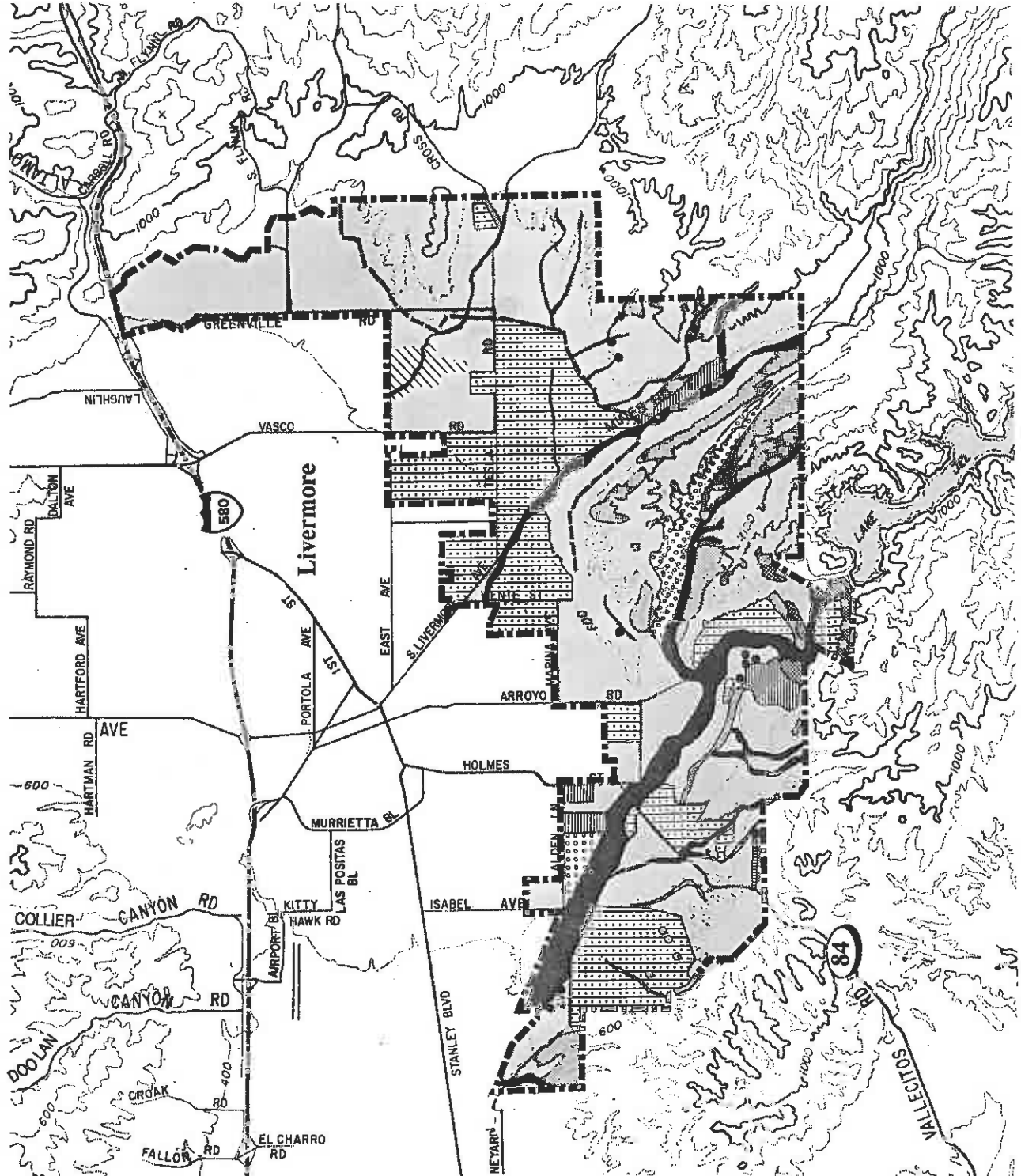


**FIGURE IV E-1  
VEGETATION AND  
COMMUNITIES AND  
WILDLIFE HABITAT**



SOURCE: Habitat Restoration Group

**SOUTH LIVERMORE  
VALLEY AREA PLAN  
ENVIRONMENTAL  
IMPACT REPORT**  
■■■■  
ALAMEDA COUNTY,  
CALIFORNIA







### **Plant Species of Concern**

One plant species of concern, valley oak, was found in the Plan Area during field surveys. Although abundant throughout the state, valley oak is on a watch list by the California Native Plant Society because only mature trees are usually found, which suggests the trees may not be reproducing successfully. Individual valley oaks are found on level terrain, particularly near drainages, throughout the Plan Area, including in existing vineyards. Additionally, one stand of mature trees was observed in the Alden Lane area.

Although not identified in field surveys, twenty-six additional plant species of concern have the potential to occur within the Plan Area and vicinity. Table E-1 summarizes the status, habitat preference, and occurrence of these species. Some plant species listed by CNPS are not included in the CDFG's data base (CNDDDB), therefore, locational information is limited.

A habitat of special concern, Valley Sink Scrub, is also included in the table due to its proximity to the Plan Area north of I-580. Additionally, alkaline soils, which may support species of special concern, were observed along Patterson Pass Road adjacent to the northeastern Plan Area boundary, and may occur on private property within the Plan Area. Potential plant species in alkaline soils include San Joaquin saltbush, hispid bird's-beak, palmate bird's-beak, recurved delphinium, and caper-fruited tropidocarpum.

Eight plant species of concern could potentially be found in grasslands in the Plan Area, including large-flowered fiddleneck, balsamroot, diamond-petaled poppy, stinkbells, great valley gumplant, showy madia, Mt. Diablo cottonweed, and showy Indian clover.

If vernal pools do occur within Plan Area grasslands, potential species of concern include Contra Costa goldfields and Lobb's aquatic buttercup,

Additional plant species of concern outlined in Table E-1 generally occur in woodland and scrub habitats, usually in steeper hillside areas.



Table E-1  
**PLANT SPECIES OF CONCERN WITHIN OR IN THE VICINITY OF THE SOUTH LIVERMORE VALLEY**

Plant Species	S <sup>a</sup>	F <sup>b</sup>	CNPS <sup>c</sup>	Habitat	Blooming Dates	Location within and in Vicinity of Plan Area
<u>Amsinckia grandiflora</u> Large-flowered Fiddleneck	C	FE	1B	cismontane woodlands, valley and foothill grasslands, slopes below 1,200'	April - May	Two site north of Corral Hollow on Lawrence Livermore laboratory property <sup>2</sup>
<u>Atriplex ioquiniana</u> San Joaquin Saltbush	-	-	3	alkaline soils, alkali scrub, grassland	April - Sept.	north of Livermore and @ 10 miles northeast of Plan Area <sup>2</sup>
<u>Balsamorhiza macrolepis</u> var. <u>macrolepis</u> Balsamroot	-	-	3	grassland and foothill woodland, below 2,000'	March - June	collected in the vicinity <sup>2</sup>
<u>Calochortus pulchellus</u> Mt. Diablo Fairy Lantern	-	-	4	chaparral and cismontane woodlands, above 700'	April - June	Contra Costa County <sup>5</sup>
<u>Calochortus umbellatus</u> Oakland Star-tulip	-	-	4	chaparral, montane coniferous forest, 1,000' - 2,000'	March - May	Alameda, Contra Costa, Santa Clara and Marin Counties <sup>5</sup>
<u>Clartia breweri</u> Brewer's Clarkia	-	-	4	chaparral, foothill woodland, below 4,000'	April - May	no records available
<u>Cordylanthus mollis</u> sp. <u>hispidus</u> Hispid Bird's-beak	-	C2	1B	alkaline soils, alkaline meadow	June - July	north of Livermore - near Vasco and Raymond Roads, and the Bluebell Drive area <sup>3</sup>
<u>Cordylanthus palmatus</u> Palmate Bird's-beak	C	FE	1B	alkaline soils, alkali scrub, grassland	June	2.5 miles north of Livermore - near Vasco and Raymond Roads <sup>3</sup>
<u>Delphinium californicum</u> sp. - <u>californicum</u> Hospital Canyon Larkspur	-	C2	3	foothill woodland, moist, shaded areas below 2,000'	March - May	no records available
<u>Delphinium recurvatum</u> Recurved Larkspur	-	C2	1B	alkaline soils, alkali scrub, grassland	March - May	populations @ 10 miles east and northeast of plan area <sup>2</sup>
<u>Dicra occidentalis</u> Western Leatherwood	-	-	4	mixed evergreen forest, chaparral, wet areas below 1,500'	Jan. - March	no records available
<u>Eriogonum inuncatum</u> Mt. Diablo Buckwheat	-	C2	1A	Chaparral, coastal scrub, grassland, 1,000' - 1,500'	April - June	along road between Livermore and Corral Hollow, near summit <sup>3</sup>



Table E-1 (cont'd)  
 PLANT SPECIES OF CONCERN IN OR WITHIN THE VICINITY OF THE SOUTH LIVERMORE VALLEY

Plant Species	S <sup>a</sup>	F <sup>b</sup>	CNFS <sup>c</sup>	Habitat	Blooming Dates	Location within and in Vicinity of Plan Area
<u>Eriophyllum jepsonii</u> Jepson's Woolly Sunflower	-	-	4	foothill woodland, coastal scrub, 1,000'-3,500'	April - June	no records available
<u>Echscholzia rhombipetala</u> Diamond-petaled Poppy	-	C2	1B	grassland, foothill woodland, chaparral	March - May	hills south of Byron <sup>3</sup>
<u>Fritillaria agrestis</u> Stinkbells	-	C3c	1B	foothill woodland, grassland	March - May	Livermore - west of Greenville Road, adjacent to Highway 580 <sup>4</sup>
<u>Grindelia campocorum</u> var. <u>parviflora</u> Great Valley Gumpplant	-	-	4	grassland	May - Oct.	no records available
<u>Helianthella castanea</u> Diablo Helianthella	-	C2	1B	foothill woodland, chaparral, 500 - 4,000'	April - May	8 miles north of Livermore in Kellogg Creek watershed <sup>2</sup> , near Los Vaqueros Reservoir <sup>3</sup>
<u>Lasthenia conjugens</u> Contra Costa Goldfields	-	C2	1B	vernal pools	April - May	near Byron, @ 10 miles northeast of the Plan Area <sup>2</sup>
<u>Lathyrus jepsonii</u> Delta Tule Pea	-	C2	1B	freshwater marsh	May - June	no records available
<u>Madia radiata</u> Showy Madia	-	-	3	grassland, foothill woodland, below 2,500'	March - May	no records available
<u>Malacothamnus helii</u> Hall's Bush Mallow	-	-	4	chaparral	May - June	Alameda, Contra Costa and Santa Clara Counties <sup>5</sup>
<u>Quercus lobata</u> Valley Oak	-	-	4	foothill woodland, grassland, riparian, below 2,000'	March - April	observed throughout the Plan Area
<u>Plagiobothrys glaber</u> Hairless Popcorn Flower	-	C2	3	alkaline flats, coastal salt marsh	April - May	no records available
<u>Ranunculus lobbii</u> Lobb's Aquatic Buttercup	-	-	4	vernal pools	Feb. - March	no records available



Table E-1 (cont'd)

PLANT SPECIES OF CONCERN IN OR WITHIN THE VICINITY OF THE SOUTH LIVERMORE VALLEY

Plant Species	S <sup>a</sup>	F <sup>b</sup>	CNPS <sup>c</sup>	Habitat	Blooming Dates	Location within and in Vicinity of Plan Area
<i>Stylocline amphibola</i> Mt. Diablo Cottonweed	-	-	4	mixed evergreen forest, grassland, mudstone substrate	April - May	no records available
<i>Trifolium amoenum</i> Showy Indian Clover	-	C2	1A	grassland, swales	April - June	no records available; last seen in 1969 <sup>3</sup>
<i>Tropidocarpum caparideum</i> Caper-fruited Tropidocarpum	-	C2	1A	alkaline soils, grassland, below 500'	March - May	near railroad tracks east of Livermore <sup>3</sup> ; near Byrona, <sup>2</sup> @ 10 miles east and northeast of Plan Area; may now be extinct <sup>2</sup>
Valley Sink Scrub	-	-	-	alkaline soils, claypan vernal pools and intermittent drainages	N/A	west of Broadmoor Street, northeast of Livermore, south of Raymond Road near Vasco Road <sup>3</sup>

<sup>a</sup> State Listings: C=Endangered, CR=Rare, C1=Threatened

<sup>b</sup> Federal Listings: FE= Endangered, FT=Threatened, C2=Threat and/or distribution data insufficient to support listing, C3c=Not threatened;

<sup>c</sup> CNPS Listing: List 1A=Plants presumed extinct, List 1B=Plants rare throughout their range and considered vulnerable due to limited habitat or low numbers of individuals per population, List 3=Review list of species which may be rare, threatened or endangered but additional data is needed, List 4=A watch list of species with a limited distribution which are not currently threatened N/A means Not Applicable

<sup>1</sup> Species on Lists 1A, List 1B and List 2 are protected by Section 1901, Chapter 10 of the California Department of Fish and Game Code (Native Plant Protection).

<sup>2</sup> Source: LSA Associates, Preliminary Biological Assessment South Livermore Valley Plan

<sup>3</sup> Source: California Natural Diversity Data Base

<sup>4</sup> Source: The Habitat Restoration Group

<sup>5</sup> Source: California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California





## Wildlife

Wildlife resources in the Plan Area include riparian corridors, wetlands, oak woodlands, grassland and scrub habitats. These habitats support common wildlife species as well as known or potential species of concern. Existing wildlife habitat values of the Plan Area are affected by ongoing cattle grazing practices, agriculture, past quarrying activities and rural residential development. Despite these disturbances, the Plan Area provides habitat for a wide variety of wildlife species, primarily due to the relatively undisturbed setting adjacent to the southern portion of the Plan Area, including the close proximity of Del Valle State Park and East Bay Regional Park District wilderness areas.

Wildlife habitats and possible wildlife that could be found in each habitat are described below. While some wildlife species may be restricted to certain habitats due to specific requirements, other species may exploit a range of habitats throughout the Plan Area.

**Non-Native Annual Grassland:** The wildlife value of the grassland habitat in the Plan Area is affected by current cattle grazing practices. Cattle grazing has reduced the amount of ground cover present in some areas, limiting cover and potential nesting sites for many wildlife species. In general, wildlife use of grasslands is expected to be highest where oak trees and ponds are interspersed, creating a varied habitat structure that supports diverse wildlife activity.

Grasslands are important resources for a wide variety of wildlife species. The grasses and forbs produce abundant seeds and provide forage for a variety of rodents such as black-tailed hare, Botta's pocket gopher, Heermann's kangaroo rat, California ground squirrel, California meadow vole and western harvest mouse. Consequently, grasslands in the Plan Area could be valuable foraging sites for predators such as long-tailed weasel, red-tailed hawk, turkey vulture and gopher snake.

Grasslands also support numerous invertebrates, providing an important prey base for reptiles such as western yellow-bellied racer, ringneck snake, and western fence lizard, and mammals such as ornate shrew and broad-footed mole. Amphibians also use grasslands, seeking abandoned rodent burrows for refuge; these sites are often near water such as ponds and intermittent drainages where the aquatic environment is a requirement for reproduction. Ground nesting birds in grasslands include horned lark, western meadowlark, and savannah sparrow. Aerial-foraging species that use grasslands include bat species such as the little brown myotis, California myotis and

western pipistrelle; and swallows, including barn swallow, violet-green swallow and cliff swallow.

**Oak Woodlands:** Because oak woodlands and oak savannas within the Plan Area have an understory dominated by annual grassland, many of the wildlife species expected to occur in grasslands are also expected to occur in oak woodlands. To avoid duplication, the discussion below focuses on wildlife habitat associated with oak trees.

Oak woodlands are considered among the top three habitat types in California, providing critical habitats for the conservation of many bird and mammals species, (Block et al., 1990). Important habitat features of oak woodlands include the availability of acorns and the presence of cavity-bearing trees. Acorns play an important role in the survival of many species of wildlife (Tietje 1990). In the fall, acorns constitute a significant portion of the diet of black-tailed deer. Other species that make significant use of acorns include western grey squirrel, California ground squirrel, band-tailed pigeon, scrub jay, yellow-billed magpie, American crow, California quail and acorn woodpecker.

Oak trees are important resources for cavity-dependent wildlife. Mature oaks frequently bear dead limbs (snags), which acorn woodpeckers and Nuttall's woodpeckers prefer for the excavation of roost and nest sites (Thomas 1979). Subsequently, snags receive high levels of use by secondary cavity-nesting bird species such as common titmouse, chestnut-backed chickadee, white-breasted nuthatch, violet-green swallow, ash-throated flycatcher and western bluebirds. Snags attract wood-boring insects, which in turn support bark-gleaning insectivorous birds. Depending upon the size of a snag, they also provide denning sites for raccoon, Virginia opossum, deer mouse, striped skunk and a variety of bats. Mature oak frequently harbor natural cavities as they lose limbs and create scarring from which cavities are formed. Natural cavities are also used by secondary cavity-dependent species.

Oak trees also provide potential roost, nest and/or perch sites for raptors such as red-tailed hawk, American kestrel and turkey vulture.

**Riparian Corridors:** In terms of wildlife habitat value, riparian habitats, in general, rank among the highest of all habitat types in California. Habitat characteristics that contribute to its high wildlife value include: (1) the presence of a nearby water source; (2) the availability of a variety of food, cover, roost, and nesting substrates provided by the abundant vegetation; and (3) the diverse habitat structure. Due to their high wildlife value as well as their limited statewide distribution, riparian

habitats are protected resources of the state (California Department of Fish and Game).

Two major riparian corridors occur in the Plan Area: Arroyo del Valle and Arroyo Mocho (Figure D-1). Their wildlife values vary depending upon the degree of habitat disturbance along the corridors, the amount of understory and in-channel vegetation, and the availability of surface water. Habitat modification due to building of roads, quarrying practices, agriculture and rural development has severely disturbed portions of these corridors.

Riparian corridors in the Plan Area vary from arid open woodlands with sparse understory, in-channel vegetation and lack of dependable surface flow to mesic forests with abundant understory, marsh vegetation and year-round surface flow. Wildlife species abundance and diversity is expected to be highest in the latter situations, an example of which occurs along the upper reaches of Arroyo del Valle, near the southern boundary of the Plan Area.

Important features common to the various riparian habitats in the Plan Area include the presence of valley oak and western sycamore. The valley oaks produce acorns which are consumed by many wildlife species, while both tree species provide nesting and cover substrate for cavity-dependent wildlife. The deciduous oaks and sycamores, along with willows (where present), also support abundant insect life, and thus are important resources for insectivores, especially migratory birds.

Representative amphibian and reptile species that may be found in riparian habitats in the Plan Area include Pacific treefrog, western toad, southern alligator lizard, western fence lizard, sharp-tailed snake, common garter snake, and common kingsnake.

Breeding birds of riparian habitats include great blue heron, green-backed heron, California quail, Nuttall's woodpecker, song sparrow, northern oriole, warbling vireo, California thrasher, yellow-billed magpie, western bluebird and orange-crowned warbler. In late fall and winter, when surface water is more prevalent within the arroyos, freshwater marshes within riparian corridors provide potential habitat for migratory waterbirds and shorebirds such as snowy egret, greater yellowlegs, spotted sandpiper and green-winged teal.

In addition to providing forage, cover and denning sites to a variety of mammals, riparian habitats in the Plan Area provide potential travelling corridors for species

such as coyote, red fox, bobcat, striped skunk, raccoon, Virginia opossum, and black-tailed deer.

**Non-Riparian Wetlands:** Surface water is a requirement of many wildlife species for drinking, bathing, escape cover, foraging, and reproduction. Hence, ponds and seeps with year-round water are probably focal points of wildlife activity. The importance of a water source is underscored due to its limited occurrence in the Plan Area during the dry season. Stock ponds, agricultural ponds, swales and sub-drainages support seasonal or year-round ponding. The presence of emergent and submergent vegetation within ponded areas increases their overall value to wildlife by providing cover and a food base for a diversified aquatic invertebrate fauna, which forms the base of many food chains. Ponded sites are critical resources for species that require surface water for reproduction, especially in the relatively arid Plan Area environment.

Aquatic breeding species that potentially inhabit non-riparian wetlands in the Plan Area include California newt, Pacific treefrog, and western toad. Depending on the availability of water and presence of wetland vegetation, mallard and green-backed heron may also breed at seasonal/permanent ponds. Other species expected to use wetland areas for foraging include common garter snake, great blue heron, raccoon, striped skunk and red fox.

Like riparian habitats, wetlands are also protected resources of the state, as well as the federal government, due to their inherent high value to wildlife and limited statewide distribution (see Agencies with Vegetation and Wildlife Jurisdiction, below).

**Diablan Sage Scrub:** The relatively large area of scrub habitat located at the upper reach of Arroyo del Valle in the Plan Area may support species that require dense brushy vegetation. This habitat is especially suited to secretive wildlife species preferring such conditions for cover, nesting, foraging, and roosting. Representative reptiles of this habitat include western fence lizard, western skink, striped racer, and western rattlesnake. Breeding birds of this habitat may include California quail, rufous-crowned sparrow, lazuli bunting, California thrasher, Bewick's wren, California towhee and Anna's hummingbird. Typical mammals are expected to include brush rabbit, Heermann's kangaroo rat, California pocket mouse, brush mouse, mountain lion, bobcat and gray fox.

**Cultivated Land and Urban Landscape:** Vineyards and orchards generally receive limited, seasonal use by wildlife. Scrub jay, American crow, yellow-bellied magpie,

red-winged blackbirds, tricolored blackbird, brown-headed cowbird, Brewer's blackbird, European starling, mourning dove, house finch and raccoon forage for fruits and nuts in such areas. Many of these species also are likely to occur in urban landscaped areas.

**Wildlife Species of Concern:**

Nine wildlife species of concern have been observed in the Plan Area. These include state and federal endangered and threatened species, federal candidate species for listing, California species of special concern, and species protected under CEQA Section 15380(d). Five of the nine species breed in the Plan Area: California tiger salamander, southwestern pond turtle, great blue heron, burrowing owl and tricolored blackbird. The other four species known to use, but not breed in the Plan Area are bald eagle, golden eagle, prairie falcon and ferruginous hawk. Refer to Table E-2 for a summary of the status, habitat preference and occurrence in the Plan Area of the known and potential wildlife species of concern.

In addition to wildlife observed on site, 13 species of concern could potentially inhabit the Plan Area. These are San Joaquin kit fox, American badger, Alameda whipsnake, black-shouldered kite, California red-legged frog, Foothill yellow-legged frog, California horned lizard, Cooper's hawk, sharp-shinned hawk, yellow warbler, pallid bat, Townsend's big-eared bat and Berkeley kangaroo. Detailed descriptions of many of the species' status, distribution, habitat requirements, and pattern of occurrence in the study region are presented in *Preliminary Biological Assessment, South Livermore Valley Plan Alameda County, California, (LSA ibid.)*.

Six of the nine wildlife species of concern that have been observed in the Plan Area are at least partially dependent on grassland habitat. These are the California tiger salamander, burrowing owl, ferruginous hawk, bald eagle, golden eagle and prairie falcon. Potentially occurring sensitive species that are primarily grassland-dependent are the San Joaquin kit fox, American badger, Berkeley kangaroo rat and black-shouldered kite.

According to the California Department of Fish and Game, pronghorn antelope were reintroduced into Alameda County and are using a portion of the Plan Area. It is the Department's goal to see that the antelope increase in number to become a viable population. While the species has no special status, the DFG considers "any loss of habitat within the animal's home-range, including the extension of viticulture" to be an adverse impact (DFG, 1992).



Table E-2

## WILDLIFE SPECIES OF CONCERN WITHIN OR IN THE VICINITY OF THE SOUTH LIVERMORE VALLEY

SPECIES	STATUS	HABITAT	OCCURRENCE IN THE PLAN AREA
California Tiger Salamander	C2, CSC	Terrestrial habitat in grassland and oak woodland; breeding habitat in riparian habitats and seasonal wetlands	Kp
California Red-legged Frog	C2, CSC	Riparian and wetland habitats where ponds with extensive pond-margin vegetation and shade are present	P, V
Foothill Yellow-legged Frog	CSC	Riparian habitats with riffles and cobbly substrate; highly aquatic	P
Southwestern Pond Turtle	C2, CSC	Exclusively aquatic; riparian and wetland habitats with muddy substrates and emergent vegetation	Kp
California Horned Lizard	CSC	Oak woodland, scrub, drainages and grasslands where shrubs provide cover and substrate consists of loose, fine soils	P
Alameda Whipsnake	C2, ST	Extensive scrub vegetation and riparian/scrub ecotones	P, V
Great Blue Heron	*	Large mature oak or sycamore trees for roosting or nesting near aquatic foraging sites	Kp
Black-shouldered Kite	FP	Scattered trees in and adjacent to grassland and open agricultural fields	P
Cooper's Hawk	CSC	Oak woodlands and riparian habitats for nesting and foraging	P, V
Sharp-shinned Hawk	CSC	Oak woodlands and riparian habitats for nesting and foraging	P, V
Ferruginous Hawk	C2	Grasslands for foraging during winter	Kn
Bald Eagle	SE, FE	Grasslands, riparian corridors and oak woodlands as alternate foraging sites in winter	Kn
Golden Eagle	CSC	Tall trees, transmission towers and cliff faces for nesting; grasslands and oak woodlands for foraging	Kn, V
Prairie Falcon	CSC	Cliff faces for nesting; grasslands for foraging	Kn, V
Burrowing Owl	CSC	Grasslands with suitable rodent burrows for nesting and/or roosting	Kp
Yellow Warbler	CSC	Breeding habitat is typically willow riparian vegetation with trees interspersed	P





Table E-2 (cont'd)  
**WILDLIFE SPECIES OF CONCERN IN THE SOUTH LIVERMORE VALLEY**

SPECIES	STATUS	HABITAT	OCCURRENCE IN THE PLAN AREA
Tricolored Blackbird	C2, CSC	Freshwater marshes with extensive cover of cattails, tules, willow thickets, or blackberry bramble for nesting; nest site in close proximity to grassland foraging areas	Kp
San Joaquin Kit Fox	FE, ST	Valley and lower foothill grasslands with friable soils and abundant prey (kangaroo rats and other fossorial rodents); often enlarges burrows of ground squirrels as den sites	P, V
Berkeley Kangaroo Rat	*	Scrub and grassland habitats where shrub cover is interspersed with openings for foraging	P, V
American Badger	CSC	Scrub, grassland, oak woodland habitats with friable soils and abundant prey (fossorial mammals)	P
Pallid Bat	*	Buildings, rock crevices, cliff faces for roosting; open oak woodlands for foraging	P
Townsend's Big-eared Bat	CSC, C2	Buildings and mine tunnels within 100m of riparian habitat for roosting; riparian habitat for foraging	P

Source: The Habitat Restoration Group

STATUS CODES: FE = federally endangered; SE = state endangered; ST = state threatened; C2 = federal Candidate 2 for listing as threatened or endangered; CSC = California species of special concern; FP = state fully protected species; \* = protected under CEQA Section 15380(d).  
 OCCURRENCE CODES: P = potentially breeding in the Plan Area; Kp = known to breed in the Plan Area; Kn = known to regularly occur as a non-breeder in the Plan Area; V = known to occur in the Plan Area vicinity.



### **Agencies with Vegetation and Wildlife Jurisdiction**

The U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG) and the U.S. Army Corps of Engineers (Corps) have jurisdiction over protected plant and wildlife species and habitats in the Plan Area.

**U.S. Fish and Wildlife Service:** The USFWS has jurisdiction over federally listed threatened and endangered species under the federal Endangered Species Act. The Act protects listed species from harm or "take", which is broadly defined as "harass, harm, pursue, hunt, shoot wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." An activity is defined as "take" even if it is unintentional or accidental. The bald eagle is the only federally listed species that has been observed on site. However, the USFWS recently released a map indicating that much of eastern Alameda County, including the Plan Area, is potential habitat for the federally listed San Joaquin kit fox. Furthermore, one state and federally endangered plant, Palmate bird's-beak, is found north of I-580, and potentially could be found on alkaline soils in the northeastern portion of the Plan Area.

In addition to endangered and threatened species, the USFWS lists "Candidate" species as those considered for listing as endangered species. Candidate species are divided into three categories: Category 1 includes species for which enough data is on file to support the federal listing; Category 2 includes species that are threatened but distribution data is insufficient to support the federal listing and; Category 3 includes non-candidate species that were previously considered as candidates. Four of the wildlife species for which there are observational records within the Plan Area are Candidate 2 species: California tiger salamander, southwestern pond turtle, tricolored blackbird and ferruginous hawk. The California tiger salamander, southwestern pond turtle and tricolored blackbird breed in wetlands. Along with the ferruginous hawk, the California tiger salamander also relies on grasslands for part of the year. Ten Candidate 2 plant species potentially found on site are listed in Table E-1.

**California Department of Fish and Game:** The CDFG has jurisdiction over state-listed threatened and endangered species. The state and federal lists are generally similar, although a few species present on one list may be absent on the other. The federally listed bald eagle is also the only State listed species observed on site. However, the state endangered black-shouldered kite may forage in grasslands and the state threatened Alameda whipsnake could potentially be found in Diablan scrub habitat within the Plan Area.

The CDFG lists "Species of Special Concern" as species not included on federal or state endangered, threatened or rare lists, but whose California breeding populations are of special concern in that they may face extinction within the state in the near future. Special concern species have the potential to be designated to a more protected status.

In addition to special status species and communities, CDFG generally requires a Streambed Alteration Agreement for streambed crossings or the filling or otherwise alteration of permanent or intermittent drainages. This regulation is generally applied to any drainage area with a bed and defined banks, even if the waterway is an ephemeral stream.

**U.S. Army Corps of Engineers:** The Corps may exercise its jurisdiction over streams and non-riparian wetlands under Section 404 of the Clean Water Act. Section 404 authorizes the Corps to regulate discharge of dredge materials or fill in "waters of the United States and Associated Wetlands." Drainages and wetland habitats in the Plan Area are likely to qualify as waters of the United States.

**CEQA Guidelines:** Section 15380 of the CEQA Guidelines states that a plant or animal may be treated as rare or endangered even if it has not been placed on an official list. An example in the Plan Area is the great blue heron. Although neither rare nor endangered, nesting colonies of the great blue heron are declining in number throughout the state.

#### **Local Vegetation and Wildlife Policies**

Three plans in the vicinity of the SLVAP address vegetation and wildlife policies. These plans are the Livermore-Amador Valley Planning Unit (LAVPU), the Livermore Community General Plan and The Pleasanton Plan. Each of the plans has policies to protect wildlife habitats that support rare and endangered plant and animal species. Portions of each plan are excerpted below with duplications avoided.

**Alameda County:** The Livermore-Amador Valley Planning Unit (LAVPU) of the Alameda County General Plan encourages the conservation of natural resources in general, and rare and endangered species habitats, streambeds and water bodies and healthy, mature trees, in particular.

LAVPU objectives that pertain to vegetation and wildlife include:

*To preserve and enhance areas which are habitats for rare and endangered animal or plant species (p. 14);*

*To restrict the alteration of all streambeds, bodies of water, and adjacent vegetation in order to preserve their scenic and wildlife qualities (p. 21);*

*To preserve healthy, mature trees or those of particular cultural significance in order to preserve the scenic quality of the Planning Unit (p. 21, LAVPU, 1977).*

**Livermore:** The following policies of the Livermore Community General Plan address vegetation and wildlife:

*Riparian woodlands and freshwater marshes shall be preserved (p. 78);*

*Grading and excavation in woodland areas shall avoid disturbances to subsurface soil, water or rooting patterns for natural vegetation (p. 79);*

*The City shall encourage agricultural interests to maintain or develop areas of natural habitat for wildlife compatible with farm management objectives (p. 79, Livermore, 1976).*

**Pleasanton:** Policies in the Pleasanton Plan that relate to vegetation and wildlife include:

*Preserve heritage trees throughout the Planning Area (p. VII-11);*

*Preserve stream beds and channels in their natural state, except where needed for flood and erosion control (p. VII-11);*

*Explore the use of open space zoning, transfer of development rights, and conservation easements in the Expanded Planning Area (p. VII-12, Pleasanton, 1986).*

## 2. CRITERIA OF SIGNIFICANCE

For the purposes of this EIR, vegetation and wildlife impacts would be considered significant if adoption and implementation of the South Livermore Valley Area Plan could result in:

- reductions in populations of rare and/or endangered plant or animal species (including CNPS and CDFG species of concern);
- the reduction or degradation of habitats or resources of high wildlife value;
- the reduction or degradation of riparian and wetlands vegetation.

### 3. IMPACTS AND MITIGATION MEASURES

The following vegetation and wildlife impacts could result from adoption and implementation of the South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce impacts to a less than significant level.

#### 3.1 Impacts of New Rural Residential and Vineyard Development

The proposed SLVAP could result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,250 additional acres of vineyards or cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT E-1:** Expansion of cultivated agriculture and related development could result in the loss of riparian, wetland, oak woodland or Diablan sage scrub habitat.

New cultivated agriculture and related development could encroach on these habitat types, with a resulting reduction in habitat values. The location of most of the Diablan sage scrub habitat, and the majority of the oak woodlands on steeper slopes will limit potential conversions of these communities to cultivated agriculture.

**Proposed Plan Mitigation:** New areas of cultivated agriculture resulting from Plan policies must protect sensitive or unique environmental characteristics, such as oak groves or creeks.

**Mitigation Measure E-1:** See Mitigation Measure D-2b above regarding creek setbacks. Require a larger setback where necessary to prevent removal of riparian habitat.

**IMPACT E-2:** Expansion of cultivated agriculture could result in the conversion of up to 3,260 acres of primarily grassland habitat, with a consequent reduction in relative habitat values, including habitat for six wildlife species of concern, and possible destruction of plant species of concern, if they occupy these areas.

New cultivated agriculture is most likely to be located in grassland areas. Cultivation would reduce plant diversity by replacing numerous plant species with one or several species, with a consequent reduction in habitat values. Burrowing and ground-dwelling animals, as well as native plant species, would be directly affected during initial tilling and planting operations. The extent that cultivated areas could be re-used by ground-dwelling animals would depend on the level and timing of subsequent agricultural management, such as discing between rows versus maintenance of interrow grassland.

The extent that potential wildlife species of concern could be displaced is unknown. Kit fox have been observed in orchards in the San Joaquin Valley, and the presence of ground squirrels in cultivated agricultural areas could enhance their use as summer estivation areas for the tiger salamander.

According to the CDFG, expansion of agriculture would be a significant adverse impact on the recently released pronghorn antelope herd.

It should be noted that the maximum potential agricultural expansion of 3,260 acres represents approximately 35% of remaining grassland in the Plan Area, and about 1.3% of all grazing land remaining in Alameda County.

**Mitigation Measure E-2a:** Destruction of plant and wildlife species of concern by agricultural expansion could be mitigated by requiring a field survey by a qualified biologist. Plant surveys should be conducted during the spring growing season, prior to initial tilling. Should populations of plant species of concern be found, mitigation measures could include avoiding the populated areas, or removal of the plants to other locations, if possible. Wildlife surveys should be conducted following established CDFG procedures. Mitigation measures available if wildlife species of concern are found would include avoidance or reduction in acres placed under cultivation.

**Mitigation Measure E-2b:** Use the proposed South Livermore Valley Land Trust to protect critical habitat areas through purchase of fee title or conservation easements. A portion of the funds used to establish the Land Trust should be used to pay for a detailed biological survey of potential agricultural lands in the Plan Area, to be conducted by a qualified biologist in consultation with Alameda County, the CDFG, and the USFWS. The survey should, to the extent possible, identify specific parcels, or portions of parcels, that represent critical habitat for species of concern. In addition, the survey should identify parcels, or portions of parcels, that would help maintain the biological integrity of the Plan Area, by establishing large areas of relatively undisturbed habitat connected to important wildlife corridors. Once identified, parcels with critical habitat should be given high priority when the Land Trust establishes a program for land or easement acquisition.

This program could be incorporated into a larger-scope Habitat Conservation Plan for all of Eastern Alameda County, as part of the on-going General Plan update.

While the above mitigation measures would reduce potential impacts of plant and animal species of concern, no mitigation measures are available for general habitat loss from agricultural expansion. Therefore, this is considered an unavoidable adverse impact of the proposed Plan.

**IMPACT E-4:** Agricultural use of 3,250 acres of the Plan Area could result in contamination of aquatic habitats and eutrophication of aquatic systems by fertilizers, herbicides and pesticides.

**Mitigation Measure E-4:** Refer to hydrology mitigation measures D-2a, D-2b, D-3b, D-3c, and D-4 above.

### **3.2 Impacts of New Urban Development**

The proposed SLVAP could result in up to 1,600 acres of additional urban development in the Plan Area.

**IMPACT E-5:** Urban development resulting from implementation of the proposed SLVAP could result in the loss of riparian, wetland and/or oak woodland habitat.

Urban development as a result of SLVAP policies will be concentrated in the northern portion of the Plan Area. While lands meeting proposed Plan criteria for urban development are largely grasslands, new urban development could encroach on the lower reaches of the Arroyo Mocho, Arroyo del Valle, Arroyo Seco, and Arroyo Las Positas. In addition, local, non-riparian wetland areas may be located in areas that could be developed. Significant stands of oak woodland that could be developed are limited to the Alden Lane and Vineyard Avenue Transitional Areas.

**Mitigation Measure E-5:** Require project-specific biological surveys to be conducted for all urban development proposals in the Plan Area. The surveys, to be conducted by a qualified biologist in consultation with the CDFG and the USFWS, should identify all significant riparian and wetland areas, and should include a oak tree preservation plan, if warranted. Riparian areas and wetland areas shall be avoided to the extent possible. A minimum setback from top of bank of 100 feet should be maintained for all arroyos to maximize their use as wildlife corridors. Should encroachment on identified wetlands or riparian areas be necessary, applicable permits from the CDFG and Army Corps of Engineers will be required.

**IMPACT E-6:** Urban development resulting from implementation of the proposed SLVAP would result in the loss of up to 1,600 acres of grassland habitat.

Most areas that could be developed under proposed Plan policies are presently grassland. Urban development of these areas would result in a loss of habitat values, both directly



from grading and construction activities, and indirectly through the introduction of domestic pets.

As noted above, grasslands may contain plant species of concern, and are considered potential habitat for a number of wildlife species of concern. In addition, the Patterson Pass area may contain areas of alkaline soils, which may support additional plant species of concern, as noted in Table E-1 above.

**Mitigation Measure E-6:** Site-specific surveys required by Mitigation Measure E-5 above should also include surveys for plant and animal species of concern. Should sensitive species be found, mitigation measures, in consultation with CDFG and USFWS, could include preservation of critical areas, on or off-site habitat enhancement, or reduction or rejection of the proposed project.

While the above mitigation measure would reduce potential impacts of plant and animal species of concern, no mitigation measures are available for general habitat loss from urban development. Therefore, this is considered an unavoidable adverse impact of the proposed Plan.



## **F. TRAFFIC AND CIRCULATION**

### **1. EXISTING SETTING**

This section is based on a traffic study by TJKM for the South Livermore Valley Area Plan, dated November, 1991; and consultation with the Alameda County Congestion Management Authority. The existing road network is illustrated in Figure F-1.

#### **Regional Access**

Interstate 580 is the closest freeway to the Plan Area, running east-west north of the project area. Although the Plan Area is directly adjacent to I-580 at the Greenville Road interchange, access to the Plan Area from this freeway may also be gained via the Airway Boulevard, Livermore Avenue, 1st Street, and Vasco Road interchanges and local Livermore streets. I-580 connects Livermore with the cities of Dublin and Pleasanton in the Amador Valley, as well as other Bay Area cities to the west and the counties of San Joaquin and Stanislaus to the east. I-580 varies between three and four lanes in width in both directions near the Plan Area, with posted speed limits of 55 miles per hour (mph). I-580 currently accommodates an average daily trip volume of 97,000 and a two-way peak hour volume of approximately 7,750 vehicles through the central Livermore area (Alameda County CMA, 1992).

State Route 84 currently utilizes Vallecitos Road from I-680 in Sunol through the Plan Area, before changing to Holmes Street at the southern edge of Livermore, and finally to 1st Street before connecting to I-580. Vallecitos Road is a rural two-lane highway traversing mountainous terrain. There are numerous sharp horizontal curves along with a rolling profile. Safety concerns have arisen recently due to increasing commuter and recreational travel demand along S.R. 84. Vallecitos Road south of Vineyard Avenue carries an average daily traffic volume of 18,200 vehicles per day. This indicates that Vallecitos Road is carrying traffic virtually at capacity (Level of Service E) during the peak periods. Existing traffic volumes indicate a need for four travel lanes, with adequate shoulders to accommodate disabled vehicles. However, there are no planned widenings of this portion of S.R. 84 in the five-year "State Transportation Improvement Plan" (STIP). The California Department of Transportation (Caltrans) is currently redesigning some of the sharp horizontal curves on Vallecitos Road as part of a curve correction project which is in the STIP.

Holmes Street through Livermore is also currently designated as S.R. 84. Within the Plan Area, Holmes Street is a two-lane undivided roadway with separate left turn lanes south of Alden Lane, changing to a four-lane divided roadway north of Alden Lane. The posted speed limit is 40 mph north of Alden Lane and 45 mph south of Alden Lane. The only signalized intersections along Holmes Street currently are at El Caminito/Vancouver Way, Concannon Boulevard and Murrieta Boulevard in Livermore. The baseline average daily traffic volume on Holmes Street south of Alden Lane is 23,000 vpd.

Stanley Boulevard is a principal four-lane east-west arterial that traverses the quarry area between Pleasanton and Livermore. Although Stanley Boulevard does not directly enter the Plan area, it provides indirect access to downtown Pleasanton and Livermore via Isabel Avenue. The baseline average daily traffic volume on Stanley Boulevard west of Isabel Avenue is 22,000 vpd.

#### Local Access

The following local roads provide access to the Plan Area from Pleasanton, Livermore, and the surrounding area.

Vineyard Avenue runs from downtown Pleasanton to Vallecitos Road near Holmes Street in the Plan Area. In southeast Pleasanton, between Bernal Avenue and the Pleasanton city limit, Vineyard Avenue is a five-lane alignment, with a traffic volume of 1,300 vpd. Just east of Pleasanton the road changes to a rural two-lane undivided road. Two reverse curves near the current Pleasanton city limit have advisory posted speed limits of 15 mph. Planned improvements for Vineyard Avenue include straightening these curves. The improvement is not funded, however. The likely source of funding is from exactions as adjacent properties develop. Traffic volume on Vineyard Avenue decreases to 700 vpd just west of the intersection with Vallecitos Road.

Isabel Avenue is currently a rural two-lane undivided north-south roadway that connects Stanley Boulevard with Vineyard Avenue, with a posted speed limit of 45 miles per hour. Current ADT volume on Isabel Avenue just south of Stanley Boulevard is 1,200 vpd.

Arroyo Road connects downtown Livermore with the central portion of the Plan Area. North of Concannon Boulevard, the roadway includes one through lane in each direction plus a center two-way left-turn lane. South of Concannon, the road narrows to two lanes, with a posted speed limit of 35 mph. Arroyo Road dead-ends

just below the Del Valle Reservoir dam.

Concannon Boulevard currently extends from Arroyo Road on the east to Murdell Lane on the west. It is a four-lane divided residential collector street west of Epton Street. East of Epton Street, Concannon Boulevard narrows to a two-lane undivided roadway. The posted speed limit is 35 miles per hour. The roadway is flat and straight. The intersection with Holmes Street is signalized and the intersection with Epton Street is three-way stop-controlled. There are plans to extend Concannon Boulevard west to Isabel Avenue and east to South Livermore Avenue in the future. The baseline ADT on Concannon Boulevard west of Holmes Street is 6,000 vpd.

South Livermore Avenue connects downtown Livermore with Tesla Road in the Plan Area. Within the city, the road has separate turn lanes at intersections and posted speed limits of 25-35 mph, but narrow to a rural two-lane undivided roadway south of Wente Street, with a posted speed limit of 45 mph. The only signalized intersection is at East Avenue near downtown Livermore.

East Avenue is a principal four-lane undivided east-west arterial serving the east side of Livermore from South Livermore Avenue to Greenville Road, between the Lawrence Livermore National Laboratory and Sandia National Laboratory. The posted speed limit is 25-35 mph.

South Vasco Road is a two-lane and four-lane divided roadway that connects I-580 with Tesla Road in the Plan Area. The posted speed limit is 45 mph. The intersection at East Avenue is signalized. South Vasco Road provides access to the west side of the Lawrence Livermore Lab, as well as nearby industrial areas.

Buena Vista Avenue is a narrow two-lane residential street that connects East Avenue in the north with Tesla Road in the Plan Area.

Patterson Pass Road is a narrow two-lane rural road that runs from San Joaquin County over the Altamont Pass area to connect with Greenville Road in the Plan Area, just east of the Lawrence Livermore National Labs, before continuing into Livermore.

Tesla Road is a narrow, two-lane rural road that runs from San Joaquin County, where it becomes Corral Hollow Road, through the Tesla rural residential area into the eastern Plan Area, connecting with S. Livermore Avenue in the central portion of the Plan Area.

Mines Road is a rural two-lane undivided roadway with paved shoulders. It provides access to Del Valle Regional Park and the mountainous southern portion of Alameda County. The posted speed limit is 45 mph.

#### **Internal Plan Area Access**

Road circulation in the Plan Area can be characterized as limited. Public roads in the Plan Area are largely limited to the northern portion of the area. Only four roads penetrate into the southern portion of the Plan Area, two of which, Greenville Road and Arroyo Road, are dead-ends. No road connections exist in the southern portion of the Plan Area. East-west travel through the Plan Area requires using segments of a number of different roads that skirt the southern boundary of Livermore, including Vineyard Avenue, Wetmore Road, Arroyo Road, Marina Avenue, Wentz Street, South Livermore Avenue, and Tesla Road, before Greenville Road is reached.

The following roads sections are completely within the Plan Area.

Greenville Road is a semi-rural four-lane divided roadway between I-580 and the Western Pacific Railroad tracks with a posted speed limit of 35 mph. Greenville Road becomes a narrow winding two-lane roadway under the railroad undercrossing. Further to the south, it remains two lanes undivided but the posted speed limit increases to 45 mph. There are currently no traffic signals. The roadway is heavily used by Lawrence Livermore National Laboratory employees, and is anticipated to be used by employees working at several business parks being constructed in Livermore on the west side of Greenville Road between the Lab and I-580.

Alden Lane is a two-lane undivided street that connects Isabel Avenue with Holmes Street. The posted speed limit is 25 mph. The average daily traffic (ADT) volume on Alden Lane is currently 1,300 vehicles per day (vpd).

Marina Avenue is a rural two-lane roadway connecting Arroyo Road and Wentz Street.

Wentz Street is a rural two-lane roadway connecting South Livermore Avenue with Marina Avenue.

Wetmore Road is a rural two-lane roadway connecting Holmes Street and Arroyo Road.

### Existing Intersection Conditions

Peak hour conditions were assessed by TJKM transportation engineers at nine intersections within or near the Plan Area in Livermore, Pleasanton and unincorporated Alameda County (Figure F-1). These intersections are:

- . Stanley Boulevard at Isabel Avenue
- . Vineyard Avenue at Isabel Avenue, and
- . Vineyard Avenue at Vallecitos Road.
- . South Vasco Road at East Avenue
- . Greenville Road at Patterson Pass Road
- . Greenville Road at East Avenue
- . Holmes Street at Concannon Boulevard
- . Vineyard Avenue at Bernal Avenue
- . Vineyard Avenue at First Street

Peak hour intersection capacity analyses were performed based on these traffic counts to determine existing levels of service. Volume-to-capacity (V/C) ratios were calculated based on the critical movement method. The specific method used is a variation of the Circular 212 method developed by TJKM.

Volume-to-capacity ratios provide an indication of the level of service (LOS). The level of service classification system is a scale which ranks street and highway operations based on the amount of traffic and the traffic conditions. Briefly, the level of service ranking system is a scale with a range of LOS A through LOS F. Level of Service A represents free flow conditions and LOS F represents jammed conditions. The method allows a straightforward comparison of existing and future conditions as well as a comparison from one intersection to another. The method is also valid for intersections that will be signalized in the future. The resulting volume-to-capacity ratios are presented in Table F-1.

As indicated by the peak hour traffic volumes, the intersection of Vallecitos Road at Vineyard Avenue is currently operating at LOS E during the PM peak hour. The intersection of South Vasco Road at East Avenue is operating at LOS D/E for the AM peak hours, although currently planned improvements are expected to improve this level of service. Most remaining intersections are currently operating at LOS C or better for both the AM and PM peak hours.





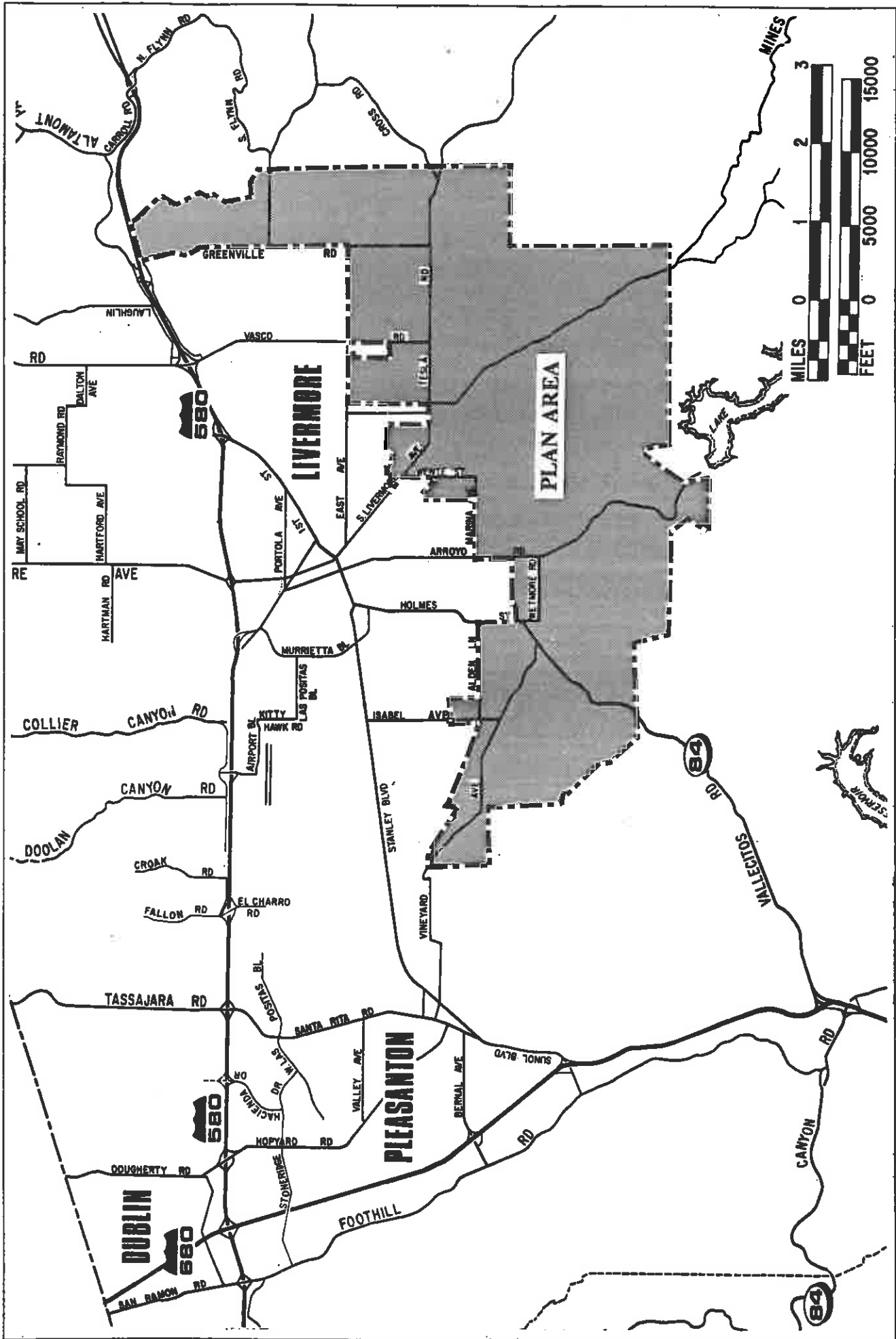


FIGURE IV F-1

**EXISTING ROAD NETWORK**



ALAMEDA COUNTY PLANNING DEPARTMENT

**SOUTH LIVERMORE  
VALLEY AREA PLAN  
ENVIRONMENTAL IMPACT REPORT**

ALAMEDA COUNTY, CALIFORNIA



**Table F-1  
EXISTING VOLUME-TO-CAPACITY RATIOS  
AND  
LEVELS OF SERVICE**

Intersection	A.M.		P.M.	
	V/C	LOS	V/C	LOS
South Vasco Road/East Avenue	0.90	D	0.78	C
Greenville Road/Patterson Pass Road	0.61	B	0.48	A
Greenville Road/East Avenue	0.34	A	0.33	A
Isabel Avenue/Vineyard Avenue	0.22	A	0.17	A
Vallecitos Road/Vineyard Avenue	0.88	D	0.93	E
Isabel Avenue/Stanley Boulevard	0.36	A	0.52	A
First Street/Vineyard Avenue	0.70	B	0.81	D
Bernal Avenue/Vineyard Avenue	0.46	A	0.53	A
Holmes Street/Concannon Boulevard	0.67	B	0.64	B

Source: TJKM.

V/C = volume-to-capacity ratio

LOS = level of service

Note: LOS E shown in grey reflects existing operational problems.

### Transit Service

Transit service in Livermore and neighboring areas is provided by the Livermore-Amador Valley Transit Authority (LAVTA). LAVTA routes serving Livermore are shown on Figure F-2. Presently, transit service is limited to the north and west periphery of the Plan area, within incorporated areas of Livermore and Pleasanton.

### Bicycle Routes

Portions of Mines Road in the Plan Area have an improved bike lane. In addition,



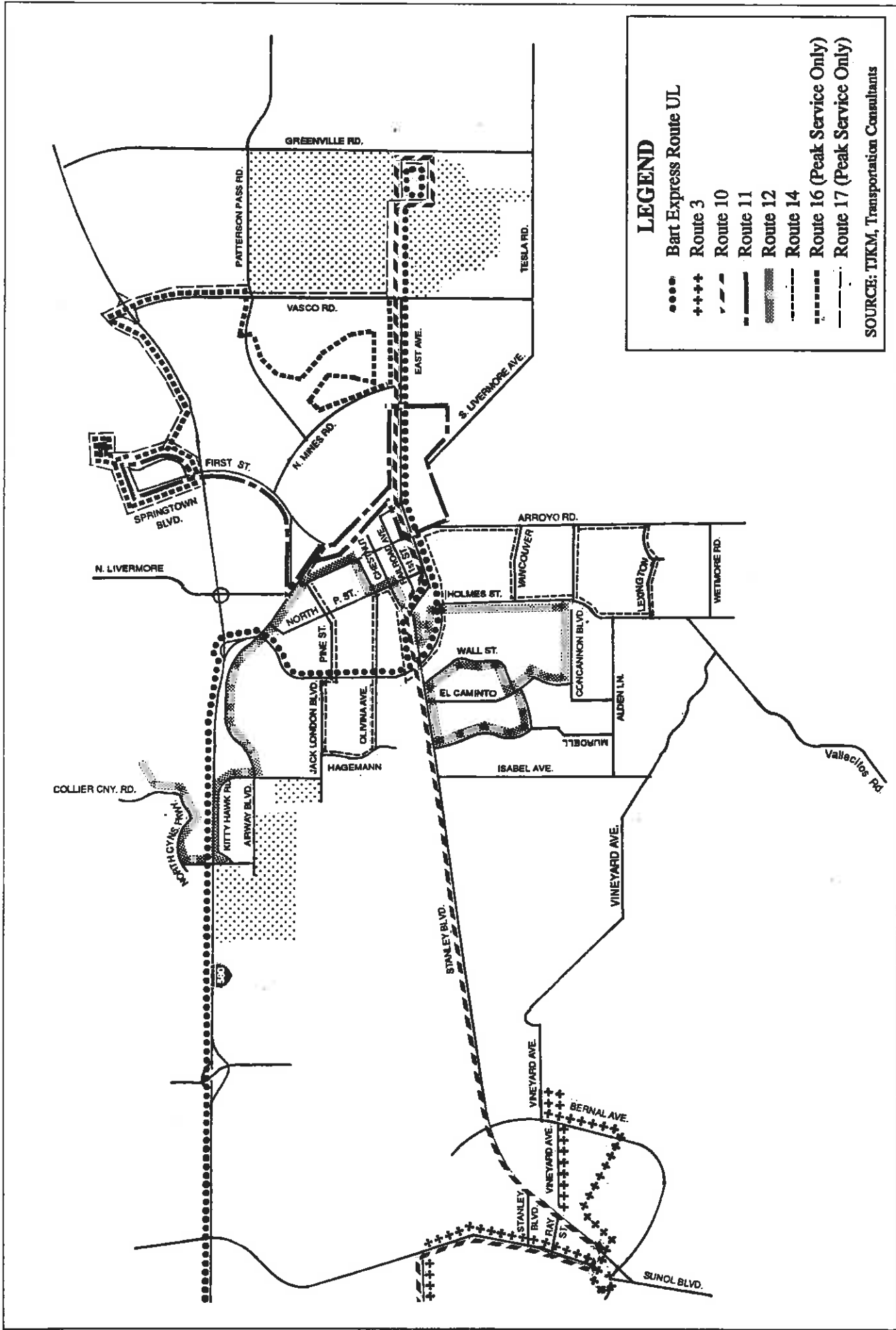


FIGURE IV F-2

**EXISTING TRANSIT ROUTES**



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ALAMEDA COUNTY, CALIFORNIA



bike paths have been constructed within Sycamore Grove Park. The Alameda County Bicycle Master Plan recognizes that provision of bicycle ways is an important contribution to long-term traffic congestion management. The March 1992 revision of the Bicycle Master Plan include nearly every road segment within the Plan Area as future bicycle routes, which should be improved so that bicycles can share full access to these roadways with motor vehicles. In addition, bike trails along the Arroyo del Valle and railroad easements are advocated. Improvements could include designated bicycle lanes or adjacent bicycle paths, and traffic signals which would be sensitive to the passage of bicycles.

### **Alameda County Congestion Management Program**

As part of the gas tax increase adopted by California voters in the June 1990 election, Proposition 111 requires all urbanized counties in California, including Alameda County, to adopt a Congestion Management Program (CMP). CMPs are transportation plans that are intended to integrate land use planning and air quality goals with transportation planning in order to reduce congestion on California streets and highways. All counties that must prepare CMPs must adopt their CMPs by December 1, 1992. Alameda County's CMP is currently in preparation.

CMPs consist of several required planning elements. Through their Congestion Management Agency (CMA), counties must designate a CMA roadway system (or network) that includes all state highways and interstates, and all primary arterials that connect major regional centers. In the South Livermore Valley State Route 84 will be a CMP roadway, and Interstates 580 and 680 (west of the Plan Area) will also be part of the CMP roadway system. Along this roadway network, the CMA will establish Level of Service (LOS) standards below which the CMP will not permit actual traffic LOS to degrade. Transit levels of service (in terms of frequency, duration and coordination) will also be established.

The CMP will also require all jurisdictions in Alameda County to implement a trip reduction ordinance and travel demand management programs, and the CMA will coordinate a land use impact review program that involves development of a county-wide transportation model, maintenance of a land use database, and road monitoring systems. The database, modeling, and monitoring systems will provide local jurisdictions with analyses of a new development project's vehicle trip generation impacts and cumulative review of projects to determine if CMP LOS standards are degraded. If LOS on CMP roads deteriorates, local jurisdictions at fault must prepare deficiency plans that integrate capacity-expanding road improvements with site design and travel demand management approaches to remedying the deficient

road segment(s).

All jurisdictions must be found by the CMA to conform to the CMP in order to be eligible to receive their gas tax subventions from the State Controller. Maintenance of CMP LOS standards on the CMP roadway system is a primary measure of conformance, and to be in conformance, all jurisdictions must adopt and implement trip reduction ordinances and travel demand management programs, and participate in the land use database, modeling and monitoring efforts of the CMA.

State law does not require CMPs to conform to local general plans (or area plans), nor are local plans required to be consistent with CMPs.

### **Future Right-of-Way Widths**

The Alameda County Public Works Agency has determined future right-of-way widths for most of the major roadways in the Plan Area. These widths provide guidance for establishing building setbacks and subdivision design for adjacent properties so that adequate space will be maintained to accommodate projected road needs. Within the Plan Area, future r-o-ws include Greenville Road (140 feet), South Vasco Road (126 feet) and Vallecitos Road (200 feet, to accommodate up to six lanes), Tesla Road (from 120 feet to 140 feet), and South Livermore Avenue (140 feet). Minor roads usually have a future r-o-w of 128 feet.

## **2. CRITERIA OF SIGNIFICANCE**

For the purposes of this EIR, traffic impacts from potential development resulting from the implementation of the proposed Area Plan will be considered significant when:

- 1) Plan Area traffic would result in an intersection V/C ratio exceeding the City of Livermore standard of 0.85 for a minimum period of two hours for intersections within or adjacent to Livermore; or exceeding the City of Pleasanton standard of LOS E for intersections within Pleasanton; or
- 2) Plan Area traffic would degrade the level of service below Alameda County CMP LOS standards for designated CMP road segments within, or in the vicinity of, the Plan Area; or
- 3) Plan Area traffic would result in the need to signalize currently



signalized intersections within or adjacent to the Plan Area, based on Caltrans signal warrants.

### 3. IMPACTS AND MITIGATION MEASURES

In order to ascertain traffic impacts that could result from the implementation of the proposed Area Plan, future baseline conditions with no additional approved development in the Plan Area were first assessed by modeling traffic flow in the Plan Area vicinity in the year 2010, using regional and local land use data together with assumptions on roadway improvements. A baseline year of 2010 was used because local and regional traffic forecasts are available and it represents a reasonable timeframe for the implementation of the proposed Plan.

TJKM has created a traffic model for the Tri-Valley region that divides the region, including the South Livermore Valley, into Traffic Analysis Zones (TAZs). A two-level TAZ structure is used, with larger zones that include the entire Bay Area and fine grain zones within the Tri-Valley. The TAZs in the Livermore area do not directly correspond with the Plan Area boundaries, requiring the use of TAZs that include lands outside of the Plan Area. TJKM's Tri-Valley area zones are illustrated in Figure F-3, and Figure F-4 illustrates TAZs in the Plan Area vicinity.

#### **2010 Baseline Conditions**

**Land Use Assumptions:** The traffic model assumes buildout of current Tri-Valley city and county general plans, and includes the approved Ruby Hill and Crane Ridge developments within the Plan Area. Additional development was assumed in East Dublin and North Livermore, based on the respective city staff's most likely land use scenarios for these areas for the year 2010. Regional traffic assumptions are based on the Association of Bay Area Government's Projections '90 for the year 2010. It should be noted that these land use assumptions include buildout of all currently designated industrial lands in Livermore, including significant areas just west of Greenville Road, although recent studies suggest that housing shortages in the Tri-Valley may curtail industrial growth (E.P.S., 1990).

**Roadway Improvement Assumptions:** Many roadway improvements are currently proposed in the Plan Area vicinity. Although funding has not been identified in all cases, for the purposes of this analysis the following improvements (illustrated in Figure F-5) were assumed to be completed by 2010:





SOURCE: TJKM, Transportation Consultants

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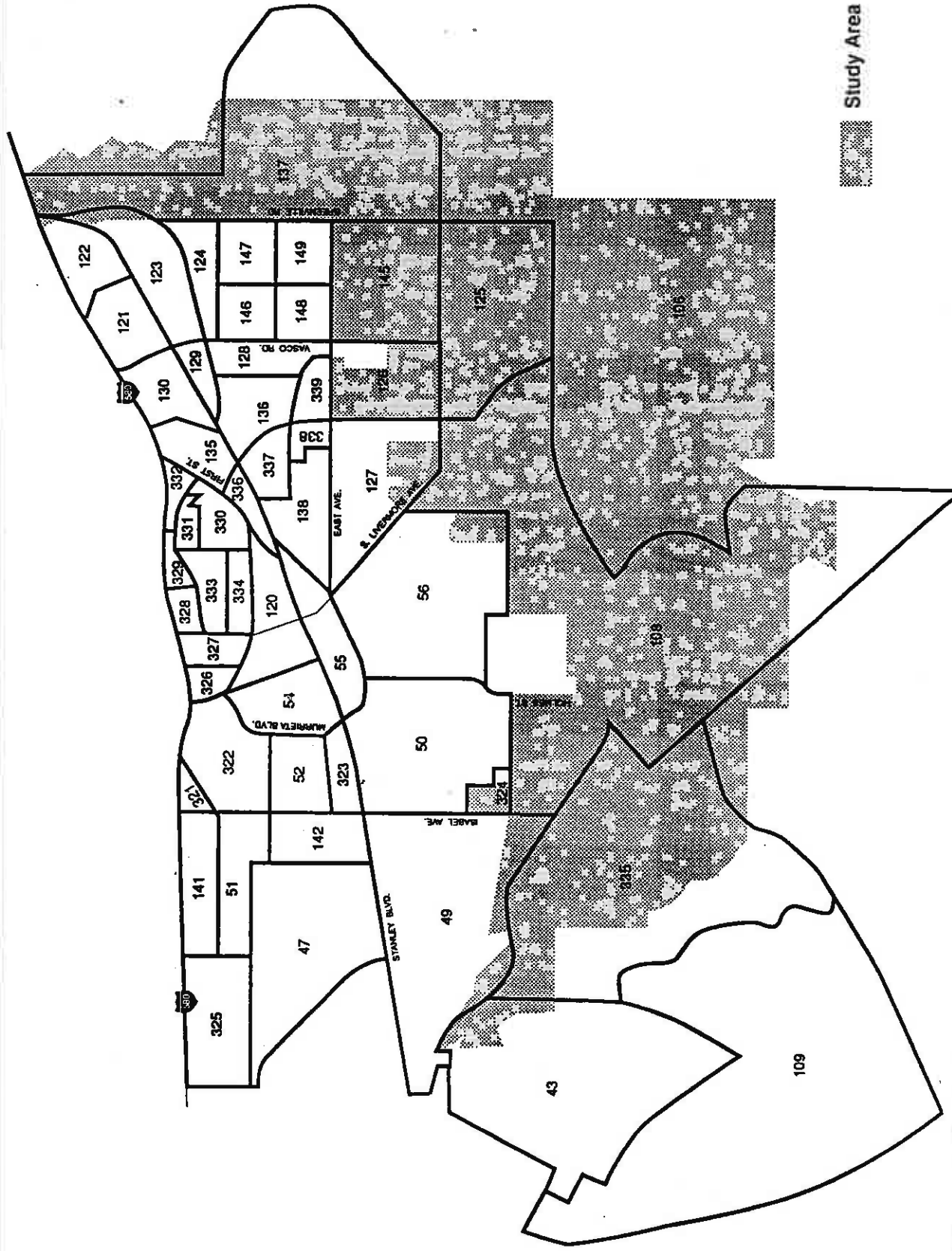
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FIGURE IV F-3

**TRI-VALLEY  
TRAFFIC ANALYSIS ZONES**





Study Area

SOURCE: TJKM, Transportation Consultants

**SOUTH LIVERMORE  
VALLEY AREA PLAN  
ENVIRONMENTAL IMPACT REPORT**



ALAMEDA COUNTY, CALIFORNIA

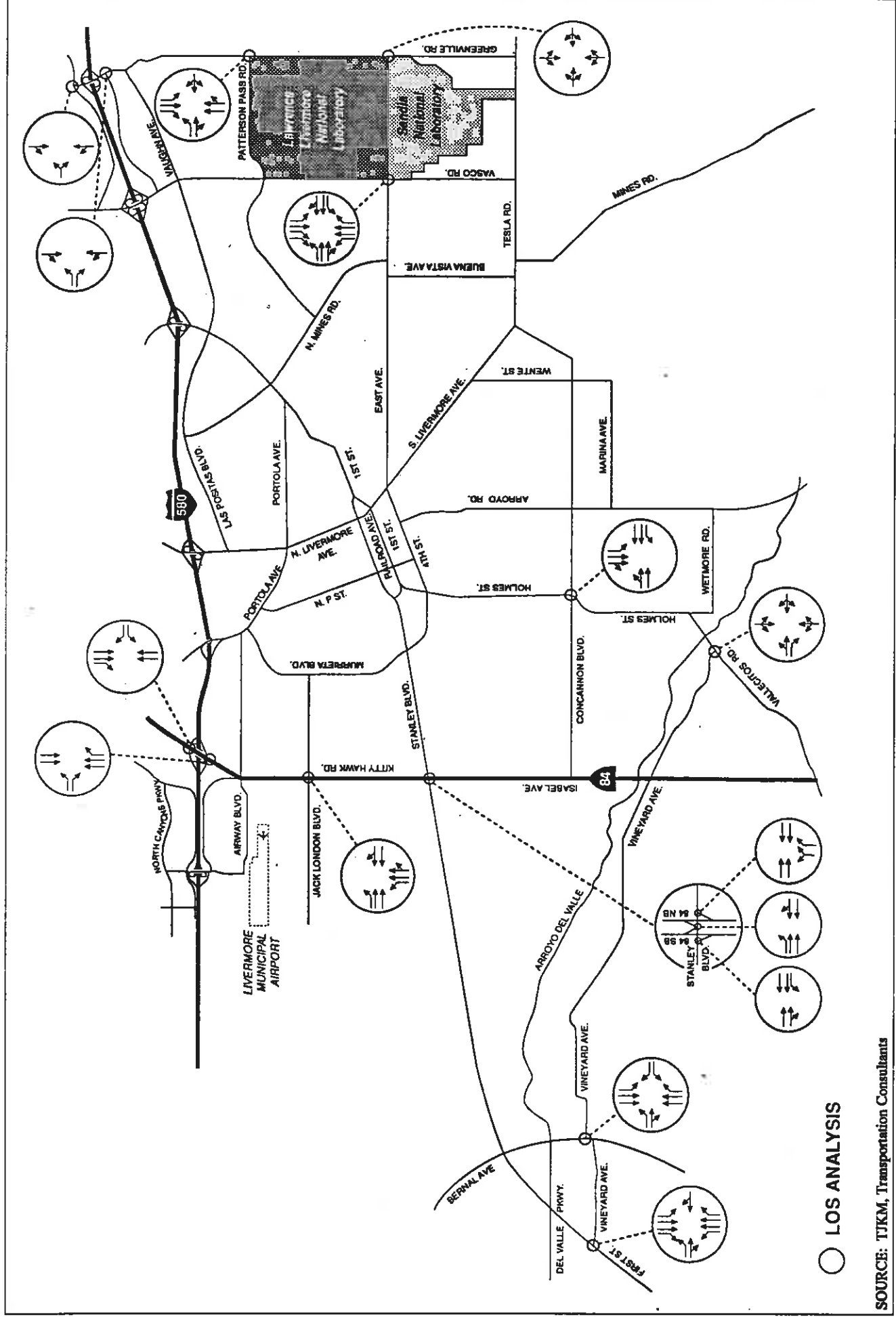


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FIGURE IV F-4

**SOUTH LIVERMORE  
TRAFFIC ANALYSIS ZONES**





SOURCE: TJKM, Transportation Consultants

**SOUTH LIVERMORE VALLEY AREA PLAN ENVIRONMENTAL IMPACT REPORT**

ALAMEDA COUNTY, CALIFORNIA



ALAMEDA COUNTY PLANNING DEPARTMENT

**FIGURE IV F-5**  
**YEAR 2010 BASELINE**  
**ROADWAY IMPROVEMENTS**





1. Construction of State Route 84 as a six-lane expressway along the Isabel Avenue alignment from Sunol to I-580. This would include interchanges at Stanley Boulevard and at I-580 between Airway Boulevard and Portola Avenue.
2. Improvements to the I-580/Greenville Road interchange.
3. Extension of Jack London Boulevard from El Charro Road to the future State Route 84.
4. Extension of Stoneridge Drive from Santa Rita Road to El Charro Road.
5. Extension of Concannon Boulevard from Isabel Avenue (S.R.84) to South Livermore Avenue.
6. Widening of Bernal Avenue to four lanes at Vineyard Avenue.
7. Widening of First Street to four lanes at Vineyard Avenue.
8. Construction of proposed interim improvements to the I-680/I-580 interchange.
9. Construction of a new interchange at I-680 and West Las Positas Boulevard.

The California Department of Transportation (Caltrans) is considering tentative plans for the construction of a limited access toll road, the Mid-State Toll Road, along or near the alignment the future S.R. 84, from Sunol to I-580 in Livermore, extending northward to Contra Costa County and Solano County. The toll road would be constructed and operated by private enterprise. Such a road would have significant effects on future circulation patterns in the Livermore-Amador Valley. However, the concept is still under study by the Metropolitan Transportation Commission (MTC), which has not yet included the toll road in any regional transportation planning. In addition, the roadway proposal has generated intense local controversy. Therefore, this EIR does not consider the toll road as a future roadway improvement. Any future actions regarding the toll road will require extensive environmental review by Caltrans.

**Trip Generation and Distribution:** Trip generation rates for Tri-Valley baseline

conditions were based on accepted values found in Trip Generation (Institute of Transportation Engineers, 1987) and specific counts of traffic generation conducted by TJKM. These rates have been adjusted for local conditions, as determined during previous validation of the TJKM traffic model.

Future baseline trip distributions were estimated using factors developed by the MTC, based on detailed travel surveys of Bay Area residents. Typically, the probability of making a particular trip declines as the travel time increases. Separate factors are applied to work trips, shopping trips, school trips, and other non-commute trips. This accounts for the possibility that people may be willing to travel a long distance to go to work, but only short distances for most shopping or school trips.

The TJKM model projects that the Tri-Valley region as a whole will generate some 2,829,000 daily vehicle trips in the year 2010. The TAZs that include the Plan Area, as well as parts of Livermore and Pleasanton, (see Figure F-4) are projected to generate some 158,000 daily vehicle trips, of which 41,000 will be work trips. These TAZs will also attract 53,500 daily vehicle trips, of which 15,400 will be work trips. These figures do not include any additional approved development in the Plan Area.

Residents in the Plan Area vicinity are projected to work in a variety of locations, including Livermore, Pleasanton, Hacienda Business Park, Bishop Ranch, and new office development in East Dublin. Nearly 31,700 of all trips (work and non-work) and 3,500 of work trips are projected to remain within the study TAZs.

**Table F-2**  
**SOUTH LIVERMORE VALLEY VICINITY TRIP DISTRIBUTION**  
**(Year 2010 Baseline Condition)**

<b>Trip Purpose</b>	<b>Trip Productions</b>	<b>Trip Attractions</b>	<b>Intra-Zonal Trips</b>
Home-Based Work	41,000	15,400	3,500
Home-Based Other	96,500	23,700	21,400
Non-Home-Based	20,500	14,400	6,800
All	158,000	53,500	31,700

Source: TJKM.

**Year 2010 Baseline Intersection Conditions:** Using the Tri-Valley traffic model, TJKM assessed peak hour conditions in the year 2010 at sixteen intersections in the

vicinity of the Plan Area, using the regional land use and road improvement assumptions described above, with no additional approved development in the Plan Area. The intersections analyzed include the nine in Table F-1, as well as six currently unbuilt intersections. New intersections include S.R.84/Jack London Boulevard (north and south), S.R.84/I-580 (eastbound and westbound) and Greenville Road at Northfront Road (near I-580) and Southfront Road.

The results for the baseline year 2010 scenario, with no additional development approvals in the Plan Area, are shown in Table F-3, which indicates future V/C and LOS at each intersection during the peak a.m. and p.m. hour. Expected intersection conditions are indicated both for unmitigated and mitigated conditions. Recommended intersection configurations to mitigate 2010 baseline conditions are shown on Figure F-5. Mitigations for these intersections include the construction of assumed roadway segments listed above, and according to TJKM would include the following:

- Widen Greenville Road to a four-lane road between Patterson Pass Road and Brisa Street, and to six lanes from Brisa to I-580. Add exclusive right-turn lane, southbound direction and three eastbound left-turn lanes at Southfront Road.
- Widen Vasco Road to six lanes between Las Positas Road and I-580.
- Build State Route 84 as a six-lane expressway from Vallecitos to I-580, including double left-turn lanes southbound, and a free westbound right-turn lane, two through lanes, and shared right and left and through movement lanes northbound at Jack London Blvd. The I-580/S.R. interchange would include two exclusive right-turn lanes and three exclusive left-turn lanes for the eastbound approach ramps, and a total of four lanes for the westbound approach.

As indicated in Table F-3, without these road improvements, numerous intersections would exceed LOS D. The worst conditions would be experienced at the Greenville Road/Southfront Road intersection and at the S.R. 84/I-580 interchange. Within the Plan Area, only the Greenville Road/Patterson Pass Road intersection would exceed LOS D. Other nearby intersections, such as Holmes/Concannon, and Vasco/East Avenue, would not exceed LOS C. The Vallecitos/Vineyard Avenue intersection,

which currently exceeds City of Livermore standards, would improve markedly with the construction of S.R. 84 along the Isabel alignment.

Table F-3 also indicates the level of service at each of the study intersections that would result from mitigation measures recommended by TJKM to carry baseline year 2010 traffic. These mitigation measures, as outlined above, would improve almost all intersection levels of service to a V/C ratio of .85 or better at both a.m. and p.m. peak hours. The only exception are the I-580 eastbound and westbound ramps at the future S.R. 84 interchange, which are projected to have a V/C ratio of 0.88 and 0.86 respectively. Since this is calculated for a one hour period, these interchanges may not exceed Livermore's threshold, which is calculated for a two hour period.

**Year 2010 Baseline Signal Warrants:** Caltrans has developed warrants (or guidelines) for analyzing the need for traffic signals. These warrants include consideration of minimum traffic volumes and interruption of continuous traffic on the main street for side street traffic, as well as accident experience, pedestrian volumes, and school crossings. Based on Caltran's Signal Warrant 11 criteria for peak hour volumes, many of the intersections within and in the vicinity of the Plan Area would meet these criteria in the year 2010, without additional development approvals in the Plan Area. Intersections that will meet the warrant criteria include:

*Alameda County:*

- . Proposed State Route 84 at Vineyard Avenue
- . Vallecitos Road at Vineyard Avenue

*Livermore:*

- . Isabel Avenue (State Route 84) northbound on and off-ramps and southbound off-ramps at Stanley Boulevard
- . State Route 84 north and southbound at Jack London Boulevard
- . Greenville Road at Patterson Pass Road
- . Greenville Road at East Avenue
- . Greenville Road at Northfront Road
- . Proposed State Route 84 at I-580 Eastbound ramps
- . Proposed State Route 84 at I-580 Westbound ramps

*Pleasanton:*

- . Vineyard Avenue at Bernal Avenue

**Table F-3  
Critical Intersection Analysis  
Year 2010 Baseline Conditions**

		A.M. PEAK HOUR				P.M. PEAK HOUR			
		UNMITIGATED		MITIGATED		UNMITIGATED		MITIGATED	
NORTH-SOUTH STREET	EAST-WEST STREET	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS
Holmes Street	Concannon Blvd.	0.49	A	0.49	A	0.66	B	0.66	B
Vallejos Road	Vineyard Ave.	0.58	A	0.58	A	0.80	C	0.80	C
Vasco Road	East Avenue	0.62	B	0.62	B	0.75	C	0.75	C
Greenville Road	East Avenue	0.86	D	0.84	D	0.88	D	0.62	B
Greenville Road	Patterson Pass Rd	0.87	D	0.54	A	0.89	D	0.57	A
Greenville Road	Southfront Road	2.45	F	0.78	C	2.30	F	0.85	D
Greenville Road	Northfront Road	1.25	F	0.75	C	1.20	F	0.73	C
S.R. 84 NB/On SB/Off Ramps	Stanley Blvd.	0.81	D	0.81	D	0.89	D	0.76	C
S.R. 84 NB Off Ramp	Stanley Blvd.	0.86	D	0.79	C	0.72	C	0.66	B
S.R. 84 SB Off Ramp	Stanley Blvd.	0.64	B	0.64	B	0.81	D	0.81	D
S.R. 84 NB	Jack London Blvd.	1.59	F	0.82	D	1.16	F	0.81	C
S.R. 84 SB	Jack London Blvd.	0.70	B	0.55	A	0.94	E	0.85	D
S.R. 84	I-580 WB Ramps	0.94	E	0.70	B	1.32	F	0.86	D
S.R. 84	I-580 EB Ramps	1.31	F	0.84	D	1.65	F	0.83	D
First Street	Vineyard Avenue	0.66	B	0.66	B	0.74	C	0.74	C
Bernal Avenue	Vineyard Avenue	0.77	C	0.77	C	0.52	A	0.52	A

Source: TJKM; V/C=Volume-to-Capacity Ratio; LOS=Level of Service



**Year 2010 Baseline Freeway Conditions:** The Alameda County CMA has projected traffic volumes and levels of service for I-580, I-680, and S.R. 84 for the year 2010. The CMA projects that during the morning peak commute hour, several portions of I-580 from central Livermore westward would operate at LOS E or LOS F, with the worst conditions occurring near the future I-580/S.R.84 interchange in the westbound lanes. Similar conditions could be expected for the afternoon peak hour, although the affected lanes would be eastbound.

Year 2010 conditions on I-680 are expected to be better, with most segments of the freeway experiencing no worse than LOS C or D as far south as Sunol. State Route 84 would experience LOS C or D from I-580 south to the intersection of Vallecitos Road. South of Vallecitos Road, S.R. 84 southbound is expected to operate at LOS E during morning commute hours.

The following traffic and circulation impacts could result from the adoption and implementation of the proposed South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce identified impacts to less than significant levels.

### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT F-1: Rural residential and commercial development could contribute to traffic congestion on local and regional roads and intersections.**

The maximum potential development of rural residences in the Plan Area would result in approximately 2,900 additional vehicle trips per day to area roads. New wineries and bed-and-breakfast establishments could result in up to 2,500 additional vehicle trips. This represents an approximately 3.4% increase over projected daily vehicle trips for South Livermore TAZs. The relatively low volume of traffic that could be generated by rural development as a result of the proposed SLVAP, combined with the dispersion over some 6,000 acres, will not result in identifiable significant impacts on vicinity intersections. New development will be required to pay

Alameda County's cumulative traffic impact fees, which are used to fund system-wide improvements.

**Mitigation Measure F-1:** None warranted.

**IMPACT F-2:** Rural residential development could result in traffic safety problems due to increased turning movements on congested roads.

Implementation of the proposed Plan could result in additional rural residences, wineries and/or bed-and-breakfast establishments along congested roads such as Vallecitos Road. Additional driveways onto this road could result in safety problems, due to poor line-of-sight and increased turning movements.

**Mitigation Measure F-2:** As part of the site development review for any rural residential projects along Vallecitos Road, access driveways onto Vallecitos Road should be limited as much as possible through use of other access routes or joint driveways. New access points onto Vallecitos will require approval from the Alameda County Traffic Engineer.

### **3.2 Impacts of Urban Development**

The proposed Plan could result in the annexation and development of up to 385 additional dwelling units in Pleasanton and up to 2,125 additional dwellings units and 100,000 square feet of retail development in Livermore. Vehicle trips that would be generated by maximum development of the Plan Area is summarized in Table F-4.



**Table F-4**  
**POTENTIAL URBAN DEVELOPMENT TRIP GENERATION**

<b>Trip Generation Assumptions</b>	<b>Residential</b>	<b>Retail</b>	<b>Total</b>
Size	2,510 d.u.	100,000sf	N/A
Daily Trip Rate/Unit	10.06	93.4	N/A
Gross Daily Trips	25,250	9,340	34,590
Net Daily Trips <sup>1</sup>	25,250	6,753	32,003
<b>AM Peak Hour Trips</b>			
Percent of Daily Trips	7.5	2.4	N/A
IN:OUT Ratio	27:73	70:30	N/A
Vehicle Trip Ends			
In	512	113	625
Out	1,382	49	1,431
Total	1,894	162	2,056
<b>PM Peak Hour Trips</b>			
Percent of Daily Trips	10.1	9.1	N/A
IN:OUT Ratio	63:37	49:51	N/A
Vehicle Trip Ends			
In	1,607	301	1,908
Out	943	313	1,256
Total	2,550	614	3,164

Source: TJKM, Transportation Consultants; Alameda County Planning

<sup>1</sup> Net daily trips refers to a reduction factor applied to avoid double-counting shopping and work trips within the Plan Area.

**IMPACT F-3: Urban development resulting from implementation of the proposed SLVAP could contribute to congestion at intersections within and in the vicinity of the Plan Area**

Several intersections in the Plan Area vicinity currently exceed a V/C ratio of 0.85 during peak hours. Total trip generation by urban development in the Plan Area would represent an approximately 22% increase over projected year 2010 trip

generation by TJKM South Livermore TAZs. While area intersections are projected to operate at LOS D or better in the year 2010, if identified road improvements are constructed, funding sources for these improvements have not been identified. If road improvements are not in place prior to the construction of additional urban development in the Plan Area, several intersections on Greenville Road and S.R. 84 could exceed LOS D.

**Mitigation Measure F-3:** Prior to the approval of urban development projects in the Plan Area, project-specific traffic studies should be required by the lead agency to determine the project impact on nearby intersections. Projects that will contribute to intersections that already exceed LOS D, or that will cause intersections to exceed LOS D during peak hours, should be required to mitigate the impact, either by paying for necessary road improvements or by reducing the project size.

**IMPACT F-4:** Urban development resulting from implementation of the proposed SLVAP could contribute to congestion on designated CMA road segments within and adjacent to the Plan Area.

The Alameda County CMA forecasts indicate that portions of I-580 west of Livermore will exceed LOS D in the year 2010, with the worst conditions occurring at the proposed I-580/S.R. 84 interchange. In addition, southbound S.R. 84 is projected to operate at LOS E during the morning commute. Urban development within the SLVAP will contribute traffic to these roads. Assuming 25% of SLVAP residents use I-580 westbound and 12% use S.R. 84 southbound during the morning commute, the result could be an increase of up to 475 vehicles on I-580 and 230 additional vehicles on S.R. 84. However, this represents approximately 5% of the capacity of each road. In comparison, Tri-Valley development will generate some 2.8 million vehicle trips per day.

Once the Congestion Management Plan has been adopted, local jurisdictions that fail to meet CMP standards will need to prepare deficiency plans. The following mitigation measures could encourage alternative travel modes.

**Mitigation Measure F-4a:** Urban development projects in the Plan Area should be required to incorporate bicycle and pedestrian facilities identified in the Alameda County Bicycle Master Plan and the LARPD Trail Master Plan.

**Mitigation Measure F-4b:** LAVTA should be consulted as part of individual project approval process regarding the potential to expand bus routes to serve urban development in the Plan Area. If LAVTA considers expansion to be feasible, project

circulation should be designed to provide loop routes and to incorporate adequate bus pullouts, as needed.

**IMPACT F-5: Urban development resulting from the implementation of the proposed SLVAP could require improvements to local roadways within the Plan Area.**

Local roadway conditions in the Plan Area are generally rural in nature, due to low traffic volumes, lack of curbs, gutters and sidewalks, and narrow right-of-ways. Urban development within the Plan Area could result in significantly higher traffic volumes on local roadways, requiring roadway improvements and potentially exceeding volumes considered acceptable for residential streets.

**Mitigation Measure F-5:** Project-specific traffic studies, as discussed in Mitigation Measure F-3 above, should include an assessment of future traffic volumes on Plan Area local roads and needed physical improvements. Annexations involving proposed urban development should include the entire right-of-way of adjacent County roads, so that necessary improvements can be funded and built. Improvements should consider the agricultural character of the Plan Area. New development should not be sited so that homes directly front on roads that are anticipated to exceed 4,000 vpd.



## **G. AIR QUALITY**

### **1. EXISTING SETTING**

The Plan Area has a high potential for air pollution, especially ozone pollution. The Livermore Valley is an inland valley with restricted ventilation. Air movement is generally from the west, through either the Niles Gap or Dublin Gap in the East Bay hills, flowing out of the Livermore Valley via Altamont Pass. Pollutants, including ozone precursors, are transported into the area from upwind development in the greater Bay Area, adding to pollutants generated locally. Warm summer temperatures and abundant sunshine in the Valley result in a high potential for ozone formation whenever winds are diminished. The area has a very high frequency of calm days, over 23 percent annually.

#### **Regulatory Standards**

State and federal air quality standards are divided into primary standards, designed to protect the public health, and secondary standards, intended to protect the public welfare from effects such as visibility reduction, soiling, nuisance and other forms of damage. Current state and federal ambient air quality standards are shown in Table G-1.

The federal Clean Air Act Amendments of 1977 specified that national ambient air quality standards were to be met by 1982, with provisions for extension of the deadline five years to 1987. Despite considerable improvement in air quality evident by 1987, these air quality standards were not met in the Bay Area, and the San Francisco Bay Air Basin (which includes the Livermore Valley) has been designated as a "non-attainment" area, because national ambient air quality standards are being exceeded for ozone, carbon monoxide and suspended particulates.

The Federal Clean Air Act Amendments of 1990 require that non-attainment areas develop plans and strategies that will reduce pollutants by a net 15 percent during the first six years, and three percent annually thereafter until the standards are met.

These reductions must be achieved while factoring economic growth into the measurement.

California has generally stricter air quality standards than the federal standards. The California Clean Air Act (CCAA) of 1989 requires air basins that exceed the California ambient air quality standards (state nonattainment areas) to develop plans that will result in a five percent annual reduction in emissions, averaged over a three-year period.

The *Bay Area '91 Clean Air Plan (1991 CAP)* was formally adopted by the San Francisco Bay Area Air Quality Management District (BAAQMD) in the fall of 1991. The *1991 CAP* forecasts continued improvement in regional air quality. The analysis of carbon monoxide trends indicates attainment of the carbon monoxide standards throughout the Bay Area by the mid-1990s. However, while implementation of the 1991 CAP is expected to improve ozone levels, it will not provide for attainment of the State ozone standard, even by the year 2000. As a result, the Bay Area has been designated as a Severe Nonattainment Area by the California Air Resources Board. The CCAA requires local air quality districts bearing the "severe nonattainment" designation to adopt a number of stringent measures to reduce emissions of nonattainment pollutants such as ozone precursors. In response to this designation under the CCAA, the *1991 CAP* contains numerous control measures for stationary and mobile sources, as well as Transportation Control Measures (TCMs) designed to reduce automobile emissions in the region.<sup>1</sup> Also, the *1991 CAP* will result in the adoption of more stringent controls on stationary sources of air pollution, and, for the first time, eventual permit control over indirect sources of air pollutants (facilities that attract or generate automobile trips).

The specific implications of this regional air quality planning process are not certain, but the following measures may be imposed.

- . Any new commercial/industrial sources to be located within the Plan Area will be subject to much more stringent regulation than existing sources. Wineries and related uses would be generally exempt from BAAQMD permitting

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<sup>1</sup> Bay Area Air Quality Management District, *Draft Bay Area '91 Clean Air Plan*, 1991.

requirements unless they utilize a boiler or include a restaurant area, in which cases they would require only basic permits (Scott Owen, BAAQMD, 1992).

- ⊙ Future development proposals for indirect sources (commercial, retail or residential uses) would be subject to indirect source review, with a requirement that vehicle trip generation controls or limits be implemented.
- ⊙ The 1991 CAP does not identify direct control measures for agricultural operations. No restrictions or controls are proposed for pesticide use (a source of hydrocarbons), although general restrictions regarding the volatility of organic liquids could require reformulation of pesticides in the future.

**Table G-1  
FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	Federal Primary Standard	State Standard
Ozone	1-Hour	0.12 PPM	0.09 PPM
Carbon Monoxide	8-Hour	9.0 PPM	9.0 PPM
	1-Hour	35.0 PPM	20.0 PPM
Nitrogen Dioxide	Annual	0.05 PPM	--
	1-Hour	--	0.25 PPM
Sulfur Dioxide	Annual	0.03 PPM	--
	24-Hour	0.14 PPM	0.05 PPM
	1-Hour	--	0.5 PPM
PM <sub>10</sub>	Annual	50 ug/m <sup>3</sup>	30 ug/m <sup>3</sup>
	24-Hour	150 ug/m <sup>3</sup>	50 ug/m <sup>3</sup>
Lead	30-Day Avg.	--	1.5 ug/m <sup>3</sup>
	Month Avg.	1.5 ug/m <sup>3</sup>	--

PPM = Parts per Million

ug/m<sup>3</sup> = Micrograms per Cubic Meter

### Toxic Air Contaminants

The pollutants covered under the above-described legislation are known as "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. Another group of substances known as Toxic Air Contaminants (TACs), are injurious in small quantities and are regulated despite the absence of criteria documents. The identification, regulation and monitoring of TACs is relatively recent compared to that for criteria pollutants.

The Toxic "Hot Spots" Information and Assessment Act of 1987 required the BAAQMD to develop information on TAC emissions and resulting health risks. There are four stages of implementation of the act. The first two stages, the inventorying of TAC sources and the identification of priority facilities that require risk assessment, have been completed.

The BAAQMD has identified 21 sources of TACs in the Livermore area. Of these, two have been identified as priority sites by the BAAQMD: Lawrence Livermore National Laboratory and Browning-Ferris Industries.<sup>2</sup>

### Local Air Quality

The BAAQMD operates a network of permanent air quality monitoring sites throughout the Bay Area, including a multi-pollutant monitoring site in Livermore. The Livermore monitoring site measures ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulate lead and PM<sub>10</sub>. For the last five years, levels of pollutants have met all the state and federal standards with the exception of ozone and PM<sub>10</sub>. The number of occurrences of these pollutants exceeding the ozone and PM<sub>10</sub> standards are shown in Table G-2 below.

The following is a description of the characteristics and sources of ozone and PM<sub>10</sub> pollutants.

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<sup>2</sup> Bay Area Air Quality Management District, Toxic "Hot Spots" Information Program High Priority Sources, 1990.



**Ozone:** Ozone is the most prevalent of a class of photochemical oxidants formed in the urban atmosphere. The creation of ozone is a result of a complex chemical reactions between hydrocarbons and oxides of nitrogen in the presence of sunshine. Unlike other pollutants, ozone is not released directly into the atmosphere from any sources. The major sources of oxides of nitrogen and hydrocarbons (known as ozone precursors) are combustion sources such as factories and automobiles, and evaporation of solvents and fuels. The health effects of ozone include eye irritation and damage to lung tissues. Ozone also damages some materials such as rubber, and may damage plants and crops.

**Table G-2  
AIR QUALITY IN LIVERMORE, 1985-1990**

Pollutant	Standard	Number of Days Exceeding Standard In:					
		1985	1986	1987	1988	1989	1990
Ozone	State 1-Hour	8	8	10	21	9	8
Ozone	Federal 1-hour	2	0	3	4	2	1
PM10	State 24-Hour	-	-	5	7	13	10
PM10	Federal 24-Hour	-	-	0	0	0	0

Source: California Air Resources Board; Bay Area Air Quality Management District.

**Particulate Matter:** PM<sub>10</sub> (particulate matter, 10 microns in diameter or less) consists of solid and liquid particles of dust, soot, aerosols and other matter small enough to remain suspended in the air for a long period of time. A portion of the suspended particulate matter in the air is due to natural sources such as wind blown dust and pollen. Man-made sources include combustion, automobiles, field burning, factories and unpaved roads.

The effects of high concentrations on humans include aggravation of chronic disease and heart/lung disease symptoms. Non-health effects include reduced visibility and soiling of surfaces.

## Sensitive Receptors

The BAAQMD defines sensitive receptors as those facilities most likely to be used by the elderly, children, infirm, or persons with particular sensitivity to air pollutants. Examples are hospitals, schools and convalescent homes. The U. S. Veterans Administration Medical Center is the only existing sensitive receptor within the Plan Area, although several schools are located adjacent to the Plan Area in Livermore.

Grapes are a crop known to be affected by ozone, and can therefore be considered to be a sensitive receptor for ozone. Statewide, yield losses for grapes as a result of high ozone concentrations have been estimated at approximately 21 percent,<sup>3</sup> and yield losses in the Bay Area are estimated to reach 10 percent (Livingston, 1988). Ozone damage to grapes is manifested by the formation of pigmented or bleached lesions on the upper surface of the leaves. Chronic exposure to ozone damage retards plant growth and the production of fruit.

Increased ozone levels as a result of urbanization in the Livermore Valley could result in decreasing grape yields. It should be noted, however, that ozone is the result of other pollutants chemically reacting over time in the presence of sunlight. As a result, some of the ozone problem experienced by the Livermore Valley is probably caused by ozone, or its precursors, being transported into the valley from upwind locations, such as the San Francisco/San Jose areas. The proportion of the ozone present in the Livermore Valley due to local production of precursors compared to the proportion transported from upwind locations is unknown.

## 2. CRITERIA OF SIGNIFICANCE

According to the CEQA Guidelines, a project would have a significant effect if criteria air pollutant emissions would cause the exceedance of ambient air quality standards, contribute to an existing or projected air quality exceedance, or expose sensitive receptors to substantial pollutant concentrations. Additionally, the BAAQMD has developed thresholds of significance for regional emission increases. The District considers increases in emissions of criteria pollutants of 150 pounds per

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<sup>3</sup> Thompson, C.R. and Olszyk, D. M.; Crop Loss From Air Pollutants Assessment Program- Status Report, 1989.

day for ozone precursors or PM<sub>10</sub>; and 550 pounds per day for carbon monoxide to represent a significant adverse impact.<sup>4</sup>

For the purpose of this EIR, impacts that could cause the exceedance of either the Federal or the California ambient standards, or the BAAQMD thresholds of significance are considered significant adverse impacts.

### 3. IMPACTS AND MITIGATION MEASURES

The following air quality impacts could result from adoption and implementation of the proposed draft SLVAP. Unless noted otherwise, proposed mitigation measures would reduce identified impacts to less than significant levels.

#### 3.1 Impacts of New Rural Residential and Vineyard Development

The proposed SLVAP could potentially result in up to 290 new rural residences, up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 20 additional wineries and 25 bed-and-breakfast establishments in the Plan Area.

**IMPACT G-1: New rural residential and commercial development could contribute to the exceedance of air quality standards in the Livermore Valley.**

Automobile trip generation, together with residential emissions, from the maximum potential rural residential and commercial development that could occur under the proposed SLVAP would generate 50.5 pounds of hydrocarbons, 47.7 pounds of NO<sub>x</sub>, and 5.5 pounds of CO per day as shown in Table G-3 below.

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<sup>4</sup> Bay Area Air Quality Management District, *Air Quality and Urban Development Guidelines*, 1985, Revised 1991.



**Table G-3**  
**SLVAP-RELATED EMISSIONS, RURAL DEVELOPMENT**  
**(pounds per day)**

Source	HC	NO <sub>x</sub>	PM <sub>10</sub>
Automobiles	26.9	43.0	4.0
Residential	23.6	4.7	1.5
Total	50.5	47.7	5.5

Source: Donald Ballanti, CCM.  
 HC = Hydrocarbons  
 NO<sub>x</sub> = Nitrogen Oxides  
 PM<sub>10</sub> = Particulate Matter, 10 Microns

Guidelines for the evaluation of project impacts issued by the Bay Area Air Quality Management District consider emission increases of each of the ozone precursors (hydrocarbons and oxides of nitrogen) and PM<sub>10</sub> to be significant if they exceed 150 pounds per day. Based upon these criteria, maximum buildout of rural development under the proposed SLVAP would not have a significant regional impact.

**Mitigation Measure G-1:** None warranted.

**IMPACT G-2:** Additional acreage of cultivated agriculture in the Plan Area could result in higher levels of PM<sub>10</sub> due to blowing dust from exposed soils, as well as localized airborne pesticide aerosols and smoke from waste burning.

The actual amount of dust produced by agricultural activities will depend greatly on the type of crops, planting and harvesting times, and farming techniques. Land used for vineyards and orchards are likely to contribute the greatest quantities of particulate matter during land clearing and planting. Once vines and trees are established, areas of exposed soils are often limited to small areas directly adjacent to the plants. Application of pesticides is usually done only once or twice annually for specific seasonal pest problems, and is applied from the ground rather than by an aerial broadcast method. Waste burning could be somewhat more frequent. Depending on windspeed, direction, and landscaping between the two land use types (agricultural and residential), the extent of the impact could be variable. For any

burning, a permit must be issued by the BAAQMD, and may only be allowed on certain days and at certain hours.

**Mitigation Measure G-2a:** Encourage farmers to utilize farming techniques that will minimize exposure of soils, especially during dry and windy weather.

**Mitigation Measure G-2b:** Encourage all urban residential development to provide landscaping barriers between residences and areas of active agricultural activities (such as packing sheds, equipment storage areas, etc.) that could generate dust, odors or chemical mists. Where practical, the landscaping barriers should be provided within an easement on the property of the residential development. Such barriers should consist of dense trees and shrubs, to provide a windbreak and to partially capture blowing agricultural contaminants.

**Mitigation Measure G-2c:** Require that the contract of each home buyer within an urban development and whose property lies adjacent to or within 100 yards of agricultural property indicate that the residence is located near an intensive agricultural use zone, and that blowing dust, smoke, and pesticide/fertilizer aerosols may be present in the air moving from the agricultural zone to the residential area.

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in a maximum of up to 2,510 additional urban dwellings, as well as 100,000 square feet of commercial development, adjacent to Pleasanton and Livermore.

**IMPACT G-3: Urban development in the Plan Area would result in increased emissions of criteria pollutants, including ozone precursors and suspended particulates.**

Sources of air pollutants from urban residential and commercial development include space and water heating, and motor vehicles. To estimate potential emissions associated with the proposed SLVAP the URBEMIS-3 computer program, developed by the California Air Resources Board, was used. The analysis assumed maximum buildout within the Plan Area by the year 2000, to conservatively simulate higher

emission rates than a 2010 buildout, since tailpipe emissions are assumed to be on an annually decreasing trend.

Maximum buildout under the proposed SLVAP would exceed the BAAQMD thresholds of significance for ozone precursors, due primarily to automobile emissions. Emissions of PM<sub>10</sub> due to urban development would not exceed the threshold.

Normal means of mitigating auto-related impacts (carpools, vanpools, transit incentives, etc.) are primarily employer-related and are not applicable to the proposed SLVAP, which has limited commercial development potential. These types of measures are not generally effective for residential development.

**Table G-4**  
**SLVAP-RELATED EMISSIONS, URBAN DEVELOPMENT**  
(pounds per day)

Source	HC	NO <sub>x</sub>	PM <sub>10</sub>
Automobiles	232.8	372.2	34.6
Residential	204.3	40.7	13.0
Total	437.1	412.9	47.6

Source: Donald Ballanti, CCM.  
 HC = Hydrocarbons  
 NO<sub>x</sub> = Nitrogen Oxides  
 PM<sub>10</sub> = Particulate Matter, 10 Microns

**Mitigation Measure G-3a:** Encourage expanded transit opportunities and facilities within any newly urbanized areas of Livermore and Pleasanton, including placement of bus stops at transportation nodes (schools, commercial areas, parks, community centers), and design road layouts with bus pullouts. Include convenience commercial uses (neighborhood grocery and sundry stores) in new urban developments to the extent possible. Require that mitigation measures for traffic congestion described in Section F. be implemented, including those for bicycle and pedestrian access and

improvement of circulation; in the general sense, these will do most to reduce the impact of the project.

**Mitigation Measure G-3b:** Require new residential development to install insulation according to Pacific Gas and Electric energy conservation standards, promote the use of solar heating, and limit residences to one fireplace or woodstove per residence. The use of EPA-certified wood stoves and specially built fireplace inserts rather than open fireplaces should be encouraged, as these greatly reduce emissions and increases heating efficiency.

These mitigation measures would not be able to reduce Impact G-3 to a level of insignificance, therefore, this is an potential unavoidable adverse impact of the proposed Plan.

**IMPACT G-4:** Traffic generated by urban development in the Plan Area would contribute to localized concentrations of carbon monoxide at congested intersections in the vicinity.

Carbon monoxide is a localized pollutant resulting from automobile emissions. To assess the degree of change that could result from potential Plan Area development, the Caltrans CALINE-4 program was used to predict future CO levels at nearby intersections with and without Plan Area development. None of the intersections studied would exceed the California one hour standard of 20 parts per million (PPM) or the eight hour standard of 9 PPM, either with or without potential additional development within the Plan Area. Potential Plan Area development would increase CO concentrations by a maximum of 0.2 PPM at study intersections.

**Mitigation Measure G-4:** None warranted.

**IMPACT G-5:** Additional urban development within the Plan Area would likely entail large-scale construction activities that would contribute to suspended particulate levels.

Grading, building and road construction would temporarily generate dust during the construction process. Construction dust is comprised partially of large diameter



particles that settle out readily, and are easily filtered; however, up to 50 percent of the particles may be of the PM<sub>10</sub> type. Dust emissions from construction activities would vary greatly on a day to day basis, depending on the level and type of activity and the prevailing weather. The BAAQMD estimates that 1.2 tons of dust per month per acre disturbed are generated from uncontrolled construction activities. However, standard dust suppression measures, such as watering unpaved surfaces, can reduce dust emissions by as much as 75 percent, and are effective on PM<sub>10</sub>.

**Mitigation Measure G-5:** Construction activities resulting from Plan implementation should be required to follow standard dust suppression measures, including watering of unpaved surfaces, multiple times daily as required; use of chemical dust palliative on disturbed working surfaces (provided that the surfaces do not drain into surface water areas); re-vegetation of disturbed surfaces and stockpiles of soil as soon as possible after disturbance; and timely construction of improvements and landscaping.



## H. NOISE

### 1. EXISTING SETTING

The Plan Area, given its generally rural and agricultural character, is relatively quiet. Motor vehicle traffic is the major source of noise. Distant aircraft are occasionally audible, but are not significant contributors to the overall noise environment. Quarry operations, and to some extent agricultural activities, generate noise that could impact their immediate vicinity.

#### Noise Standards

Noise, defined as unwanted sound, is measured in decibels (dB). A change of 3 dB is considered barely noticeable. In general, a change of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 10 dB represents an approximate doubling in noise volume.

Because noise levels are continuously fluctuating, noise measurements usually are averaged. A common noise measurement technique averages hourly measurements over a 24 hour period, after adding 10 dB to measurements taken between 10:00 p.m. and 7:00 a.m. The resulting Day/Night Noise Level ( $L_{dn}$ ) is weighted to take into account people's relative sensitivity to noise at night.

The State of California Department of Health Services noise and land use compatibility guidelines indicate that residential outdoor use areas should not exceed an  $L_{dn}$  of 60 dB, and interior residential noise levels should not exceed an  $L_{dn}$  of 45 dB.

#### Plan Area Noise Measurements

Noise measurement were conducted in August, 1991 to quantify existing ambient noise levels in the Plan Area. Full 24 hour measurements were made at two locations, and spot measurements were made at nine other locations. Measurement locations are shown in Figure H-1.

Noise measurements indicate that I-580 is the largest single source of noise. The 60 dB  $L_{dn}$  contour generated by I-580 is located approximately 2,000 feet from the freeway. The area within this contour would exceed state guidelines for residential



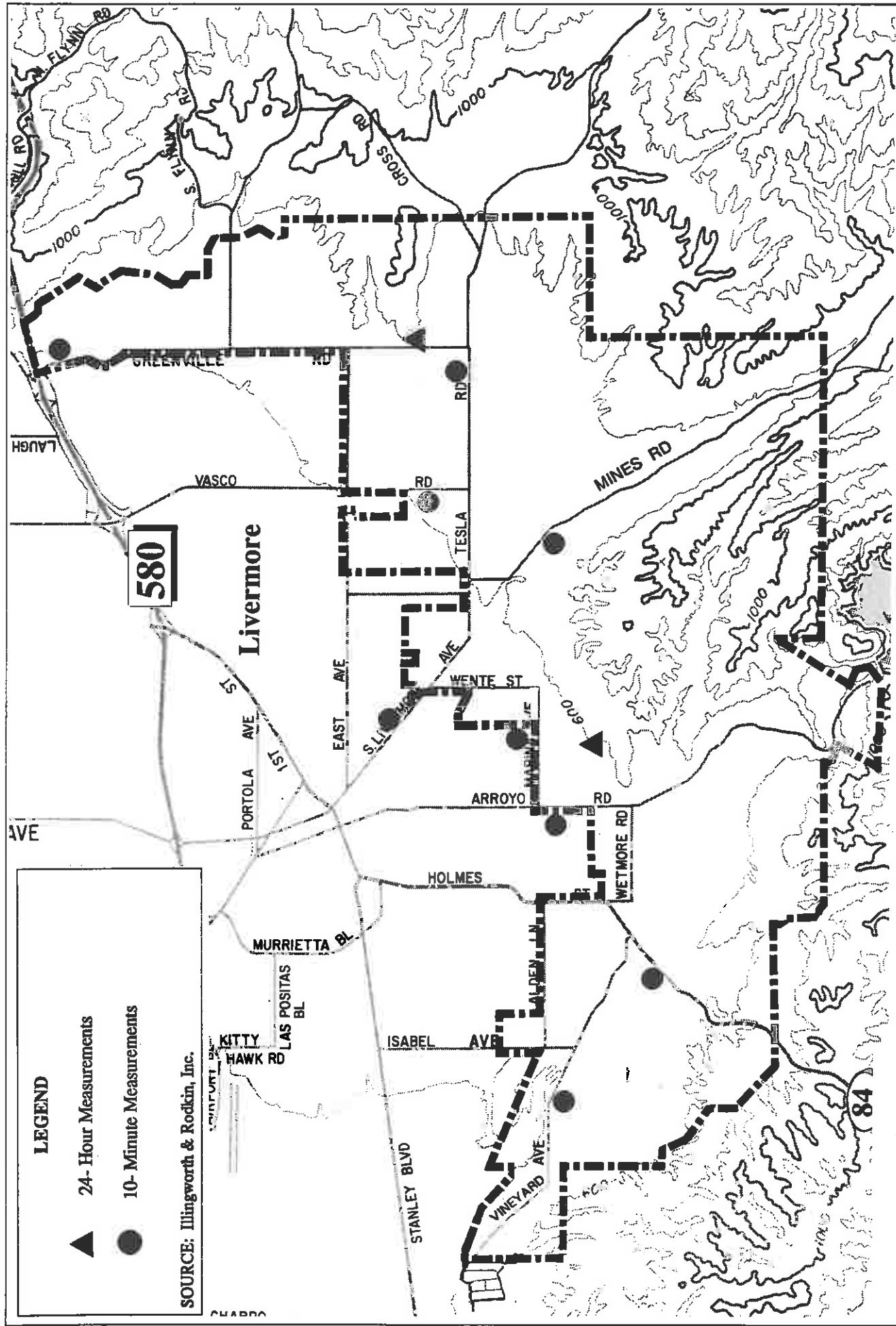


FIGURE IV H-1



ALAMEDA COUNTY PLANNING DEPARTMENT

**NOISE MEASUREMENT LOCATIONS**

**SOUTH LIVERMORE VALLEY AREA PLAN ENVIRONMENTAL IMPACT REPORT**

ALAMEDA COUNTY, CALIFORNIA



development, unless mitigation measures, such as soundwalls, are used.

Vallecitos Road has a 60 dB  $L_{dn}$  contour approximately 250 feet from the road centerline. Other roadways in the Plan Area have much smaller contours, ranging from between 50 and 75 feet from the road centerline.

### **Aggregate Mining Noise**

Recent mining activity by RMC Lonestar along the Arroyo del Valle has resulted in noise complaints from nearby residential areas in southwest Livermore. The use of earthmoving equipment can result in noise levels which can be heard over considerable distances. The actual noise levels vary considerably, depending on the amount of mining activity and the depth of the quarrying activity. A recent noise study conducted for the City of Livermore indicated that a 250 foot setback from the quarry's northern property line would reduce exterior noise levels to a range of 59-61  $L_{dn}$ .

### **Agricultural Noise**

Agricultural activity, such as early morning irrigation or night harvesting, can produce unwanted noise that can lead to complaints from adjacent residences. The potential extent of this problem in the Plan Area is unclear. According to viticulturalists in the Plan Area, there have been few complaints to date from adjacent residential areas regarding agricultural activities, even though a number of vineyards extend right up to the backyards of several suburban-density developments.

## **2. CRITERIA OF SIGNIFICANCE**

For the purposes of this EIR, noise impacts will be considered significant if the proposed Plan could result in land uses incompatible with State guidelines, or if proposed land uses would result in increased noise complaints.

## **3. IMPACTS AND MITIGATION MEASURES**

The following noise impacts could result from the adoption and implementation of the proposed South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce identified impacts to a less than significant level.

### 3.1 Impacts of Rural Residential and Vineyard Development

The proposed SLVAP could potentially result in up to 290 new rural residences with a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT H-1: New rural residences near Plan Area roads could be sited within existing or future 60 dB  $L_{dn}$  noise contours.**

Existing traffic on Vallecitos Road and Holmes Street, and future projected traffic levels on other Plan Area roads, will generate noise levels in excess of 60 dB  $L_{dn}$ .

**Mitigation Measure H-1:** Require that new rural homesites are located a minimum of 100 feet from the edge of pavement of local Plan Area roads; and a minimum of 200 feet from major roads, including Vallecitos Road, S. Livermore Avenue, Arroyo Road, and Holmes Street. If rural homesites are located within these distances, site-specific noise studies should be conducted to ensure that State guidelines will be met.

### 3.2 Impacts of Urban Development

The proposed Plan could result in the annexation and development of up to 1,600 acres, including up to 2,510 additional dwelling units.

**IMPACT H-2: Urban development sited adjacent to Plan Area roads could be within existing or future 60 dB  $L_{dn}$  noise contours.**

Existing traffic on Vallecitos Road and Holmes Street, and future projected traffic levels on other Plan Area roads, will generate noise levels in excess of 60 dB  $L_{dn}$ .

**Mitigation Measure H-2:** Require site specific noise studies for any development that proposals that would place homes within the distances discussed in Mitigation Measure H-1 above. Projects should be required to comply with noise study mitigation measures, including use of soundwalls or berms, siting of homes so that outdoor use areas are sheltered from noise sources, and interior insulation, if required.

**IMPACT H-3: Construction of urban development in the Plan Area could result in temporarily elevated noise levels that could affect nearby existing residences.**



Construction equipment, such as trucks, graders, and power tools, could create high levels of noise. Typical construction equipment noise levels are shown in Figure H-2. Existing residences adjacent to construction sites could be disturbed.

**Mitigation Measure H-3:** Restrict construction which employs equipment powered by internal combustion engines within 500 feet of existing residences to the hours of 8:00 am to 5:00 pm, Monday through Friday.

**IMPACT H-4:** Residential development located south of Alden Lane, adjacent to the existing quarry operation along the Arroyo del Valle, and residential development along Vineyard Avenue, adjacent to property under quarry permit, could be exposed to excessive noise levels.

Future quarrying activities will result in off-site noise levels above the State guidelines for residential dwellings.

**Mitigation Measure H-4a:** Require that new residential development constructed within a quarter mile of the boundaries of all properties with quarry permits include a clause in the sales contract for each home, indicating that the residence is located near an existing or future quarry, and that the homebuyer recognizes that the property may be subject to noise impacts resulting from close proximity to the quarry.

**Mitigation Measure H-4b:** Require residential development adjacent to quarry property to maintain a 250 foot buffer from the quarry property line that includes a 6 foot earth berm and appropriate landscaping. All residential lots adjacent to the setback should be sited so that homes face the quarry property, providing additional noise shielding for backyard activity areas. Home construction should be required to incorporate appropriate insulation and windows to provide an interior noise level of 45 dB  $L_{dn}$  or less.

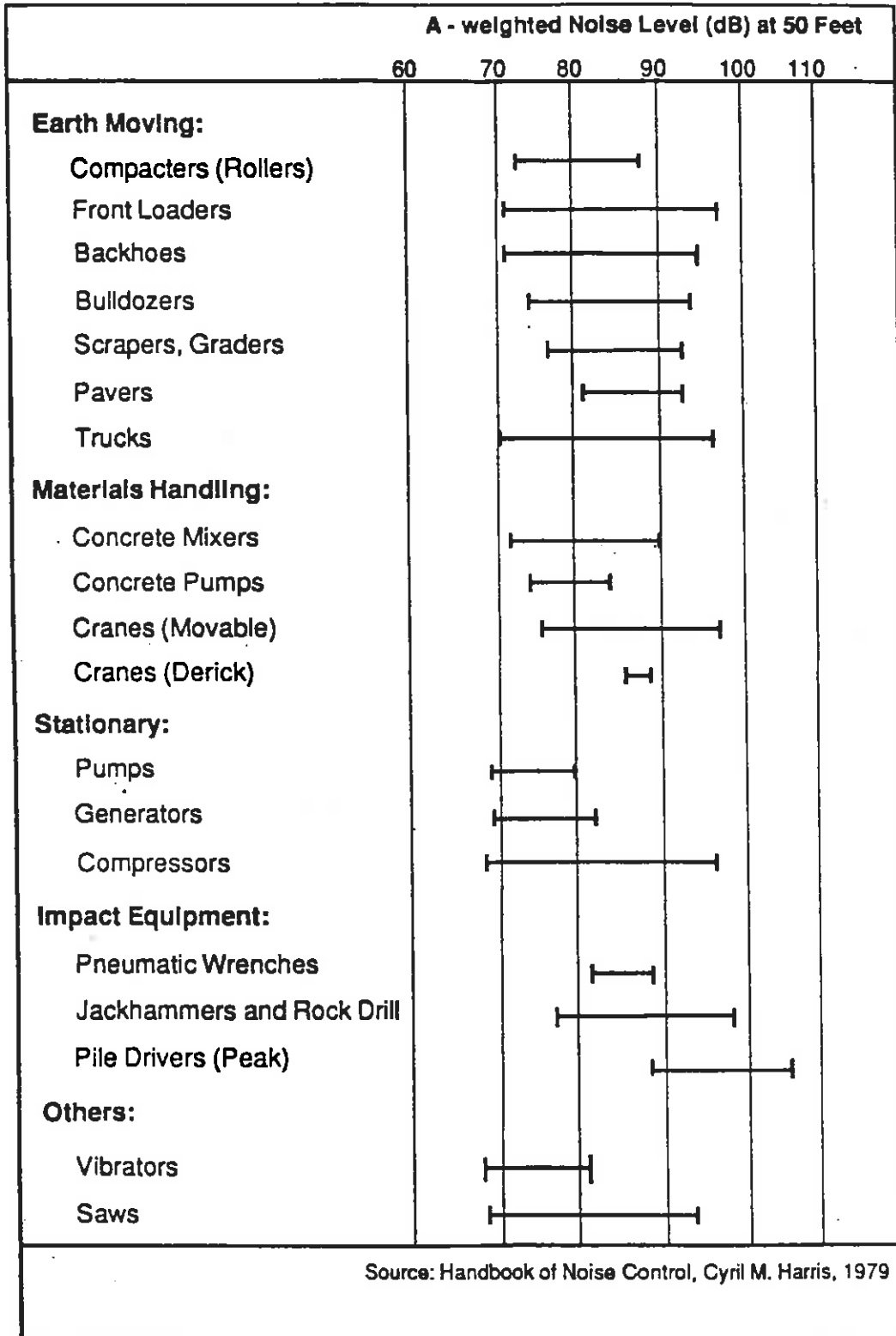
**IMPACT H-5:** Implementation of the proposed SLVAP could result in additional residential development adjacent to agricultural operations that could be subject to complaints regarding noise.

While agricultural noise will not exceed standards for residential areas, occasional single-event noise levels may induce complaints from neighboring residents.

**Mitigation Measure H-5:** Require that new residential development in the Plan Area that will be, or could be, adjacent to agricultural operations include a clause in the

sales contract of each home, indicating that the residence could be located near an agricultural operation, and that the homebuyer recognizes that the property may be subject to noise, dust, odors or other impacts resulting from the operation. The clause should also alert the potential homebuyer to the Alameda County Right to Farm ordinance.

## Construction Equipment Noise Level Range





## **I. CULTURAL AND HISTORICAL RESOURCES**

### **1. EXISTING SETTING**

#### **Prehistory and Archaeology**

Archaeological investigations have revealed evidence of two prehistoric archaeological sites (Ala-28 or the McCoy site and Ala-29) within the south-central portion of the Plan Area (McGeein and McGeein 1956, 1957). Three other sites (Ala-413, -394 and -483) that are outside but within the vicinity of the Plan Area provide information about the use of the general area by prehistoric cultures.

The two prehistoric archaeological sites (the McCoy site and Ala-29) in the Plan Area contain nine housepit depressions and chipped, groundstone, shell and bone artifacts. The McCoy Site is believed to have been occupied during the Late Horizon, which began in about A.D. 500 and was probably abandoned at or near the end of the eighteenth century (McGeein and McGeein 1956:39, 1957:32). Both sites are in undeveloped settings and the cultural deposits likely have good depositional integrity. The two sites are probably considered "important prehistoric resources" under CEQA Appendix K criteria.

The three sites outside but within the vicinity of the Plan Area contain evidence of use between 400 B.C. and A.D. 500 by the Meganos cultures and possibly earlier Windmiller cultures, which date between 2500 B.C. and 1000 B.C.. One of the sites, Ala-394, may represent 5,000 years of cultural deposition. (Busby et al. 1990, EIP Associates 1989, Hager-Holson 1988, Peak and Associates 1987, Wiberg 1988).

It is highly likely that additional, unsurveyed archaeological sites are located within the Plan Area. Areas of high archaeological sensitivity include terraces and benches along drainages, ridgelines, and saddles between ridges. Archaeological sites might also be discovered buried in alluvial plains in the vicinity of drainages, such as Arroyo del Valle, Dry Creek and Arroyo Mocho.

## **History**

Portions of the Plan Area were used during the Spanish, Mexican, American and Current Periods. These historic periods occurred between 1769 and the present. While several historical resources and sites lie within the boundaries of the former ranches, no structures or features associated with the Spanish, Mexican or early American Periods are known to exist within or immediately adjacent to the Plan Area. However, the Plan Area does contain three California Historical Landmark wineries and 21 potential historic resources, which are over 50 years old, from the Current Period. The historic use of the Plan Area is discussed below.

**Spanish Period (1769-1822).** From 1797 into the early 1800's, travelers journeyed along El Camino Viejo (the Old Road) from Mission San Jose (12 miles southwest of the Plan Area) through Mission Pass to El Valle de San Jose (the Livermore-Amador Valley, including the Plan Area). The eastern portion of El Camino Viejo transected the Plan Area.

*Crossing over the lower hills, the old trail dropped down into Sunol Valley, where it went in two directions. One branch skirted the western edge of Livermore Valley along the Arroyo de la Laguna and proceeded up the Amador and San Ramon valleys to the site of Concord, and from there on to the San Joaquin Valley. The other branch, the more traveled route, went straight across Livermore Valley through the hills into the San Joaquin Valley (Hoover et al. 1990:8).*

The fathers of Mission San Jose pastured their vast herds of cattle on the valley floor and in the hills surrounding El Valle de San Jose, which includes the Plan Area (Hagemann 1965:1; Hoover et al. 1990:7).

**Mexican Period (1822-1848).** After Mexico gained its independence from Spain in 1822, Alta California became a province of Mexico. During the Mexican period, the civilian government systematically granted large parcels of land to individuals who, to a great extent, engaged in the cattle and tallow trade. Two such land grants were issued in the Plan Area: Rancho El Valle de San Jose and Rancho Las Positas (Map 1968; Beck and Haase 1981:30).

In 1835, Governor Juan B. Alvarado granted four members of the Bernal family the 48,436-acre former mission grazing land, Rancho El Valle de San Jose (Beck and Haase 1981:30; Hoover et al. 1990:10; Hagemann 1965:1-2; Stuart 1966:64-65). Well over two-thirds of the western half of the Plan Area lies entirely within the borders of Rancho El Valle de San Jose (Map 1953, 1961). The eastern portion of the Plan Area remained unclaimed common terrain during the Mexican era.

Most members of the Bernal family remained in San Jose well after they received title to Rancho El Valle. Nevertheless, they immediately starting running stock on their land, under the watchful eyes of Indian vaqueros (Stuart 1966:66-67).

*The Bernals began operations with one thousand head of cattle as the initial herd. By 1850, the herds of "Rancho El Valle" were estimated at twenty-five thousand head of cattle and several thousand sheep and a thousand head of horses (Hagemann 1965:2).*

The other ranch in the Plan Area was the 8,880-acre Rancho Las Positas, which was granted to Robert Livermore and Jose Noriega, and later bought out by Livermore. Less than two-square miles in the northeast portion of the Plan Area are situated within the boundaries of Rancho Las Positas. Like the Bernal family, Livermore stocked his ranch with cattle, although within a few years his land was planted with pears and olive orchards as well as a vineyard.

**American Period (1848-present).** After the signing of the Treaty of Guadalupe-Hidalgo in 1848, California became part of the United States. Under the 1851 Gwin Act, a commission was established by the government to settle disputes arising over the validity of Mexican land grants due to poor recording of claims and pressure from landless American squatters. The Bernals proved their claim and Rancho El Valle de San Jose was patented to them in 1863 (Hagemann 1966:2; Map 1860, 1863).

A state-wide dry spell between 1862 and 1865 resulted in the starvation of thousands of cattle in the Livermore-Amador Valley due to the lack of water and grass. The herds of cattle in the Livermore-Amador Valley were so devastated that many ranch owners could not raise the money to pay their taxes. Compelled to sell their land at any price, by 1870 the ranch lands had dwindled considerably, with only a small

## *I. Cultural and Historical Resources* **South Livermore Valley Area Plan DEIR**

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portion of the Mexican grants remaining in the hands of their original owners (Bean 1978:166-167; Nava and Barger 1976:280; Hagemann 1965:2).

In 1869, the Central Pacific Railroad was constructed across Alameda County, giving rise to the towns of Pleasanton, Livermore and Sunol. Train transportation also allowed incoming American and European settlers in the Livermore-Amador Valley to make the transition from a cattle-raising to an agricultural-based economy, since farmers could now easily ship their wheat and barley to market (Wood 1883:468).

By 1874, the open range outside the ranches had been surveyed by the United States Geological Survey and broken into parcels. Four years later, all the sections, half-sections and quarter-sections in the Plan Area had been purchased by farmers, land speculators or wealthy families who built country estates (Thompson and West 1978:24-26, 48-49, 52-54).

During the 1880s, grape vines and fruit trees began replacing the grain fields in the Livermore area. Within the Plan Area, numerous vineyards and several wineries such as Concannon, Wente, Cresta Blanca, Olivina and Ruby Hill were developed. By 1889, after the invention of refrigerator railroad cars, hundred of acres were planted with almond, apricot and pear orchards. Dairy farming also became an important enterprise during the 1880s and 1890s (Map 1889; Baker 1914:442-443).

The number of acres of vineyards and the subsequent state of the Livermore valley wine industry was turbulent around the turn of the century and into the early 1900s. By the late 1890s, a disease called Phylloxera decimated the vineyards in the Livermore Valley area. However, this was followed by a resurgence in vineyards and the wine industry in the Plan Area during World War I. Prohibition succeeded the Plan Area's prosperous years. By 1920, two of the major wineries in the area, Cresta Blanca and Wente Brothers, ceased producing wine; however, another, Concannon, continued to produce sacramental wines.

### **California Historical Landmarks**

Although numerous late-nineteenth-century/early-twentieth-century historical resources exist within the Livermore-Amador Valley, the majority are situated in the



downtown areas of Pleasanton and Livermore. Three California Historical Landmarks (CHL), however, in the form of late-1800 wineries, remain within the Plan Area boundaries. They are described below.

The **Cresta Blanca Winery** (CHL No. 486 and California Inventory of Historic Resources designee) is located at 5050 Arroyo Road. It was founded by Charles Wetmore who, after purchasing 480 acres along the Arroyo del Valle, planted his vineyard in 1882 and built his winery in 1883. Originally called C. A. Wetmore Wine Company, the name was later changed to Cresta Blanca. The Cresta Blanca wine Wetmore produced won the first International Award for California, the highest honor at the 1889 Paris Exposition, bringing assurance to California wine growers that they could make wines comparable to the finest in the world. The winery is today known as the Wente Brothers Sparkling Wine Cellars (CHL 1990:3; CIHR 1976:78; WBW n.d.).

The **Wente Brothers Winery** (CHL No. 957) is located at 5565 Tesla Road. It was here, in 1883, that Carl Wente purchased 47 acres and planted his first vineyard. After thirty-six years in the viticulture business, Carl Wente sold his winery to two of his sons, Ernest and Herman. In 1935 the Wente brothers introduced California's first varietal wine label, Sauvignon Blanc, which won Grand Prix at the Paris International Exhibition in 1937. Presently, Wente Brothers Winery is the oldest continuously operating, family-owned winery in California (CHL 1990:5; WBW n.d.).

The **Concannon Vineyard** (California Historical Landmark No. 641 and California Inventory of Historic Resources designee) is located at 4590 Tesla Road and was established in 1883 by Irish immigrant James Concannon. Concannon initially moved to the Livermore Valley on the advice of the Archbishop in San Francisco, who suggested he plant a vineyard in the area in order to make sacramental wines for the Diocese. Finding the open space and clean environment an ideal place to raise his family, Concannon purchased land approximately one mile southeast of Livermore, planted his vines, built his house and constructed a winery. In the late 1880s, Concannon came to the attention of Mexican President Porfirio Diaz, who shared an interest in viticulture. At Diaz's invitation, Concannon brought cuttings from his vineyard, as well as from those of Wente, Wetmore and others, and between 1889

***I. Cultural and Historical Resources***  
**South Livermore Valley Area Plan DEIR**

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and 1904 launched the Mexican wine growing industry (CHL 1990:3; CIHR 1976:77; Butler 1989).

**Historic Structures**

During the preliminary field survey of the Plan Area in 1991, 21 structures were observed that appear to be over fifty years old and have reasonable architectural integrity. (Chavez, 1991) (See Table I-1 for a summary of the 21 structures.) Most of the structures consist of late-nineteenth-century/early-twentieth-century farmhouses with accompanying wooden barns and outbuildings that, in most cases, are still related to farming, winery and dairy activities. One of these structures, the 1887 Ruby Hill Winery building, was noted in a 1989 cultural survey for the Ruby Hills Development General Plan Amendment (EIP Associates 1989).

The 21 structures appear to be good candidates for local historical listing. Additional historical research would be required to determine their potential eligibility for National Register of Historic Places listing and whether they qualify as "important historical resources" as defined by CEQA Appendix K guidelines.

Other historical resources may be located in inaccessible portions of the Plan Area. For example, access to the late-nineteenth-century Olivina Winery property, whose tree-lined entrance is behind a locked gate, may reveal additional buildings.

**Table I-1**  
**HISTORICAL RESOURCES IN THE SOUTH LIVERMORE VALLEY**

No	Location	Description
1.	8433 Patterson Pass Road	Two-story, turn-of-the-century house with fair integrity
2.	Tesla Vineyard on Tesla Road, east of Greenville	Turn-of-the-century farmhouse, barns and outbuildings with very good integrity
3.	7986 Tesla Road	Circa 1920 dairy farm, house and barns with good to fair integrity
4.	7565 Tesla Road	Circa 1940 Farmhouse with very good integrity

*I. Cultural and Historical Resources*  
**South Livermore Valley Area Plan DEIR**

5.	2248 Vasco Road	Circa 1920 farmhouse, barns and outbuildings with good integrity
6.	5385 East Avenue	Turn-of-the-century farmhouse and barn with good integrity
7.	5624 Tesla Road	Turn-of-the-century farmhouse, barn and outbuildings with fair integrity
8.	Mines Road, south of Tesla Road	Two homesteads, circa 1920 farmhouse and barn, as well as a two-story, turn-of-the-century farmhouse and late-nineteenth-century stone winery building with good to fair integrity
9.	3461 Mines Road	Very small turn-of-the-century farmhouse, barn and outbuildings with fair integrity
10.	4496 Mines Road (Madsen Ranch)	Turn-of-the-century farmhouse, barn and outbuildings with good integrity
11.	6944 Mines Road (Rocky Acres Ranch)	Circa 1890 farmhouse, barn, outbuildings and windmill with fair integrity
12.	5143 Tesla Road	Turn-of-the-century farmhouse with fair integrity
13.	5167 Tesla Road	Circa 1920 farmhouse with good integrity
14.	5443 Tesla Road	Two-story, turn-of-the-century farmhouse with fair integrity
15.	3084 Livermore Avenue	Circa 1920 farmhouse and tankhouse with fair integrity
16.	1890 Livermore Avenue	Turn-of-the-century farmhouse, barn and outbuildings with good integrity
17.	1969 Livermore Avenue	Turn-of-the-century farmhouse, horse stables and barns with good integrity.
18.	2235 Wente Street	Two-story, circa 1890 farmhouse, barns, outbuildings and tankhouse with very good integrity
19.	2927 Hansen Road (Zumbach Ranch)	Circa 1920 farmhouse, barn and outbuildings with very good integrity
20.	444 Vineyard Avenue	Two-story, circa 1900 farmhouse, barn and outbuildings with fair integrity
21.	Vineyard Avenue, east of Isabel Avenue	1887 Ruby Hill Winery building with good integrity

Source: David Chavez & Associates, 1991

## **Cultural and Historical Resources Policies**

Alameda County's LAVPU General Plan encourages preservation of cultural and historical resources. Specifically, the LAVPU General Plan states as an objective:

*To encourage, and when possible, require the preservation of places, structures, and works of man with cultural, archaeological, or historical significance. Specifically, all historical resources entered on official registers, including but not limited to, State Points of Historical Interest, State Historical Landmarks, and the National Register of Historic Places, shall be preserved and maintained to the maximum practical extent. (LAVPU, 1977, page 22)*

The Pleasanton Plan includes the following policy programs:

*Require archaeological studies in areas of known archaeological significance prior to development approval.*

*Follow the recommendations contained within archaeological studies regarding rehabilitation or preservation of archaeologically significant structures and sites (Pleasanton Plan, pages VII-12, VII-13).*

The Livermore Community General Plan (LCGP) requires preservation of archaeological sites for research and educational programs. The LCGP also encourages preservation of sites and structures with historical or archaeological significance. Architectural design review for the relocation or renovation of historical buildings is required under the LCGP. If an archaeological site is discovered during construction, the LCGP requires construction work to be suspended until the site can be surveyed by a qualified professional.

## **2. CRITERIA OF SIGNIFICANCE**

In accordance with CEQA Guidelines, cultural and historical impacts would be considered significant if the implementation of the SLVAP would:

*...disruptor adversely affect a prehistoric or historic archaeological site or a property of historic or cultural significance to a community or ethnic or social group; or a paleontological site except as a part of a scientific study.<sup>1</sup>*

### **3. IMPACTS AND MITIGATION MEASURES**

The following impacts to cultural resources could result from adoption and implementation of the South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce impacts to less than significant levels.

#### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences; up to 3,260 additional acres of vineyards or other cultivated agriculture; 20 additional wineries and up to 25 bed-and-breakfast establishments in the central Plan Area.

**IMPACT I-1:** The proposed South Livermore Valley Area Plan could result in rural residential development and additional cultivation in areas where there are known or potential significant archaeological resources.

Two known prehistoric archaeological resources (Ala-28 and -29) with good site integrity are situated on land that is already cultivated in the south-central portion of the Plan Area. Archaeological sites could also exist along alluvial plains of the Arroyo Mocho area, Arroyo del Valle, Dry Creek, intermittent creeks, terraces and benches along drainages and ridgelines and saddles between ridges. Continued cultivation is not expected to disturb archaeological sites. However, construction of rural residential buildings or infrastructure near an existing or potential archaeological site could disrupt the site.

**Mitigation Measure I-1a:** Proposed structures or roads on property that contains archaeological sites should be sited in consultation with a professional archaeologist to avoid damaging the archaeological sites.

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<sup>1</sup>CEQA Guidelines, Appendix G, section (j), p. 284.

**Mitigation Measure I-1b:** Whenever there is evidence of an archaeological site within a proposed project area, an archaeological survey by qualified professionals shall be required as a part of the environmental assessment process.

**Mitigation Measure I-1c:** If any archaeological sites are found during construction, all work in the immediate vicinity shall be suspended pending site investigation by qualified professionals. If, in the opinion of a qualified professional, the site will yield new information or important verification of previous findings, the site shall not be destroyed.

**IMPACT I-2:** Rural development allowed in the proposed SLVAP could result in potential destruction of historical resources.

Some of the 21 structures with historical resources potential are located within proposed rural development portions of the Plan Area (see Table I-1).

**Mitigation Measure I-2:** Encourage preservation and reuse of historical structures.

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in up to 1,600 additional acres of urban development in the Plan Area.

**IMPACT I-3:** Construction of buildings or infrastructure associated with development could disturb undiscovered archaeological sites.

Favorable circumstances for the occurrence of prehistoric archaeological sites are present in the Ruby Hill Development Area, the Vineyard Avenue Transitional Area and the northwestern edge of the Arroyo Mocho.

**Mitigation Measure I-3:** See Mitigation Measure I-1c above.

**IMPACT I-4:** Urban development allowed under the SLVAP could disturb or destroy some of the 21 historical resources (see Table I-1) in the Plan Area.

***I. Cultural and Historical Resources***  
**South Livermore Valley Area Plan DEIR**

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**Mitigation Measure I-4a:** Require that any proposals to remove historic structures in the Plan Area be reviewed by qualified professionals.

**Mitigation Measure I-4b:** Encourage urban development projects in the Plan Area to preserve historic structures. Appropriate measures for preserving historic structures include renovation or moving it to another location.





## **J. VISUAL QUALITY**

### **1. EXISTING SETTING**

The visual character of the Plan Area is primarily agricultural or natural in appearance. Man-made structures are generally subordinate to the landscape, although agricultural activities, particularly viticulture, visually influences much of the landscape. Figure J-1 diagrammatically illustrates the visual quality of the Plan Area, while Figures J-2 - J-5 are photographs of significant views within the Plan Area.

#### **Major Visual Elements**

The Plan Area can be divided into three major visual elements. The relatively flat valley floor makes up the largest area. Usually in the viewer's foreground due to the location of the road system, the valley floor is often planted in vineyards or other crops, with scattered rural residences and rows of trees along roads, drives and the arroyos. To the north, the urban edge of Livermore is often visible across agricultural fields.

Rolling grass-covered hills rise above the valley floor to the east, south and west. Predominantly open and natural, the annual grasses on these hills changes from green in the winter and spring to yellow in the summer and fall, giving them a light color that contrasts with the darker vineyards and stands of trees. Due to their location relative to the road system, these hills are often in the viewer's middle ground view.

Rising above the grass hills to the south are steep, tree-covered ridges that define and enclose the valley, forming the predominant background. To the north, east and west, distant dark ridges define the larger Livermore-Amador Valley. While most of the ridges are actually located on the edge or outside of the Plan Area, a minor ridge system penetrates the center of the Plan Area from the south, the nose of which reaches within a mile of the Livermore city limits.

The central ridge effectively divides the Plan Area into two viewsheds from most perspectives. The western viewshed, which includes the Ruby Hill area, Sycamore Regional Park, and the Arroyo Del Valle, is largely hidden from view from the eastern viewshed, which includes Crane Ridge, Tesla Road and the Arroyo Mocho.

In addition, topography visually separates the three "transitional areas" from the

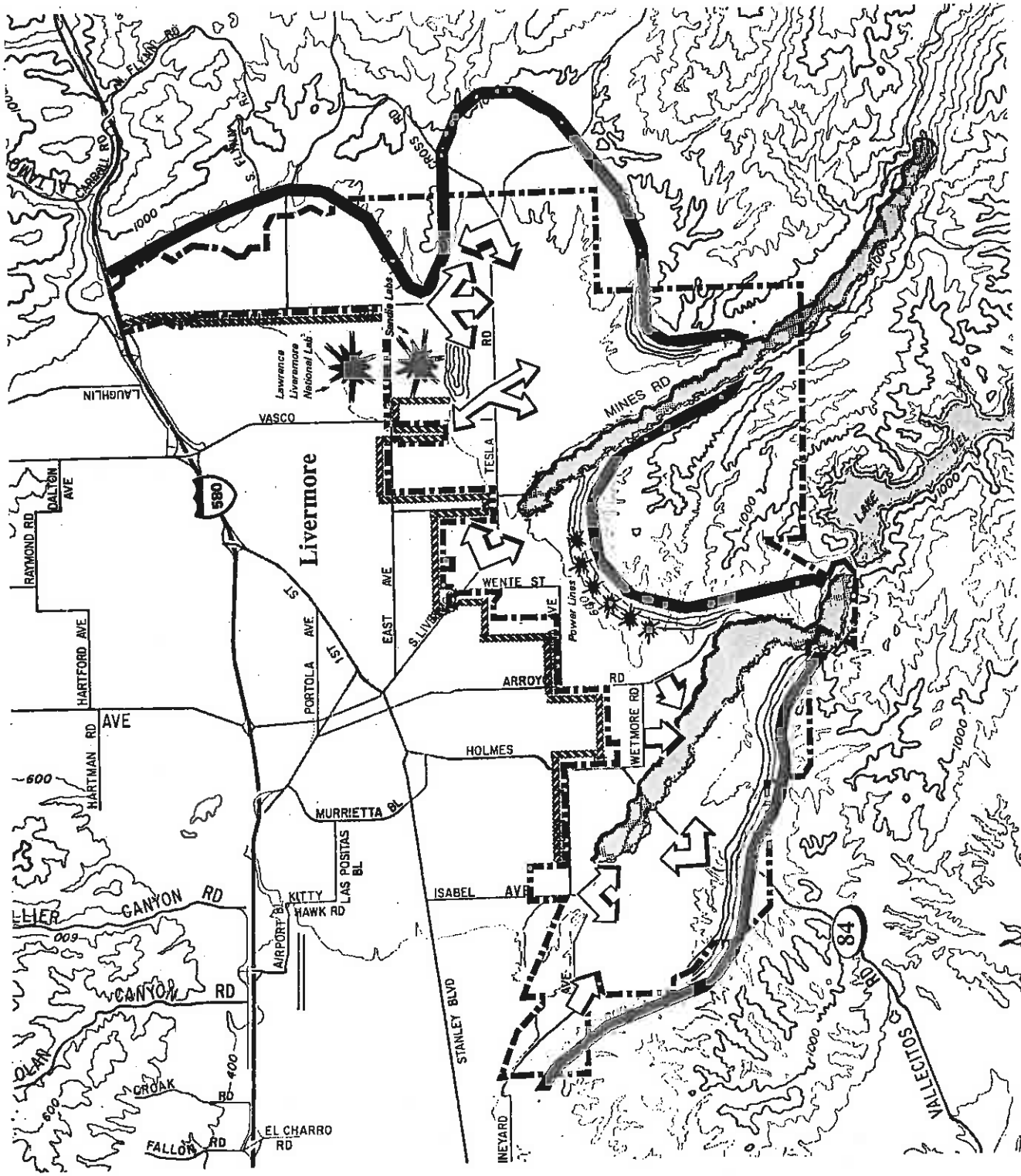


FIGURE IV J-1

# SOUTH LIVERMORE VALLEY VISUAL ELEMENTS

- ENCLOSING RIDGES
- GRASSY HILLS
- VIEWS
- TREE LINES
- NEGATIVE VISUAL FEATURE
- URBAN EDGE

SOUTH LIVERMORE VALLEY AREA PLAN  
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body of the Plan Area. Much of the area along Vineyard Avenue between Pleasanton and Ruby Hill is visually isolated by an adjacent ridge. The Patterson Pass area, extending to I-580, is visually isolated from the Plan Area to the south by an intervening hill that provides perhaps the most comprehensive vista as one drives south on Greenville Road. The Alden Lane area is visually isolated from the western portion of the Plan Area by the intervening heavily wooded arroyo.

### **Human Influences**

Several existing man-made structures and landscape features have a generally negative impact on the Plan Area. Electrical transmission towers cross the southern and eastern portion of the area, marring areas where they have been sited on top of hills, and where they congregate along Mines Road. Views along the northern portion of Greenville Road are in places dominated by the adjacent industrial areas, especially the Lawrence Livermore National Labs. In the eastern portion of the Plan Area, an recreational vehicle storage area has been located in the midst of a large vineyard area. Several homes, particularly one just south of the Plan Area along Vallecitos Road, have been sited on top of prominent ridges. In the western portion of the Plan Area, views of the scarred landscape of the aggregate quarrying area to the north are sometimes prominent.

Other man-made structures and landscapes lend much to defining the unique visual quality of the Plan Area. The long, neat, and well-tended rows of vineyards provide visual order, and the dark green contrasts with the predominant yellow/gold of the hills in summer. The vineyards, along with small areas of orchard, provide seasonal color in the fall. Rows of trees, some planted over 100 years ago, define roads and provide visual interest. A number of structures, especially the older homes and wineries that are scattered throughout the vineyards, are visually striking and help define the "sense of place" of the Plan Area.

### **Visually Sensitive Areas**

Visually sensitive areas are defined as areas where substantial changes in the landscape could alter the perceived visual character of the region. Sensitive visual areas are usually visually prominent from public viewing areas, such as roads and parks, due to their relative location, viewer position, topographic prominence, or high contrast. In comparison, areas that are distant or topographically screened from public viewing areas will be less visually sensitive. Landscape changes in these areas will usually have less impact on the perceived visual character of the area.

Using these criteria, visually sensitive areas within the Plan Area can be identified. Prominent ridgelines, especially the skyline as perceived from nearby roads, are particularly sensitive, due to their visibility from a wide area. In contrast, the heavily wooded sides of ridges would be less sensitive, due to vegetative screening. The rolling grassy hills that make up the middle ground views in the Plan Area are also visually sensitive, due to their visual prominence, lack of trees to provide screening, and high contrast. However, smaller areas located within these rolling hills may provide topographic screening from most public viewpoints.

Visually sensitive areas on the flatter valley floor are generally limited to close, foreground views from public roads and parks, and areas where the road location gives viewers a superior position above the surrounding landscape. These viewing areas are limited to the southern portion of Greenville Road, north of the intersection with Tesla Road; areas south of Tesla Road near the intersection with Vasco Road; and areas west of Arroyo Road, south of the intersection with Wetmore Road. Most other road segments are either level or inferior to their surrounding landscape.

### **Visual Policies**

Each of the three jurisdictions within or adjacent to the Plan Area have policies regarding visual quality. Alameda County's Scenic Route Element (1966) identifies most major roads in the Plan Area, including Vallecitos, Arroyo, Mines, Tesla, Vasco, Greenville, and Patterson Pass Road, as well as Vineyard Avenue, as scenic routes. The Element states that development controls, site design and architectural guidelines should be used to preserve and enhance scenic views and qualities along these routes.

The City of Livermore's 1977 Scenic Route Element also identifies these roads as scenic routes, and calls for the "preservation and enhancement of adjacent scenic areas visible from the scenic route." The Element also identifies important vistas, including distant views of Mount Diablo and Brushy Peak, vineyard views from Vineyard Avenue, views from Arroyo Road, and Livermore Valley views from the southern foothills. The City's General Plan also contains policies regarding protection of hillsides, scenic corridors, and vistas.

The City of Pleasanton's 1986 Pleasanton Plan contains several goals and policies regarding visual quality, including the need to maintain a physical separation of Pleasanton from neighboring communities, preservation of heritage trees, and the consideration of scenic guidelines for gateway entries into Pleasanton.

## 2. CRITERIA OF SIGNIFICANCE

Visual impacts would be considered significant, according to *CEQA Guidelines*, if a project has a substantial, demonstrable negative aesthetic effect. However, because there is no quantitative method for assessing visual quality and aesthetic impacts, judgements on the significance of a particular effect may be expected to differ among viewers.

For the purposes of this EIR, visual impacts will be considered significant if it could result in large-scale changes in the existing visual character of the area; substantial terrain modifications; development that is substantially inconsistent with the character, scale, or form of adjacent development; or development that blocks existing significant public views and view corridors.

## 3. IMPACTS AND MITIGATION MEASURES

The following visual quality impacts could result from adoption and implementation of the proposed South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce impacts to less than significant levels.

### 3.1 Impacts of New Rural Residential and Vineyard Development

The proposed SLVAP could potentially result in up to 290 rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT J-1: Implementation of the proposed SLVAP could result in new rural residences or other structures on visually prominent ridges, in existing vineyards, or other sensitive areas.**

Poorly sited new rural development in visually sensitive areas could result in unsightly structures that would diminish the predominantly rural and agricultural character of the Plan Area. Large existing vineyards could be cut up into 20 acre parcels, each with a new residence. Poorly sited homes near public roads could block broad views of the Plan Area.

**Proposed Plan Mitigation:** Proposed Plan policies include requirements for site

planning, site development review, and development of design standards. In addition, only areas less than 25% slope can have additional rural development.

**Mitigation Measure J-1:** Develop comprehensive design guidelines for new rural structures in the Plan Area that would emphasize the existing visual character, including use of wood or stone materials, architectural features such as porches and verandas, and careful siting so that structures are subordinate to the landscape and do not block public views from adjacent roads. The design guidelines should also include guidelines for fences to limit or prohibit use of property line fences in existing vineyard areas.

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land, and the development of up to 2,510 additional dwelling units in Pleasanton and Livermore.

**IMPACT J-2:** Implementation of the proposed SLVAP could result in urban development that would substantially change the character of the area.

While any further urban development in the Plan Area will change the landscape character in its immediate vicinity, the location of urban development in visually sensitive areas could change the overall character of the Plan Area from rural and agricultural to suburban. Due to their visual isolation from the rest of the Plan Area, urban development in the three transitional areas would not substantially contribute to a perceived landscape change. Plan policies requiring that new urban development be located adjacent to existing development in the Vineyard Area will also reduce potential visual impacts, because the existing southern edge of Livermore is generally flat. This will generally limit visual impacts of new development to close views from adjacent roads, and could substantially limit the need for extensive grading, with a corresponding reduction in visual impacts.

However, visually sensitive areas could be subject to potential development under the proposed Plan criteria. Most notably, the area south of Wetmore Road and west of Arroyo Road, which is not under Williamson Act contract or used for cultivated agriculture, could be developed, if connected to new development north of Wetmore Road. This area is subject to both close views from Wetmore Road and Sycamore Grove Park, and from viewer-superior views on Arroyo Road.

**Mitigation Measure J-2:** Require that proposed urban development projects in the



Plan Area be subject to project-specific visual studies that recognize the need to protect visually sensitive areas. Require that proposed urban development projects be sited and designed to minimize views from scenic corridors, through use of topographic and vegetative screening, and limit or prohibit development in visually sensitive areas that would substantially change the character of these areas.

**IMPACT J-3: New urban development could reduce or block views from adjacent existing residences.**

The location of development adjacent to existing residences on the urban edge of Livermore could result in blocking views into the Plan Area from existing residences, such as in the Alden Lane area and the Wetmore Road/Marina Avenue area.

**Mitigation Measure J-3:** Require project-specific visual studies of proposed urban projects in the Alden Lane area and the Wetmore Road/Marina Avenue area to determine if views from existing residences will be blocked. Use design techniques, such as height limits or house placement to reduce significant view blockage as much as possible.



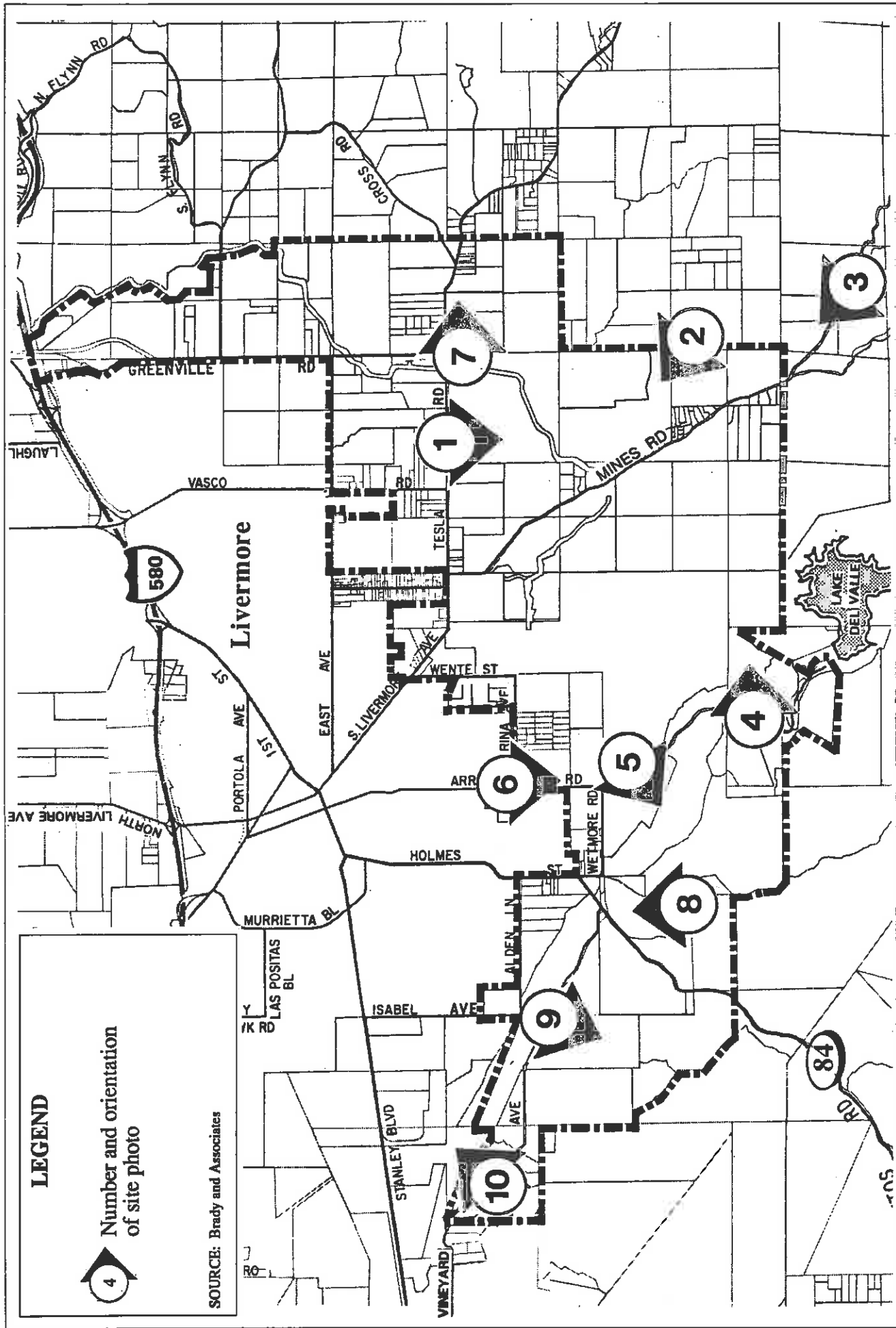


FIGURE IV J-2  
**KEY TO PLAN AREA VIEWS**



**SOUTH LIVERMORE  
 VALLEY AREA PLAN  
 ENVIRONMENTAL IMPACT REPORT**

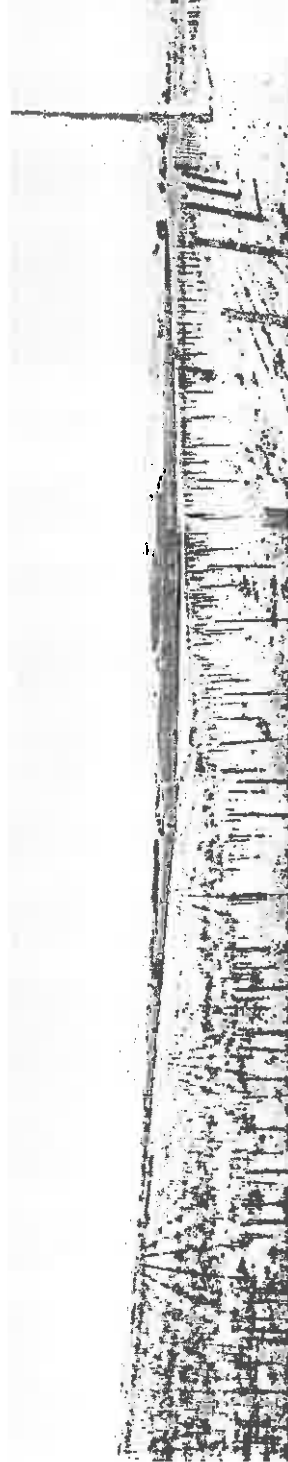


FIGURE IV J-3

PLAN AREA VIEWS



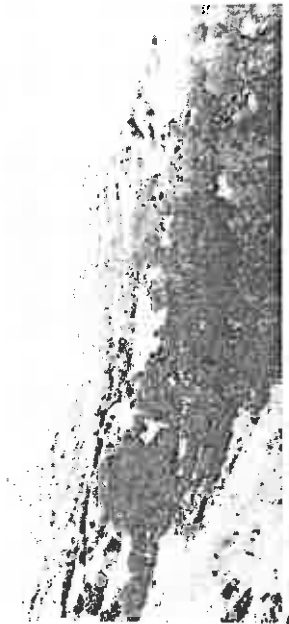
1 View South from Testa Road



2 View Northwest from South Greenville Road toward Wente Bros. Vineyards (The Crane Ridge site)



4 Crest Blanca Vineyards



3 View North of the Arroyo Mochó from Mines Road

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**SOUTH LIVERMORE  
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FIGURE IV J-4

PLAN AREA VIEWS

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ALAMEDA COUNTY PLANNING DEPARTMENT



**6** View South from Arroyo Road



**5** Olivina Property



**7** Panorama East from Greenville Road near Tesla Road



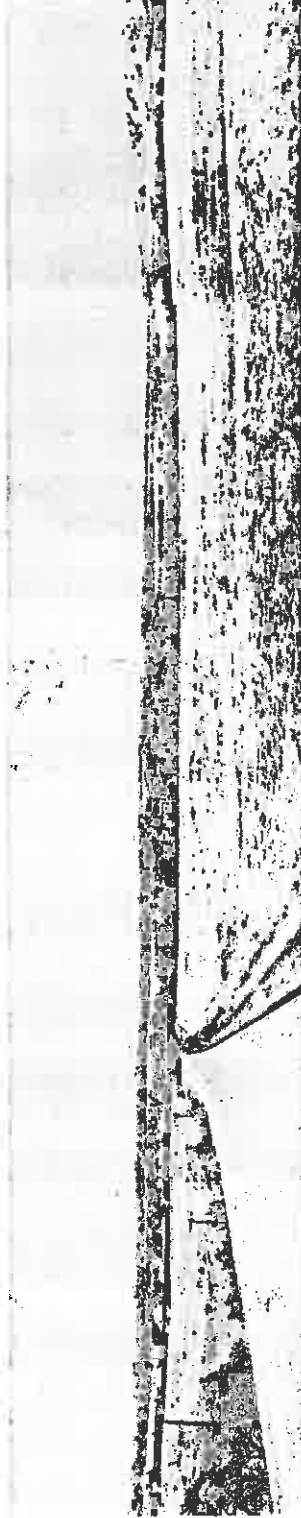


FIGURE IV J-5

PLAN AREA VIEWS

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VALLEY AREA PLAN**  
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8 View North from water treatment facility; Sycamore Park in middle ground.



9 View South from East Vineyard Avenue across Ruby Hill site



10 View Northeast in the Pleasanton Gateway from East Vineyard Avenue



## **K.1 WATER SUPPLY**

### **1. EXISTING SETTING**

#### **Water Management**

Zone 7 of the Alameda County Flood Control and Water Conservation District is the water management agency for the Livermore-Amador Valley water basin, a 425 square mile service area which includes the South Livermore Valley. Zone 7 is responsible for: bulk water purchase and treatment, distribution of treated drinking water and untreated agricultural irrigation water, surface water and groundwater basin management, and flood control.

Components of the water system for the Livermore-Amador Valley service area are shown on Figure K.1-1.

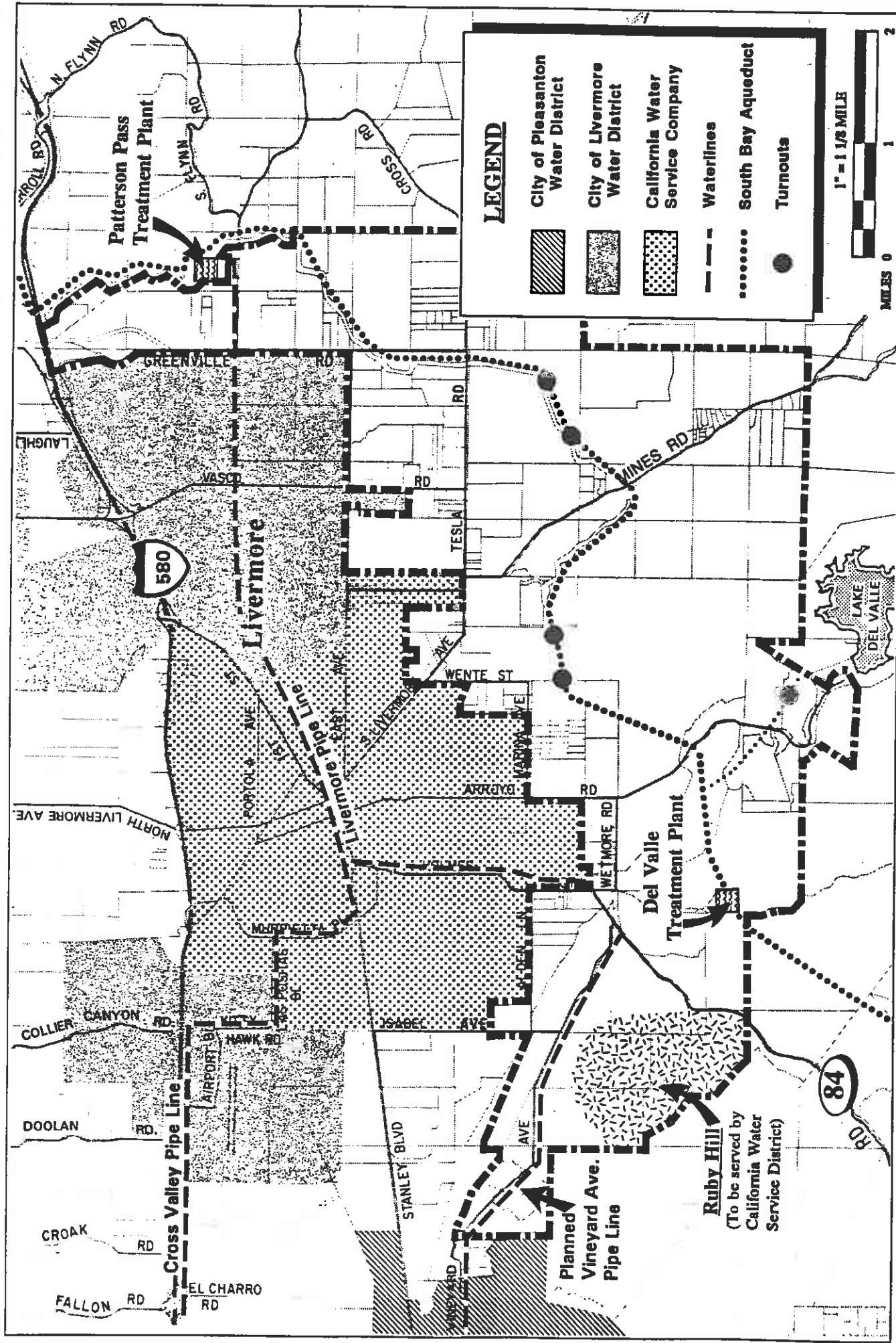
#### **Existing Water Supply**

Zone 7 water is derived from three sources: (1) imported water from the Sacramento-San Joaquin Delta via the South Bay Aqueduct, an element of the State Water Project; (2) locally conserved runoff that flows into the Del Valle Reservoir; and, (3) local groundwater.







Table K.1-1 summarizes the existing water supplies available to Zone 7. Water supply information is generally derived from Zone 7, Water Supply Update, February 1992.

**State Water Project:** Imported water from the State Water Project (SWP) currently supplies 70 percent of the water used in the Zone 7 service area. Under a long-term contract with the California Department of Water Resources (DWR), Zone 7 receives water from the Sacramento-San Joaquin Delta where SWP pumping facilities near Tracy withdraw and transport water to the Livermore-Amador Valley via the South Bay Aqueduct (SBA). The imported surface water is generally of good quality. SWP water intended for municipal use is treated by Zone 7 at either the Del Valle Water Treatment





**LEGEND**

-  City of Pleasanton Water District
-  City of Livermore Water District
-  California Water Service Company
-  Waterlines
-  South Bay Aqueduct
-  Turnouts

1" = 1 1/8 MILE



FIGURE IV K.1-1

**WATER DISTRICTS AND WATER SUPPLY SYSTEMS**



ALAMEDA COUNTY PLANNING DEPARTMENT

**SOUTH LIVERMORE VALLEY AREA PLAN ENVIRONMENTAL IMPACT REPORT**

ALAMEDA COUNTY, CALIFORNIA



Plant or the Patterson Pass Treatment Plant and then distributed to the local water retailers via underground pipelines.

TABLE K.1-1. Summary of the Livermore-Amador Valley's Existing Water Supplies  
 (in acre-feet)

Source	Local Pumpers <sup>1</sup>	Independent Quotas <sup>2</sup>	Zone 7	Service Area Totals	Water Available to Meet Existing M & I Demand
Safe Ground-Water Yield	6,000	7,200	—	13,200	7,200
Del Valle Reservoir Storage	—	—	7,000	7,000	7,000
State Water Project (SWP)	—	—	31,700	31,700	31,700
Less the Water Reserved for Small Systems and Agriculture	—	—	—	—	-5,000
Totals	6,000	7,200	38,700	51,900	40,900

1 Local pumpers consist of agricultural users and gravel mining users.

2 IQ is the amount of groundwater the Zone's four major purveyors are permitted by contract to pump from the groundwater basin.

Source: Zone 7, Water Supply Update, February 1992.

<b>TABLE K.1-2. Water Supply Capability: State Water Project/ Zone 7</b>			
<b>Supply Conditions</b>	<b>Acre-Feet</b>		
	<b>SWP Delivery</b>	<b>Zone 7</b>	
		<b>Entitlement</b>	<b>% of Maximum Entitlement</b>
<b>Maximum Annual Yield w/existing and planned SWP facilities</b>	4.2 million	up to contracted amount: 32,000 (1990) to 46,000 (1997)	N.A.
<b>Average Annual Yield w/planned SWP facilities</b>	3.66 million	40,100	87 %
<b>Average Annual Yield w/existing SWP facilities</b>	2.89 million	31,700*	69 %

\* The 31,700 acre-feet figure may be conservative for the short-term because it does not take into account that current requested SWP deliveries are only 3.4 million acre-feet per year and are not expected to reach the full delivery of 4.2 million acre-feet until 2010. In this interim period, Zone 7 could reasonably expect to receive a larger percent of their entitlement from the pool of water not currently being requested by water contractors of the SWP system.

Source: Alameda County Planning Department based on information contained in Zone 7, Water Supply Update, February 1992.

As shown in Table K.1-2 above, Zone 7's contracted amount of SWP water was 32,000 acre-feet<sup>1</sup> in 1990 and increases each year until a maximum annual entitlement of 46,000 acre-feet is reached in 1997, an amount slightly more than one percent of the total maximum annual SWP entitlements of 4.2 million acre-feet. The actual amount of water received by a contractor in any one year, however, is dependent upon the amount of water made available to the SWP system from rainfall and snowpack runoff. If cutbacks to contractors are required due to less-than-maximum yield to the SWP system, all

<sup>1</sup> One acre-foot is an acre of water one foot deep and is equivalent to approximately 326,000 gallons.



contracted amounts are reduced commensurate with the percent of shortfall. Zone 7's maximum entitlement of 46,000 acre-feet in 1997 is also predicated on the completion of planned additions to the SWP system. With existing facilities, the SWP can yield an average of only 2.89 million acre-feet per year, or 69 percent of the maximum SWP supply capability, and Zone 7 can expect to receive an average yield of only 31,700 acre-feet (69 percent of 46,000 acre-feet) from the SWP. If all the planned SWP facilities are completed and put into operation, the average annual yield which Zone 7 can expect to receive will increase to 40,100 acre-feet (see discussion below under **Potential Future Water Supplies: Additions to the SWP**). The average yield figures are based on the historic climatic conditions from 1922 to 1978. For this 57-year period, the amount of surplus water above the yield of 31,700 acre-feet equals the amount of deficit below this average yield.<sup>2</sup> For water deficit years, Zone 7 and its major purveyors "borrow" from the basin by maintaining groundwater pumping capacity to meet 75 percent of the maximum daily demand; during water surplus years, the groundwater table is recharged.

Other factors which decrease the level of supply predictability include increasing competition for water from municipal, environmental and agricultural interest groups as well as a complex variety of possible state and federal legislative, regulatory, and legal actions which could significantly affect the local and state-wide water use equation.

**Locally Conserved Runoff:** Under its water rights permit for the Arroyo del Valle and under an operating agreement with the Department of Water Resources, Zone 7 captures and stores an average of approximately 7,000 acre-feet<sup>3</sup> of local surface runoff in the Del Valle Reservoir.

**Local Groundwater:** The Livermore-Amador Valley is underlain by a central underground basin reservoir which yields groundwater from two relatively distinct water bearing formations: an unconfined upper alluvial aquifer over a sequence of deeper semi-confined aquifers called the Livermore formation (see IV. C. Hydrology and Groundwater Quality). Based on hydrologic records that have been maintained since

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<sup>2</sup> Statistically, Zone 7 would receive less than 31,700 acre-feet from the SWP 44 percent of the time and more than 31,700 acre-feet 56 percent of the time.

<sup>3</sup> The annual amount of water to which Zone 7 is entitled is based on the level of precipitation in the local watershed. This long-term average yield is based on records from 1969 to 1990.

1974, Zone 7 has determined that the long-term safe yield<sup>4</sup> for the groundwater basin is 13,200 acre-feet annually. The major water retailers are permitted to pump up to 7,200 acre-feet annually with the balance of the safe yield (6,000 acre-feet) being pumped by agricultural and gravel mining interests (see Major Water Users in the Service Area below). In addition to the allotted use of long-term safe yield, Zone 7 relies on the available groundwater for operational backup of imported water, emergency reserve, and to meet peak demand during summer months.

Historically, the groundwater basin has been overdrafted. Until the early 1960s, Livermore-Amador Valley residents relied on groundwater as their sole source of supply. One key reason for the establishment of Zone 7 in 1957 was the serious overdraft problem and resultant declining water table elevations. To redress historic overdraft and to keep within the limits of long-term safe yield, Zone 7 has been artificially recharging the basin up to a rate of 13,000 acre-feet per year using: 1) releases of State Water Project water from the South Bay Aqueduct into the arroyos during off-peak months, and 2) releases from Del Valle Reservoir of the Zone's permitted local surface runoff from the Arroyo Del Valle watershed. Under natural recharge conditions in wet years, the main groundwater basin has a maximum groundwater elevation of 310 feet with a storage capacity of about 280,000 acre-feet. However, due to the loss of groundwater from the basin at elevations higher than 280 feet<sup>5</sup>, Zone 7 maintains the groundwater elevation at 280 feet, a level that provides a managed regulatory storage capacity of 240,000 acre-feet. Maintaining groundwater levels at the 280 foot elevation also facilitates the economic extraction of gravel in the quarry area between Pleasanton and Livermore by reducing the amount of water which would have to be pumped from the active pits. Due to higher than average groundwater useage during the past few years of drought, the present groundwater level has dropped to the 250 foot elevation, representing storage of 200,000 acre-feet. Zone 7 estimates that at least half the 200,000 acre-feet could readily be pumped and recharged if additional surface supplies were secured (Zone 7, 1992).

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<sup>4</sup> Safe groundwater yield is defined as the amount of water that can annually be pumped from the groundwater basin that will be replaced by average annual natural recharge by percolation of rainfall and applied water, stream recharge, and subsurface inflow (Zone 7, Groundwater Basin Safe Yield, January 17, 1990).

<sup>5</sup> Between the 310 and 280 foot elevations, groundwater spills into the Arroyo del la Laguna and then into Alameda Creek, at which point it flows out of the basin.

**Potential Future Water Supplies**

According to Zone 7 (1992), the following options are available to the Zone for increasing its reliable water supply: 1) water conservation; 2) additions to the State Water Project; 3) use of recycled water; 4) water marketing; and, 5) increased local storage.

These options (except for water conservation) are summarized in Table K.1-3 below. The following discussion is taken from the Zone 7 February 1992 document with minor changes and additions to improve clarity:

<b>TABLE K.1-3. Summary of Possible Water Sources and Amounts Available to Meet Future Valley Municipal and Industrial Demands.</b>					
<b>Existing Supply (acre-feet)</b>	<b>Los Banos Grande</b>	<b>Water Marketing</b>	<b>Additional Storage</b>	<b>Recycled Water*</b>	<b>Totals</b>
40,900	---	---	---	---	40,900
40,900	8,400	---	---	---	49,000
40,900	---	14,300	---	---	55,200
40,900	---	---	20,000	---	60,900
40,900	---	---	---	25,000*	65,900
* For surface irrigation use.					
Source: Zone 7, Water Supply Update, February 1992					

**Water Conservation:** The Zone and its purveyors are committed to water conservation efforts that are feasible for the District. The State Department of Water Resources (DWR) estimates that the practices known as Best Management Practices (BMP) will eventually result in 10 percent to 15 percent water savings. Table K.1-4 lists 16 BMPs

developed by the California Urban Water Conservation Council<sup>6</sup>. The four water retailers in the Zone 7 service area have committed themselves to implementing these measures where feasible.

**Additions to the State Water Project:** Planned additions to the State Water Project include the Kern Water Bank, Los Banos Grandes Reservoir, and an additional four pumps. The four pumps and the Kern Water Bank are complete, although all permits to operate these facilities have not been obtained. Environmental review of the Los Banos Grande Reservoir is underway. The State Department of Water Resources hopes to begin construction in 1995.

As shown on Table K.1-2, if the State continues with the planned additional improvements to the State Water Project, then the average yield of the State Water Project would increase to 3.66 million acre-feet, or 87 percent of the total contracted amounts. With the additional improvements, Zone 7 would receive an annual average of 40,100 acre-feet (87 percent of 46,000 acre-feet) from the SWP.<sup>7</sup> This would result in an increase of 8,400 acre-feet over present supplies.

**Recycled Water:** Studies underway by Zone 7 indicate that it would be possible to recharge to the groundwater basin and to use as surface irrigation amounts up to 25,000 acre-feet per year with treated recycled water. The recycled water recharged to and used over the main basin would be demineralized by reverse osmosis. Legislation is currently being considered that would provide grants and other financial incentives to use recycled water. This would help defer the high cost of developing recycled water. The use of recycled water does not require new dams and transportation systems. It does not (in Zone 7's area) reduce downstream flows. A decision to develop a recycled water source is primarily a local decision subject to state regulation. Recycled water facilities can be

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<sup>6</sup> The Council, with the assistance of the State Department of Water Resources' Water Conservation Office is currently circulating a Memorandum of Understanding (entitled Regarding Urban Water Conservation in California, September 1991) to all water suppliers, public advocacy organizations and other interested groups. Signatories of the MOU are committed to good faith efforts to implement these BMPs. The MOU also contains assumptions that can be used for calculating estimates of reliable future water conservation savings resulting from the BMPs.

<sup>7</sup> Statistically, Zone 7 would receive less than 40,100 acre-feet 37 percent of the time and more than 40,100 acre-feet 63 percent of the time.

**TABLE K.1-4. Best Management Practices**

1. Interior and exterior water audits and incentive programs for single-family residential, multi-family residential and governmental/institutional customers.
2. Plumbing - New and Retrofit:
  - a) enforcement of requirement for ultra-low flush toilets in all new construction beginning January 1, 1992;
  - b) support of state and federal legislation prohibiting sale of toilets using more than 1.6 gallons per flush; and
  - c) plumbing retrofit.
3. Distribution system water audits, leak detection and repair.
4. Metering with commodity rates for all new connections and retrofit of existing connections.
5. Large landscape water audits and incentives.
6. Landscape water conservation requirements for new and existing commercial industrial, institutional, governmental and multi-family developments.
7. Public information.
8. School information.
9. Commercial and industrial water conservation.
10. New commercial and industrial water use review.
11. Conservation pricing.
12. Landscape water conservation for new and existing single-family homes.
13. Water waste prohibition.
14. Water conservation coordinator.
15. Financial incentives.
16. Ultra-low flush toilet replacement.

constructed in small units as needed. They usually do not affect environmentally sensitive issues such as habitat destruction, loss of wetlands or diversion from the Delta. The constraint on recycled water is the high cost of producing reverse osmosis water.

**Water Marketing:** The concept of water marketing is that water supplies can be purchased by water deficient agencies from agencies that have surplus by reasons of conservation, conjunctive groundwater use, change in crop patterns, and/or fallowing land in dry years. A number of legislative bills are under consideration to ease the process of purchasing water. In 1991, due to drought-related water shortages, Zone 7 purchased "emergency bank" water from the state for a cost of \$200 per acre-foot. ("Emergency bank" water is available for purchase when the amount of water received from the SWP system is less than 75 percent of normal demand in the service area.) Zone 7 believes that, on a small scale, water purchases will be an alternative to an additional water supply. The amounts at this time are viewed as the amount that could be delivered through the existing state system, i.e., the full 46,000 acre-feet. The increase to the Zone's present water supply could be 14,300 acre-feet annually (the difference between 46,000 acre-feet and 31,700 acre-feet, the average annual yield under existing conditions).

**Increased Local Storage:** Studies by Zone 7 and other South Bay Aqueduct contractors have identified potential off-stream storage sites that could provide up to an additional 50,000 acre-feet by maximizing the delivery capability of the South Bay Aqueduct. The water supply would come from a combination of purchasing surplus water from the State and other water delivery systems in wet years, and from the water marketing concept previously mentioned. Zone 7's share of increased local storage capacity would be approximately 20,000 acre-feet per year. In place of constructed off-stream storage it would be possible for Zone 7 to store the additional deliveries from the South Bay Aqueduct in the underground aquifers.<sup>8</sup>

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<sup>8</sup> Additional future storage not mentioned by Zone 7 in their February 1992 report could be available in 30 years time when the "Chain-of-Lakes" Specific Plan for the Livermore-Amador Valley Quarry Area is anticipated to be fully implemented. Under the Specific Plan, portions of the three existing gravel quarries will be reclaimed as a series of connected "lakes" for water conveyance, surface water storage and flood control facilities. Waters from the Arroyo Mocho and Arroyo del Valle will be diverted into the "Chain-of-Lakes". After storage and conveyance via the "Chain-of-Lakes", water would percolate into the ground through the exposed aquifer. The first of these lakes would not be available to Zone 7 until after the year 2000. The last of the lakes, necessary to give Zone 7 a complete system, is not likely to be available until after the year 2020. The potential additional increase in storage resulting from implementation of the "Chain-of-Lakes" could allow

## **Water User Demand**

**Municipal and Industrial:** The District sells treated water from SWP and local surface runoff sources to small institutional users<sup>9</sup> and to the District's four water retailing agencies: City of Pleasanton, Dublin San Ramon Services District, California Water Service Company, and City of Livermore. In addition to purchasing water from Zone 7, the four major purveyors are permitted by contract with Zone 7 to pump an independent quota of groundwater as a supplemental source. In 1990, the water retailers supplied a service area population of roughly 139,000. According to Zone 7 (February 1992), the Zone assumes an overall community consumption rate of 210 gallons per capita per day for planning purposes (or, 0.235 acre-feet per capita per year). (Historically, the Zone used 160 to 180 gallons per day per capita until large scale commercial and industrial development came to the Livermore-Amador Valley in the early 1980s.)

The California Water Service Company and the City of Livermore retail treated water to municipal and industrial consumers adjacent to the South Livermore Valley Plan Area (see Figure K.1-1). The California Water Service Company will provide water to the approved Ruby Hill development in the Plan Area using Zone 7's planned six-and-one-half mile Vineyard Pipeline once the pipeline is installed. The pipeline is expected to be completed by 1993 and will run between the wellfields in the City of Pleasanton, along Vineyard Avenue to Vallecitos Boulevard in the Plan Area.

**Rural Residential:** Residents that are not located within water retailer service areas use wells for their water supply. In its groundwater management policy document (Zone 7, 8-19-87), the Zone states that under California law landowners are entitled to withdraw groundwater for a "beneficial use" on their own property. Zone 7 could impose, but currently does not require, pumping permits; therefore, groundwater consumption is not monitored. The use of groundwater for residential use is somewhat constrained by the relatively high concentrations of total dissolved solids, particularly chloride, boron and, in some locations, nitrate salts. Generally, groundwater must be softened for domestic

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the Zone to purchase and store excess SWP water during wet years.

<sup>9</sup> Zone 7 has reserved 5,000 acre-feet for small systems/institutions and agriculture: institutional use (Veterans Administration Medical Center, Santa Rita, and Camp Parks) is currently 1,100 acre-feet; a total of 400 acre-feet is allocated to Oakland Scavenger and Springtown Golf Course; leaving 3,500 acre-feet for use by agriculture.

use. Groundwater drawn from deeper wells is usually of better quality than shallow groundwater. (Livingston, June 1988) Refer to C. Hydrology and Groundwater Quality for more information.

**Gravel Mining:** The Livermore-Amador Valley Quarry Area is located south of I-580 between the cities of Pleasanton and Livermore. Water consumptive uses by the sand and gravel operations include moisture contained in the sands and gravels that are sold, groundwater extractions which are discharged to surface streams and leave the basin, and evaporation losses. Although past groundwater use has been relatively high due to dewatering activities<sup>10</sup>, Zone 7 estimates that useage will level out at about 3,000 acre-feet now that the water table has been lowered to the 280 foot elevation. (Zone 7, Vincent Wong, personal communication, April 9, 1992)

**Irrigated Agriculture:** There are approximately 2,100 acres of irrigated vineyards and other cultivated agriculture in the South Livermore Valley. Agricultural users utilize untreated water which is either imported via the SWP system or pumped from wells. In general, crop requirements for water is heavily dependent on the water retention properties of the soils. In the Plan Area, vineyards require about 1 to 1.5 acre-feet of applied water per acre per year; olive orchards would require somewhat less than this amount, and apples and pears would require somewhat more than this amount. Drip irrigation can reduce water use in the Plan Area by about 10 percent. (Phil Wente, Wente Bros. Estate Winery, personal communication, April 24, 1992)

Using the conservative figure of 1.5 acre-feet per acre, total existing agricultural demand comes to about 3,150 acre-feet per year (1.5 acre-feet per acre per year x 2,100 acres). In 1991, agricultural water use in the entire main basin approximated 3,300 acre-feet with scheduled deliveries from the South Bay Aqueduct totaling about 2,400 acre-feet (Zone 7, December 1991) while agriculture pumping was estimated by Zone 7 at about 900 acre-feet (Zone 7, Water Resources Monitoring Groundwater Supply and Utilization, December 1991). Some agricultural pumpage, however, occurred outside the Plan Area for irrigated pastureland in the North Livermore area.

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<sup>10</sup> About 4,800 acre-feet of groundwater were used by the three gravel mining operators during the 1989 water year while average mining use between the years 1974 and 1989 was 6,100 acre-feet. (Zone 7, Memorandum, Hydrologic Inventory: 1989 Water Year, Dennis Maslonkowski, Water Resources Engineer, January 3, 1990)



**Groundwater.** Pumping permits and pump taxes are not currently being imposed by Zone 7, although their imposition is the legal prerogative of the District. Use is estimated by Zone 7 based on acres under cultivation. Use of groundwater is particularly important during peak demand when sufficient imported water is unavailable. For its water budget, Zone 7 allocates a total of 6,000 acre-feet annually to gravel mining and agricultural use. With foreseeable annual gravel mining needs estimated by Zone 7 at about 3,000 acre-feet, the remaining 3,000 acre-feet is available for agriculture. Use of groundwater for agricultural purposes, especially grapes, is constrained by the high concentrations of boron in certain areas of the South Livermore Valley (refer to C. Hydrology and Water Quality).

**Untreated Imported Water.** Zone 7 reserves a total of 5,000 acre-feet (treated and untreated water) for small institutional and miscellaneous users and for agriculture. At current institutional/miscellaneous usage (1,500 acre-feet), about 3,500 acre-feet of untreated imported water is available for agriculture. Current agricultural use of untreated imported water was about 2,400 acre-feet in 1991 and will increase to about 3,000 acre-feet in 1992 (Zone 7, Untreated Water Delivery Summary, February 1992). Zone 7 does not have a delivery system for the untreated imported water which it sells to agricultural users; users are generally located adjacent or near to the South Bay Aqueduct and draw water via turnout facilities. These facilities are paid for by the user. Users of SWP water at some distance from the SBA have made arrangements for delivery with intervening landowners. (Livingston, June 1988)

**Peak Demand Availability of Imported Water.** A critical water supply question for irrigated agriculture is one of peak demand and the expected reduction in available untreated SBA peak flow during periods when heavy irrigation is needed. By contract, Zone 7 may use 11 percent of its maximum annual entitlement in the peak months. The flow rate available to Zone 7 from the SBA on the basis of that limit is 169 acre-feet per day. Peak usage in 1988 was 89 acre-feet per day of treated water and 80 acre-feet of untreated water, an amount which easily satisfied the agricultural demand for 55 acre-feet for untreated water. However, projected supplies of untreated water for peak demand agricultural use are dropping each year due to rising needs of treated water for municipal and industrial use. Projected supplies of untreated water for agriculture are expected to drop to a low of about 25 acre-feet per day peak demand use by 1995 and are projected to remain at that level through the year 2010. (Zone 7 Engineer's Report, 1987) In the absence of new transport facilities to bring water into the South Livermore Valley or

storage reservoirs to set aside supplies for the summer months, this gap will become a serious impediment to agricultural activities as currently practiced. (Livingston, June 1988) Zone 7 has notified current agricultural users of imported water that coordination of irrigation activities among users to prevent simultaneous water turnout could help reduce this peak-demand problem.

Water Costs. According to the South Livermore Valley Study (Livingston, June 1988, p. IV-9), drilling a 500 to 700 gallons per minute well to a depth of 200 to 300 feet would cost between \$7,500 and \$10,000 and the pump and related equipment would cost between \$10,000 and \$15,000. Costs of this magnitude when averaged over the multi-year useful life of the facilities would not add significantly to the overall cost of vineyard operation. The energy and maintenance cost of a pumping operation of this size would add about \$20 to the cost of an acre-foot of groundwater. The above cost estimate was calculated in 1988; therefore, equivalent 1992 costs may be higher.

The cost of Zone 7 untreated water for agricultural irrigation in the Plan Area is based on the equivalent cost of water at the Delta source plus the energy cost to pump it and an administrative charge added by the Zone. The Zone's Board of Directors sets the charge annually. Untreated water costs have ranged from about \$30 per acre-foot (1988) to a high of \$39 per acre-foot (1984 and 1985) for a rough average (between 1983 and 1988) of \$35 per acre-foot. Annual cost fluctuations have generally reflected current energy rates. As discussed in the South Livermore Valley Study (Livingston, June 1988, p. IV-8 and -9), the cost of \$35 per acre-foot for untreated irrigation water is (to at least one grower) a relatively small part of the overall operating cost of grape growing. The grower estimated the total per-acre operating cost to range from \$1,500 to \$2,000, leading to the conclusion that the approximately one acre-foot of imported water which he applied annually to one acre of grapes would represent about two percent of the total variable costs. This grower agreed with others that wine grape production could easily endure higher irrigation water costs before the feasibility of continued operations would be affected. If water had to be purchased through water marketing, however, costs could increase significantly. In addition to paying the Zone for water, individual irrigators must construct facilities to convey the water from the turnout at the SBA to the field to be irrigated. In 1988, the approximate added cost of "boosting" the water to its destination is about \$30 per acre-foot, leading to a total water cost of roughly \$65 per acre-foot for some parcels.

### **Water Supply and Demand Equation in Zone 7 Service Area**

It is the policy of Zone 7 to approve water delivery requests on a first request basis. The Zone is currently considering adopting a "fair share" policy under which Zone 7 would not approve future requests for deliveries that would exceed existing supplies (see Table K.1-1). As noted above, Zone 7 is actively seeking additional water supplies. Possible sources of water include water marketing, recycled water, and additional storage.

**Municipal and Industrial Supply and Demand:** Current M & I demand is about 32,665 acre-feet (139,000 people x .235 acre-feet per capita per year). Zone 7 estimates that its current water supply can meet the needs of a service area population of 174,000 to 192,000 people depending on the effectiveness of water conservation measures in reducing water demands. If the facilities planned for the State Water Project are put into operation, the Zone could supply the needs of 210,000 to 231,000 people.

**Agricultural Supply and Demand:** Available water sources for agricultural use are groundwater (3,000 acre-feet) and imported untreated water (3,500 acre-feet), for a total of 6,500 acre-feet. Current agricultural demand is about 3,150 acre-feet (based on an average of 1.5 acre-feet per year for the 2,100 existing irrigated acres in the Plan Area). Therefore, existing supply exceeds existing demand by roughly 3,350 acre-feet, an amount capable of irrigating an additional 2,200 or so acres of vineyards, using sprinklers.

## **2. CRITERIA OF SIGNIFICANCE**

Implementation of the plan would create a significant environmental impact if increased water demand exceeded available water supply and/or depleted groundwater resources. Expansion of existing water services would be a significant impact if service extension occurred in areas not adjacent to existing services.

### **3. IMPACTS AND MITIGATION MEASURES**

The following public facility and service impacts could result from adoption and implementation of the South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce impacts to less than significant levels.

#### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT K.1-1: Water demand from new agricultural acreage brought into production as a result of Plan policies could exceed existing water supply.**

The Plan could accommodate a maximum of 6,000 cultivated acres. This number includes 2,100 existing vineyards, the 640 acres that are required to be planted as conditions of approval for the Ruby Hill and Crane Ridge developments, plus an additional 3,260 acres placed under cultivation as a result of Plan policies. The existing water supply allocated by Zone 7 for agriculture is about 6,500 acre-feet. Current agricultural demand is about 3,150 acre-feet (based on an average of 1.5 acre-feet per year for the 2,100 existing irrigated acres in the Plan Area). Therefore, existing supply exceeds existing demand by 3,350 acre-feet, an amount capable of irrigating about an additional 2,200 acres. Irrigation requirements of the Ruby Hill and Crane Ridge developments will probably use about 1,000 acre-feet of this excess amount leaving about 2,350 acre-feet for future use. Future water demand for the 3,260 acres that may potentially be brought under cultivation as a result of Plan policies would be about 4,900 acre-feet, an amount which exceeds available supply (assuming Ruby Hill and Crane Ridge vineyards are put under cultivation prior to implementation of the Plan) by 2,550 acre-feet. (The 2,550 acre-feet figure is based on irrigation by sprinkler technology; drip irrigation could reduce potential water demand by 10 percent and would be more conducive to using reclaimed water because the grapes would not come into contact with the reclaimed water.) This is considered a potential significant impact. Potential new sources of water supply have been discussed in the Existing Setting section of this EIR. If the City of Livermore

proceeds with tentative plans to develop a reverse-osmosis wastewater treatment system, using (in part) developer funds previously allocated for an R-O system on the Ruby Hill site, treated recycled water may be made available for irrigation in the South Livermore Valley. As noted previously, a decision to develop a recycled water source is primarily a local decision subject to state regulation. Additional pumping of groundwater resources may also occur, a potential impact discussed under IMPACT K.1-3.

**Proposed Plan Mitigation:** The proposed Plan requires that the proponent shows, to the satisfaction of the County and Zone 7, that adequate water supplies are available for irrigation needs. Plan policy also "encourages the development of additional sources of irrigation water for vineyards and other cultivated agriculture by investigating wastewater reclamation and development of other supply and delivery systems."

**Mitigation Measure K.1-1:** No further mitigation is warranted.

**IMPACT K.1-2: Water supply of imported water during periods of peak demand may not be adequate for the needs of irrigated agriculture.**

Projected supplies of untreated imported water from the South Bay Aqueduct for peak demand agricultural use are expected to drop to a low of about 25 acre-feet per day peak demand use by 1995 and are projected to remain at that level through the year 2010. This reduction in availability of imported water to existing and future agricultural users when most needed during hot periods of the summer months is a potentially significant impact. Agricultural users will have to develop alternate strategies to irrigate their crops during peak demand periods. Alternative strategies could include building on-site storage reservoirs, developing recycled water or pumping groundwater to supplement imported water during periods of high demand. Vineyards or other cultivated agriculture developed under the Plan and located in areas not adjacent to the South Bay Aqueduct would have to either arrange for water delivery with intervening landowners or rely on a groundwater pumping system. The potential impact on the groundwater basin is discussed below under IMPACT K.1-3.

**Proposed Plan Mitigation:** The proposed Plan requires that the proponent shows, to the satisfaction of the County and Zone 7, that adequate water supplies are available

for irrigation needs. Plan policy also "encourages the development of additional sources of irrigation water for vineyards and other cultivated agriculture by investigating wastewater reclamation and development of other supply and delivery systems."

**Mitigation Measure K.1-2:** No further mitigation is warranted.

**IMPACT K.1-3: Pumping of groundwater by agricultural, rural residential and other rural uses could result in the long-term depletion of the groundwater basin.**

As described in Impact K.1-2 above, existing agricultural water supplies could fall short of that needed to sustain the potential new cultivated acreage. As a result, new agricultural users may resort to pumping groundwater that could lead to the long-term depletion of the groundwater basin. New rural residents, bed-and-breakfasts and wineries in the Vineyard Area would also use groundwater resources to meet their water needs because they would be outside the water retailer service area. Estimated groundwater demand from these users would be low (less than 200 acre-feet per year) but would nevertheless contribute to the possible long-term depletion of the groundwater basin. Although Zone 7 monitors groundwater useage, the agency has assumed no legal authority to curtail pumping in an effort to keep useage within the long-term safe yield. Zone 7's policy has been to artificially recharge the basin during years when surplus water is available. In the event that pumping for irrigation of new agricultural acreage and other rural uses developed as a result of Plan policies exceeds long-term safe yield, Zone 7 has stated that it would continue to recharge the basin to the extent necessary to prevent overdraft using water from one or more of the possible future sources (Vincent Wong, Zone 7, personal communication, April 10, 1992). In this event, the basin would serve as a storage reservoir and Zone 7 would have to develop a cost allocation mechanism (user charge) to cover costs of new water.

**Mitigation Measure K.1-3:** Zone 7 should consider developing a pump monitoring and cost allocation system to cover the cost of new water in the event that additional supplies are needed and can be secured and stored in the groundwater basin.

**IMPACT K.1-4: Groundwater supplies may not be available for rural residential, bed-and-breakfast and winery uses in all locations of the Vineyard Area.**

Under the Plan, rural residential, bed-and-breakfast and winery uses could be allowed in parts of the Vineyard Area that have no access to groundwater resources. As noted in D. Hydrology and Groundwater, groundwater in the upland and highland areas surrounding the central groundwater basin is limited, very localized, and of generally poor quality.

**Proposed Plan Mitigation:** The proposed Plan requires that the proponent shows, to the satisfaction of the County and Zone 7, that adequate water supplies are available for domestic needs.

**Mitigation Measure K.1-4:** Amend Policy V.2.B. as follows: "The proponent shows, to the satisfaction of the County and Zone 7, that adequate water supplies are available for both domestic, commercial (wineries and bed-and-breakfasts), and irrigation needs.

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land. Potential development includes up to 2,510 additional dwelling units in Pleasanton and Livermore and up to 100,000 square feet of commercial.

**IMPACT K.1-5: New urbanized development would create the need for extension of the water distribution system.**

New urban development would require an expansion of the water distribution system. New development would be located adjacent to existing city limits and would be annexed to either the City of Livermore or the City of Pleasanton and the appropriate water retailer urban service area. This is not considered a significant impact.

**Mitigation Measure K.1-5:** None warranted.

**IMPACT K.1-6: Water demand from new urban development could exceed existing water supply.**

Using Zone 7's 210 gallons per capita per day (or, .235 acre-feet per capita per year) water consumption figure, the potential addition of 2,510 dwelling units would generate a demand of 1,650 acre-feet (2,510 households x 2.8 persons per household x .235 acre-feet per person per year = 1,652 acre-feet). At the present time, there is a sufficient supply of water to accommodate this demand because implementation of plan policies would increase the population by only roughly 7,000 persons bringing the total Zone 7 service area population up to about 146,000 from the 1990 139,000 population. Zone 7 states that there is adequate water to service a population of between 174,000 and 192,000 depending on the effectiveness of water conservation measures in reducing water demands.

**Proposed Plan Mitigation:** The proposed Plan requires that the proponents show, to the satisfaction of the County and Zone 7, that adequate water supplies are available for domestic needs. (Mitigation Measure K.1-4 amends this policy to include commercial uses.)

**Mitigation Measure K.1-6:** In an effort to conserve water, the water retailers are encouraged to require proponents of development projects to implement an off-set program utilizing one or more of the water conserving best management practices.



## **K.2 WASTEWATER**

### **1. EXISTING SETTING**

Wastewater collection, treatment and disposal is handled by five separate agencies in the East County Area of Alameda County: the Livermore-Amador Valley Waste Management Agency (LAVWMA), the Tri-Valley Wastewater Authority (TWA), the cities of Pleasanton and Livermore, and the Dublin-San Ramon Services District (DSRSD). The Alameda County Flood Control and Water Conservation District, Zone 7 (Zone 7) is responsible for regulating septic systems and on-site treatment systems for areas not currently served by existing sewer service areas.

#### **Wastewater Treatment Plants**

**Dublin San Ramon Service District Treatment Plant:** The DSRSD Treatment Plant is located in the City of Pleasanton and treats wastewater collected from the City of Pleasanton service area and the DSRSD service area. The City of Pleasanton collection area includes all developed areas within the city limits and the Castlewood Country Club area. The DSRSD collection area includes the City of Dublin, the southern portion of the City of San Ramon (located in Contra Costa County), the US Army Camp Parks facility and the Alameda County Santa Rita Jail facility.

The DSRSD Treatment Plant has a design capacity of 11.5 MGD-ADWF (million gallons per day - average dry weather flow). This capacity is equal to DSRSD's share of the LAVWMA export pipeline. Since the export capacity of the treatment plant is restricted by the LAVWMA pipeline, the plant assigns capacity limits to its member cities. The City of Pleasanton has an allocation of 7.1 MGD-ADWF and the remainder of the DSRSD an allocation of 4.4 MGD-ADWF. Existing flow at the plant is about 8.1 MGD-ADWF. Sewer permits are granted on a first-come, first-serve basis with industrial and residential projects competing equally for available permits.

**Livermore Water Reclamation Plant:** The Livermore Water Reclamation Plant is located in the City of Livermore and is owned and operated by the City of Livermore. The plant treats wastewater from the collection area which includes the City of Livermore

and from the unincorporated areas that include the Lawrence Livermore Laboratory and the Sandia Corporation facilities. Some of the treated effluent from the plant is used for irrigation at the airport, golf course and nearby agricultural lands. The City of Livermore recently increased the capacity of their reclamation plant from 6.25 MGD-ADWF to 7.3 MDG-ADWF. Under Phase II of their current expansion plan, which is scheduled for completion by summer 1993, plant capacity will increase to 8.5 MDG-ADWF. The planned 8.5 MGD-ADWF wastewater treatment capacity will then equal Livermore's share of LAVWMA export pipeline. The City grants sewer permits based on a growth rate revised each three years and splits remaining capacity evenly between residential and non-residential uses. In granting new sewer permits, wastewater flows are estimated at 80 gallons per day (GPD) per capita and 70 GPD per employee for planning purposes. The current remaining treatment capacity for residential uses is about 0.29 MGD. (City of Livermore, North Livermore General Plan Amendment EIR, January 30, 1992.)

#### **Livermore-Amador Valley Waste Management Agency**

The Livermore-Amador Valley Waste Management Agency (LAVWMA) owns and operates the export pipeline which receives all treated effluent for the valley's two wastewater treatment plants. LAVWMA is a joint powers agency consisting of the cities of Livermore and Pleasanton, together with the Dublin-San Ramon Services District. The Livermore Water Reclamation Plant is the starting point of the LAVWMA interceptor pipeline which carries treated wastewater from that facility and the DSRSD Wastewater Treatment Plant to the LAVWMA Regulating Reservoir and Export Pump Station. The Valley's treated wastewater is then pumped over the Dublin Grade through the LAVWMA Export Pipeline and delivered to the East Bay Dischargers Authority (EBDA) pipeline where it released by outfall pipe into San Francisco Bay. Export of wastewater has been considered necessary in order to protect groundwater resources in the Livermore-Amador Valley.

The capacity of the LAVWMA export pipeline is limited to 19.72 MGD-ADWF of which each member agency is allocated a portion the total daily capacity. Because of rapid growth in the East County, the allocations of the existing pipeline will be fully utilized in the mid-1990s and reach its capacity by the year 2000. Total remaining sewage export capacity is estimated to be fully utilized in Pleasanton by 1997, in Livermore by 2000,

*K.2 Public Services and Utilities - Wastewater*  
**South Livermore Valley Area Plan DEIR**

and in DSRSD by 1997. Since sewer allocations precede actual development and sewer use, the jurisdictions are likely to exhaust their sewer allocations and subsequent ability to approve new development before the actual sewer capacity runs out. Table K.2-1. below summarizes this information.

<b>TABLE K.2-1. Remaining Sewage Export Capacity and Projected Year Capacity is Fully Utilized - Livermore, Pleasanton and DSRSD<sup>1</sup></b>				
<b>CATEGORY</b>	<b>PLEASANTON (MGD)</b>	<b>LIVERMORE (MGD)</b>	<b>DSRSD (MGD)</b>	<b>TOTAL (MGD)</b>
Total Capacity	7.106	8.229	4.385	19.720
Existing Flow <sup>2</sup>	4.495	5.000	3.569	13.064
Remaining Capacity <sup>3</sup>	2.611	3.229	0.816	6.656
Projected Year Capacity is Fully Utilized	1997	2000	1997	
Projected Year Allocations Are Fully Utilized <sup>4</sup>	1994 to 1995	1997 to 1998	1996	

1 Measured in terms of millions of gallons per day (MGD) for average dry weather flow (ADWF).  
 2 Existing flow as of the following dates: Pleasanton 8/88; Livermore 1/89; DSRSD 7/89.  
 3 Includes reserve allocations set aside for projects that have yet to be developed or have vacant space.  
 4 Allocations represent when development has been approved under each jurisdiction's growth management program.

**SOURCE:** "Final Report, Growth Inducing Impacts Analysis of Tri-Valley Wastewater Authority Export Capacity Expansion" prepared for TWA by Economic and Planning Systems, Inc., April 1990.

**Tri-Valley Wastewater Authority**

As described above, rapid growth in the East County area has caused rapid absorption of existing capacity for treatment and export. In 1986, the Tri-Valley Wastewater Authority

(TWA) was formed to plan and build a new export pipeline to transport wastewater in excess of the existing export pipeline capacity. TWA is a joint powers authority formed by Alameda County, the Dublin-San Ramon Services District, and the cities of Pleasanton and Livermore.

TWA recently released (January 31, 1992) a Supplemental Environmental Impact Report (SEIR) which evaluates several currently feasible wastewater treatment and export alternatives. The TWA Board of Directors selected "Alternative North 3" as the preferred alternative as being the most economical, feasible, and least environmentally damaging of the alternatives reviewed. "Alternative North 3" proposes to export untreated sewage to the Central Costa County Sanitary District for treatment and to outfall treated wastewater into Suisun Bay. The SEIR also studied implementation of the export system under three different capacity alternatives, each capacity alternative corresponding to a different development scenario. Export requirements under these development scenarios are shown on Table K.2-2. No decisions on the TWA project will be made until environmental review of the project is completed.

### **Wastewater Systems in the Plan Area**

The Plan Area is outside of existing sewer service areas for Livermore and Pleasanton, although it is anticipated that the recently approved Ruby Hill project located in the Plan Area will be connected to the City of Livermore wastewater collection, treatment and disposal system. Existing rural residences and wineries use private septic systems and several wineries use ponding systems. Other special land uses in the Plan Area such as the U.S. Veteran's Administration Hospital and the General Electric Vallecitos facility have their own private treatment plants. According to the City of Livermore General Plan, three sewer trunk line extensions are proposed for the Plan Area along: 1) Vineyard Avenue to Isabel Avenue; 2) Arroyo del Valle to the Veterans Administration Hospital; and 3) Tesla Road to the foothills. (See Figure K.2-1)

### **Zone 7**

Alameda County Flood Control and Water Conservation District, Zone 7 (Zone 7) is the agency responsible for managing and protecting the surface and groundwater resources of the Livermore-Amador Valley and regulating on-site treatment and septic systems through

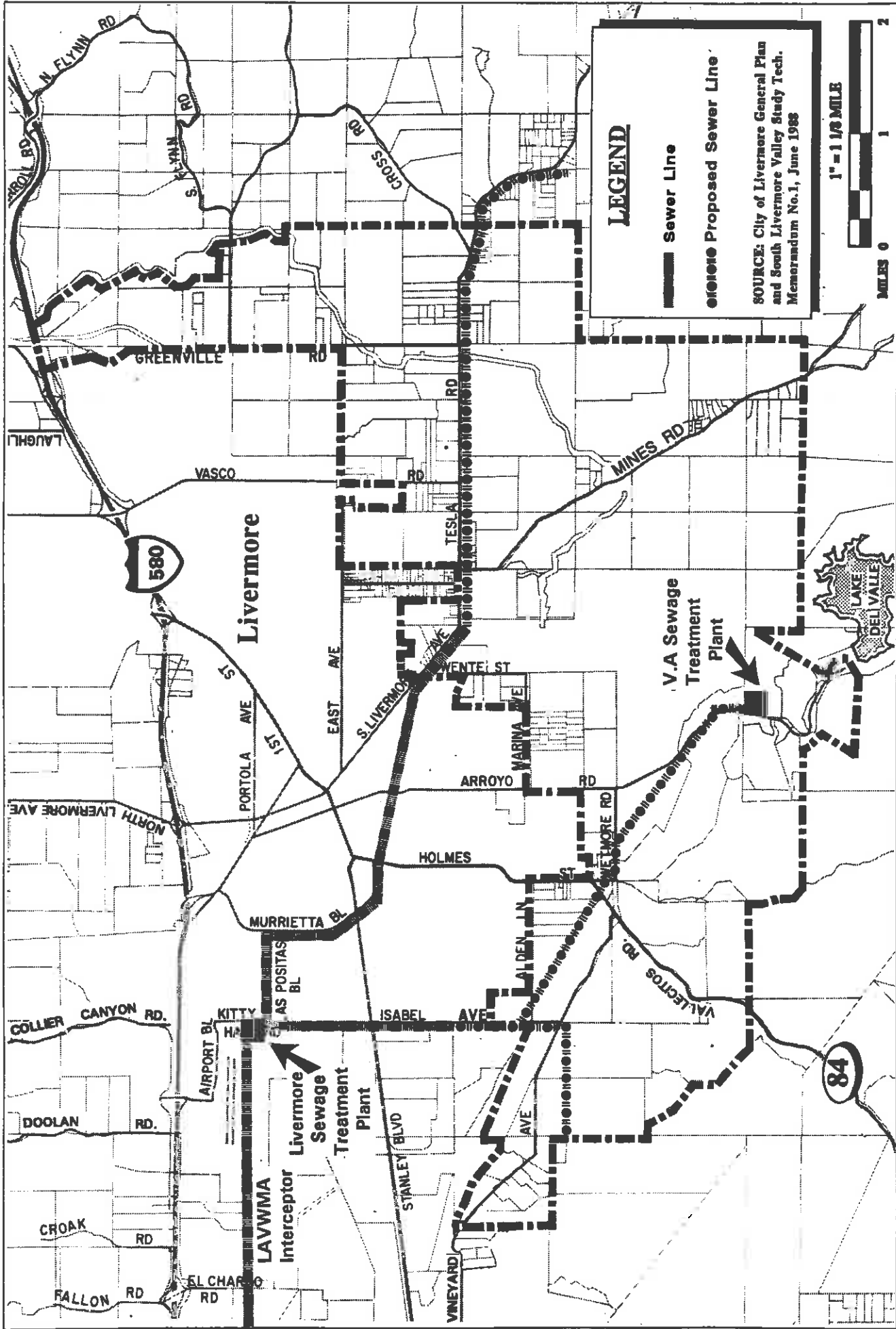


FIGURE IV K.2-1  
WASTEWATER SYSTEMS



ALAMEDA COUNTY PLANNING DEPARTMENT

**SOUTH LIVERMORE VALLEY AREA PLAN**  
ENVIRONMENTAL IMPACT REPORT

ALAMEDA COUNTY, CALIFORNIA



*K.2 Public Services and Utilities - Wastewater*  
 South Livermore Valley Area Plan DEIR

**TABLE K.2-2. Additional Sewage Export Requirements Given Projections of Employment and Population Potential in the TWA Service Area<sup>1</sup>**

SCENARIO	TOTAL EXPORT CAPACITY NEEDED TO ACCOMODATE GROWTH (MGD)	EXISTING EXPORT CAPACITY (MGD)	EXPORT EXPANSION REQUIRED TO ACCOMODATE GROWTH (MGD)
Existing General Plans	36.36	19.72	16.64
Prospective General Plans <sup>2</sup>	45.80	19.72	26.08
Constrained General Plans	29.46	19.72	9.74

- 1 Based on sewer use estimates of 70 gallons per day per employee and 80 gallons per day per resident.  
 2 Includes General Plan Amendments in North Livermore, Pleasanton Ridge, East Dublin, West Dublin and Tassajara and Dougherty Valleys.

**SOURCE:** "Final Report, Growth Inducing Impacts Analysis of Tri-Valley Wastewater Authority Export Capacity Expansion" prepared for TWA by Economic and Planning Systems, Inc., April 1990.

a permitting system. Permits for on-site treatment must also conform to Alameda County Environmental Health regulations. The valley relies extensively on groundwater to supplement and/or store imported water from the State Water Project to supply the Valley's water needs. Because of the Valley's reliance on groundwater, Zone 7 has adopted policies that regulate the treatment and disposal of wastewater in the watershed.

Zone 7's Wastewater Management Plan prepared in 1982 outlines policies to protect the groundwater resource. A central policy of the wastewater management plan is to prevent degradation of the central groundwater basin by controllable factors, such as requiring the export of all wastewater effluent to minimize salt and other pollutant loadings in the central basin. Wastewater management policies that would affect implementation rural areas of the South Livermore Valley Area Plan are as follows:

- community wastewater systems may be permitted on a case-by-case basis dependent on site specific studies of soils, geohydrology, ground water, and of the impacts on groundwater and disposal methods must be approved by Zone 7;
- individual on-site wastewater systems, where permitted, should be sited on minimum lot sizes of five acres;
- when intensive development of a site is proposed and/or zoning is changed from Agriculture to Rural Residential and will use individual onsite wastewater systems:
  - minimum lot sizes should be five acres;
  - geohydrologic studies may be required to determine impacts, if any, to ground or surface waters;
  - when cluster developments of five or more units are proposed, a detailed hydrologic study is required to determine conformance with the wastewater management plan;
  - if a project is found to conform with the wastewater management plan, an On-site wastewater management zone would be formed to provide septic tank maintenance and groundwater monitoring program;
  - in some cases, larger minimum lot sizes may be required.

## **2. CRITERIA OF SIGNIFICANCE**

Implementation of the plan would create a significant environmental impact in the urban development area if increased demand for wastewater collection, treatment, and disposal exceeded existing capacity. Implementation of the plan would also create a significant environmental impact if salts and other pollutant loadings in effluent from individual on-site wastewater systems exceeded public health standards and would result in the degradation of groundwater quality.



### **3. IMPACTS AND MITIGATION MEASURES**

The following waste water treatment system impacts could result from adoption and implementation of the South Livermore Valley Area Plan. Unless otherwise noted, proposed mitigation measures would reduce impacts to less than significant levels.

#### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture; up to 25 bed-and-breakfast establishments (4 bedroom maximum); and, up to 20 additional wineries.

**IMPACT K.2-1: Use of on-site septic systems by rural residents, bed and breakfast establishments, and wineries could result in groundwater contamination.**

The proposed Plan would conditionally permit landowners to subdivide property for residential use to a maximum gross density of 20 acres per unit for a potential total of 290 rural residences. A small percentage (less than 10 percent) of the sites may include a bed-and-breakfast operation (which would probably be located in the same building as the residence) and a small winery. This development is expected to be served by on-site septic systems. Due to the presence of an underlying groundwater basin, the potential exists for groundwater contamination to occur from the use of on-site septic systems. The potential for contamination could be increased with clustering of residential units into one area of the landholding, possible under Plan policies. Such clustering could concentrate pollutant loadings into a specific area. Gross densities, however, would remain at one unit per twenty acres and therefore conform to Zone 7's five-acre minimum policy.

Landowners would be required under the Plan to adhere to septic system policies and design and performance standards of Zone 7 and County Environmental Health. When cluster development of five or more units is proposed, a detailed hydrologic study is required to determine potential groundwater impacts. If the project is found to conform with the wastewater management plan, an onsite wastewater management zone would be formed to provide septic tank maintenance and monitor groundwater.

County Environmental Health has regulations that also establish criteria for the location and construction of septic systems, based upon wastewater volumes, pollutant loads, soil types, depth to groundwater, and septic system design among other factors.

Although Zone 7 policies prohibit commercial and industrial uses in unsewered areas unless the applicant can demonstrate that the wastewater loading to septic systems would be no more than the equivalent loading of a rural residence, accessory uses to agriculture are accepted uses. It is unclear whether Zone 7 considers wineries to be a commercial/industrial use or an agricultural accessory use. The fact that existing wineries in the Plan Area use on-site septic systems indicates that wineries that comply with Zone 7 and Environmental Health standards are permitted uses in the Plan Area.

**Proposed Plan Mitigation:** The proposed Plan requires that the proponent shows, to the satisfaction of the County and Zone 7, that all proposed homesites can be served by individual septic systems.

**Mitigation Measure K.2-1:** Amend Policy V.2.B. as follows: "The proponent shows, to the satisfaction of the County and Zone 7, that all proposed homesites, bed-and-breakfast establishments, and wineries can be served by individual septic systems.

### **3.2 Impacts of New Urban Development**

The proposed plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land which includes: the development of up to 385 additional dwelling units on land to be annexed to the City of Pleasanton; the development of up to 2,125 additional dwelling units on land to be annexed to the City of Livermore; and, up to 100,000 square feet of commercial.

**IMPACT K.2-2:** New urban development could require municipal sewer services in excess of existing treatment plant and export pipeline capacities.

The proposed plan would permit urban development requiring municipal sewer services. New urban development would only be permitted if the development were to be annexed

***K.2 Public Services and Utilities - Wastewater***  
**South Livermore Valley Area Plan DEIR**

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to either the City of Livermore or the City of Pleasanton. Developers would have to demonstrate to the appropriate city that sufficient sewage treatment and export capacity existed at the time of development. The Tri-Valley Wastewater Authority is planning to provide sufficient export capacity to serve all current and planned development.

**Mitigation Measure K.2-2:** None warranted.



## **K.3 SCHOOLS**

### **1. EXISTING SETTING**

As shown in Figure K.3-1, the Plan Area is within the jurisdictions of two school districts: the Livermore Valley Joint Unified School District (LVJUSD) and the Pleasanton Unified School District (PUSD). There are no schools located in the Plan Area at the present time.

#### **Livermore Valley Joint Unified School District (LVJUSD)**

The Livermore Valley Joint Unified School District serves the City of Livermore and surrounding unincorporated areas, including most of the South Livermore Valley Plan Area. The District currently operates ten elementary schools, four middle schools, three high schools, one continuation school (for students who can't attend the two high schools), and one alternative school (for adult education, independent study and home schooling). The District has recently opened Croce Elementary, which will initially serve kindergarten and eventually accommodate kindergarten through third grade. Christensen Elementary School will be converted to a Middle School over the next few years as elementary grades are phased out and placed at Croce. This will increase the District's middle school capacity, but leave elementary classroom space essentially unchanged. Vineyard School is an alternative school, serving elementary, middle and high school students. Del Valle is a continuation high school.

Current enrollments and school capacities are shown on Table K.3-1. Currently, total enrollment at the LVJUSD schools is 87 percent of total capacity. According to the District, students that will be generated under existing housing permit allocations in the City of Livermore<sup>1</sup> will more than absorb this existing capacity (Personal Communication, Mike White, Director of Facilities Management, March 2, 1992).

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<sup>1</sup> The City of Livermore has approved a total of 3,819 housing units as a part of its housing implementation program. These allocations are consistent with the City's General Plan and controlled growth policy and represent allocations for the years 1988 through 1993. The District assumes that these units will be built prior to any development under the proposed Plan.



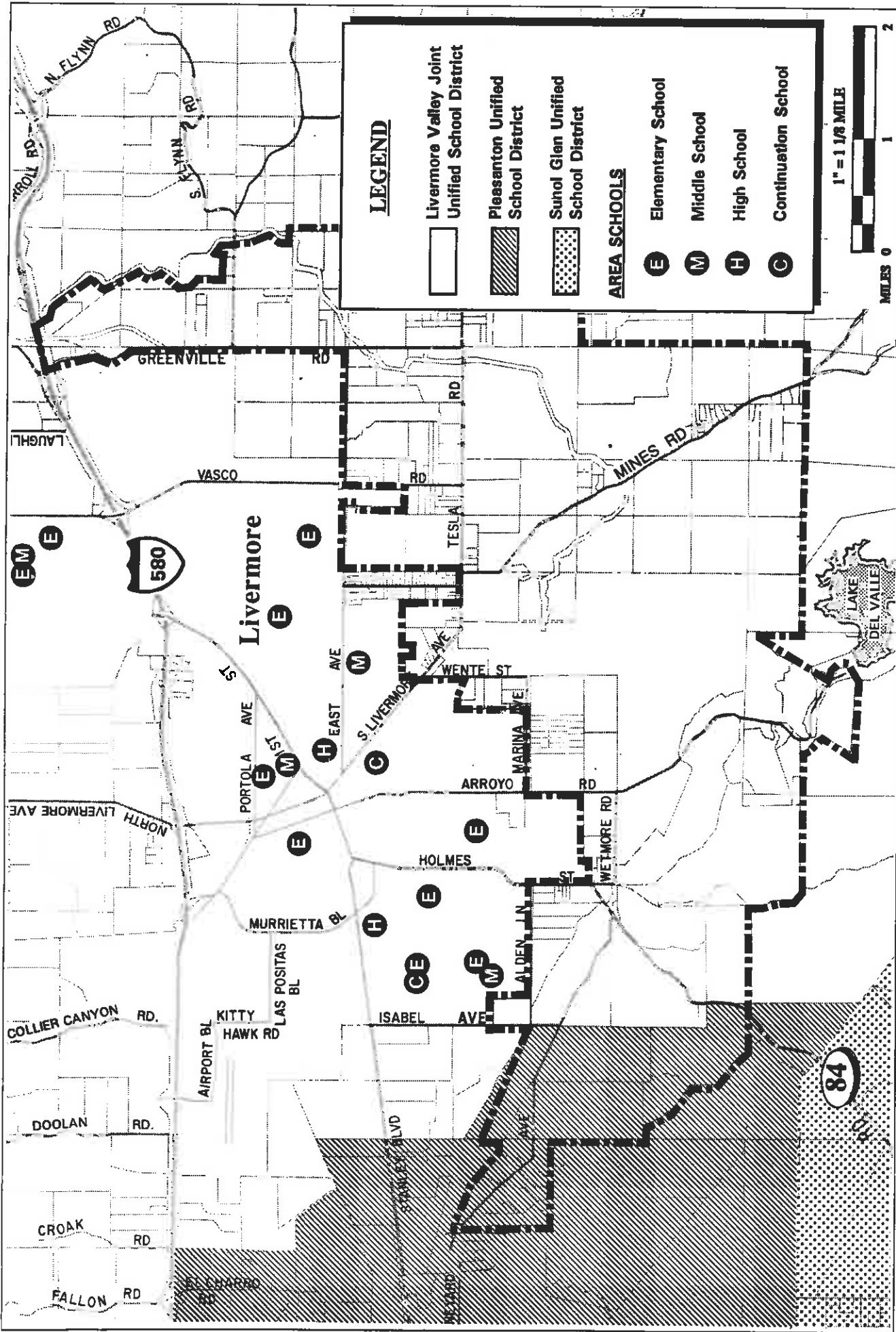


FIGURE IV K.3-1  
SCHOOL DISTRICTS AND FACILITIES



ALAMEDA COUNTY PLANNING DEPARTMENT

**SOUTH LIVERMORE  
VALLEY AREA PLAN**  
ENVIRONMENTAL IMPACT REPORT

ALAMEDA COUNTY, CALIFORNIA





*K.3 Public Services and Utilities - Schools*  
South Livermore Valley Area Plan DEIR

**TABLE K.3-1. Current Enrollment and Capacities: LVJUSD**

School	1991 Capacity	1991 Enrollment	Remaining Capacity
<b>Elementary</b>			
Arroyo Seco	450	544	-94
Christensen	660	567	93
Croce (K only)	128	128	0
Jackson	540	658	-118
Marylin	510	578	-68
Joe Michell	360	406	-46
Portola	510	568	-58
Rancho	420	518	-98
Smith	420	489	-69
Sunset	510	572	-63
Vineyard Alt.	17	17	0
<b>Middle</b>			
Christensen	175	201	-26
East Avenue	800	705	95
Junction	705	690	15
Mendenhall	826	758	68
Vineyard Alt.	24	24	0
<b>High School</b>			
Del Valle	171	171	0
Grenada	1,700	1,340	360
Livermore	1,700	1,422	278
Vineyard Alt.	1,500	252	1,248
<b>TOTAL</b>	<b>12,126</b>	<b>10,608</b>	<b>1,518</b>

Source: Livermore Valley Joint Unified School District, Superintendent's Office, personal communication, September 24, 1991.

In order to estimate the number of school-aged children generated from new housing construction, the District uses the following student generation rates:

- .30 children per unit for Kindergarten through grade six;
- .15 children per unit for grades seven and eight;
- .20 children per unit for grades nine through twelve;

for a total of 0.65 students per new household.

Once the District has determined that new schools are needed, the location and siting of the new facilities must be approved by the District and State Department of Education. One factor in planning new school facilities is the location of development relative to school sites. LVJUSD operates on a neighborhood school concept and therefore does not provide busing for students within the District. In addition to concern for the safety of students walking to school, the District requires that siting consideration be given to circulation patterns for up to 50 staff members at elementary schools, 75 staff members at a middle school, and in excess of 150 staff members at a high school. These figures are based on the following District optimum capacity standard: 650 students per elementary school; 750 students per middle school; and, 1,500 students per high school. Scattered rural development is generally more difficult to serve than concentrated, city-based development due to transportation needs of the rural student population to urban neighborhood school locations, or, alternatively, to the higher per capita cost if smaller facilities are used to serve the rural areas.

Under AB 2926, school districts are allowed by the State to charge an impact fee on new development, up to \$1.58 per square foot of residential floor space and \$0.26 per square foot of commercial floor space. Other potential funding mechanisms for capital facilities include Mello-Roos Community Facilities Districts, special assessment districts and bond issues. Financing of operations is determined by the State of California Department of Education from property tax revenues.

According to the LVJUSD, the District is financially unable to provide the necessary schools to house students from new development. To address this issue, the District's Board of Education has adopted Policy 3224 which requires developers to provide mitigation of \$1.58 per square foot of residential development.

**Pleasanton Unified School District (PUSD)**

The area encompassing the Vineyard Avenue transitional area and the Ruby Hill development is within the Pleasanton Unified School District (PUSD), which operates seven elementary schools, two middle schools and three high schools, with a total enrollment in 1991 of approximately 9,200 students. Student generation rates for the PUSD are generally similar to the LVJUSD, depending on housing unit type. Current enrollments and school capacities are shown in Table K.3-3. Forecast enrollments are shown in Table H.3-2.

**TABLE K.3-2. Projected Enrollment: PUSD**

Grades	1992	1993	1994	1995	Capacity
K-5	4,536	4,777	4,954	5,103	5,390
6-8	2,411	2,435	2,552	2,660	2,400
9-12	2,727	2,859	3,029	3,287	4,500
<b>Total</b>	<b>9,673</b>	<b>10,070</b>	<b>10,535</b>	<b>11,050</b>	<b>12,290</b>

Source: Pleasanton Unified School District, Superintendent's Office, personal communication, October, 1991.

Currently, total enrollment at the PUSD schools is 79 percent of total capacity. The PUSD projects that student populations will grow by approximately three to five percent per year during the next five years. Crowding is expected in the middle schools, despite recent grade and attendance reorganization. New schools and expansion plans are underway to accommodate increasing population in the PUSD.

The District is planning a new elementary school in the Ruby Hill and Vineyard Avenue area, which will be funded in part by a recently floated General Obligation Bond. Funding will be supplemented by a PUSD impact fee of \$1.50 per square foot of new residential construction in addition to funds derived from Mello-Roos Community Facilities Districts. At the request of the PUSD, the City of Pleasanton is now requiring that new development either create a Mello-Roos District or be included in an existing district.

*K.3 Public Services and Utilities - Schools*  
 South Livermore Valley Area Plan DEIR

**TABLE K.3-3 Current Enrollment and Capacities: PUSD**

School	1991 Capacity	1991 Enrollment	Remaining Capacity
<b>Elementary</b>			
Alisal	650	499	151
Donlon	800	811	-11
Fairlands	700	630	70
Lydiksen	465	477	-12
Valley View*	651	625	26
Vintage Hills*	415	365	50
Walnut Grove	984	860	124
<b>Subtotal</b>	<b>4,665</b>	<b>4,267</b>	<b>398</b>
<b>Middle</b>			
Harvest Park	1,090	949	141
Pleasanton*	1,300	1,201	99
<b>Subtotal</b>	<b>2,390</b>	<b>2,150</b>	<b>240</b>
<b>High Schools</b>			
Amador*	1,875	1,644	231
Foothill	1,475	1,098	477
Village Continuation	140	141	-1
Independent Study	27	27	0
<b>Subtotal</b>	<b>3,490</b>	<b>3,883</b>	<b>707</b>
<b>TOTAL</b>	<b>10,572</b>	<b>9,227</b>	<b>1,345</b>

Source: Pleasanton Unified School District, Superintendent's Office, personal communication, October 1991.

\* Serves the western portion of the Plan Area.

## **2. CRITERIA OF SIGNIFICANCE**

Implementation of the proposed Plan would create a potential significant environmental impact if demand for school services increased beyond existing or planned service capacity.

## **3. IMPACTS AND MITIGATION MEASURES**

The following public facility and service impacts could result from adoption and implementation of the proposed South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce impacts to less than significant levels.

### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT K.3-1: Rural residential population growth could result in the addition of approximately 188 school children to the Livermore Valley Joint Unified School District.**

Under the Plan, all rural residential growth would occur in the Livermore Valley Joint Unified School District. Using the student generation rates given in the existing setting section, a total of 290 new rural residences would yield 188 school children (87 children in kindergarten through grade six; 43 in grades seven and eight; and, 58 in grades nine through twelve). This increase in new students is not considered to be significant because of the relatively small number of new students which would need to be accommodated by the school district in comparison to existing total capacity (2 percent) and because of the incremental addition of these new rural households over time. Students from the vineyard area would, however, have to be privately transported to neighborhood schools. Driving distances would probably not exceed five miles.

**Mitigation Measure K.3-1: None warranted.**

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land, and the development of up to 2,510 additional dwelling units in Pleasanton and Livermore.

**IMPACT K.3-2: Urban population growth could result in the addition of approximately 1,380 school children to the Livermore Valley Joint Unified School District.**

Under the Plan, up to 2,125 urban residences could potentially be built in the Livermore Valley Joint Unified School District: 1,625 residences adjacent to the City of Livermore in the Vineyard Area and about 500 residences in the area of Alden Lane between Isabel Avenue and Holmes Street. Using the student generation rates given in the existing setting section, 2,125 households would generate a total of 1,380 students: 638 children in kindergarten through grade six; 319 in grades seven and eight; and, 423 in grades nine through twelve. Using District standards given in the existing setting section, this increase would require one new elementary school, one-half a new middle school, and one-third a new high school and is therefore considered a significant impact. In addition to the need for new facilities, the District may have to realign the boundaries which define school service areas in order to maximize enrollment efficiency.

**Mitigation Measure K.3-2:** The City of Livermore, through the development approval process, should ensure that urban development projects within the Plan Area pay for needed school improvements and provide school sites as needed.

**IMPACT K.3-3: Urban population growth could result in the addition of approximately 250 school children to the Pleasanton Unified School District.**

Under the Plan, up to 385 new residences could be built in the transitional East Vineyard Avenue area of the Pleasanton Unified School District. Using the student generation rates given in the existing setting section, 385 households would generate a total of 250 students: 115 children in kindergarten through grade six; 58 in grades seven and eight; and, 77 in grades nine through twelve. Using District standards given in the existing setting section, this increase would require one-sixth of a new

elementary school with relatively small additional capacity needed at the middle school and high school levels. This increased demand is considered a significant impact. In addition to the need for new facilities, the District may have to realign the boundaries which define school service areas in order to maximize enrollment efficiency.

**Mitigation Measure K.3-3:** The City of Pleasanton, through the development approval process, should ensure that urban development projects within the Plan Area pay for needed school improvements.





## **K.4 POLICE SERVICES**

### **1. EXISTING SETTING**

The Plan Area is within the jurisdiction of the Alameda County Sheriff's Department. The California Highway Patrol, operating out of its Dublin office, has responsibility for state highways and major unincorporated roads. Proposed annexations under the Plan would place portions of the Plan Area in the cities of Livermore and Pleasanton.

#### **Alameda County Sheriff's Department**

The Alameda County Sheriff's Department currently provides police services for the unincorporated Plan Area. All emergency vehicles, fire, police and ambulance are dispatched from the Alameda County Sheriff Department's central switchboard. The Plan Area is included in a patrol beat that covers approximately 320 square miles. The Sheriff's Department has assigned two patrol cars with one officer each to the day shift, and one patrol car with two sworn officers to the night shift. The closest station to the Plan Area is the Eden Township substation in San Leandro, 15 miles west of the Plan Area. Response time to the Plan Area varies depending on factors such as location of the patrol car in relation to the site of the call and amount of traffic. Under the best conditions, County Sheriff's Department response time would be under five minutes, but could extend to between 20 to 25 minutes under adverse conditions (Alameda County, Ruby Hill General Plan Amendment EIR, prepared by EIP Associates, November 1989). Under mutual aid agreements, if an urgent call comes in and the County Sheriff's Department officer is at an extended distance from the call, police from the cities of Livermore or Pleasanton, or the California Highway Patrol, would respond to the call until a Sheriff's officer arrived. Service is currently adequate to meet the needs of local residents.

#### **City of Livermore Police Department**

The Livermore Police Department (LPD) provides police services within Livermore city limits. The Department has a staff of 65 sworn officers and 55.5 non-sworn personnel which occupy one police station on South Livermore Avenue. The City of Livermore is in the process of planning for a new station capable of accommodating additional personnel. The LPD operates four patrol beats with one officer assigned per shift to each

beat. An additional beat is being considered by the Department to respond to growth in the area north of I-580. The LPD currently uses the following personnel generation factors: an additional 1.25 sworn officers and 0.70 non-sworn employees per 1,000 person increase in population. (City of Livermore, North Livermore General Plan Amendment, Environmental Impact Report, prepared by Environmental Science Associates, January 30, 1992.)

#### **City of Pleasanton Police Department**

The Pleasanton Police Department (PPD) provides police services within City of Pleasanton City limits. In 1990, there were 71 sworn police officers, or 1.37 sworn officers per 1,000 population. Call response time averages 3.2 minutes for emergencies and 21.4 minutes for overall response time. The City Council determines short-term Police Department personnel needs each year. (City of Pleasanton, Growth Management Report, 1991.)

## **2. CRITERIA OF SIGNIFICANCE**

Implementation of the plan would create a significant impact on police services if it reduced response times by police officers and lowered the existing level of police protection and other services.

## **3. IMPACTS AND MITIGATION MEASURES**

The following public facility and service impacts could result from adoption and implementation of the South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce impacts to less than significant levels.

### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT K.4-1: Rural residential population growth would result in increased service demand on the Alameda County Sheriff's Department.**

Future residents of the up to 290 new rural homes would create some additional demand on the Alameda County Sheriff's Department for police services. Vineyards and related commercial uses would not present unusual crime prevention problems. There could, however, be increased nuisances from potential incompatibility of residential and agricultural activity and increased petty theft from vineyards by residents and visitors to the wine country that could require additional Sheriff Department personnel. As property taxes and other revenues increased, there should be adequate funding to incrementally increase sheriff staffing; as needed. The Sheriff's Department has not expressed any concerns about the proposed Plan at this time (W. C. Godfrey, Commander, Law Enforcement Services Division, Alameda County Sheriff, response to EIR Notice of Preparation, August 27, 1991); therefore, these impacts would be less than significant.

**Mitigation Measure K.4-1:** None warranted.

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land, and the development of up to 2,510 additional dwelling units in Pleasanton and Livermore.

**IMPACT K.4-2: Urban population growth would result in increased demand for City of Livermore and City of Pleasanton police services.**

Urban development under the proposed Plan would result in additional demand by future residents for police services. Up to 385 new homes could be built in the East Vineyard Avenue transitional area to be annexed to the City of Pleasanton generating a potential population of about 1,000 people<sup>1</sup>. Using the existing sworn officer per 1,000 ratio, an increase in population of 1,000 people would require about another 1.4 sworn officers and .70 non-sworn personnel.

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<sup>1</sup> A persons per household figure of 2.8 was used in this calculation. SOURCE

Up to 2,125 homes could be built in the Vineyard Area and in the Alden Lane and Patterson Pass Road transitional areas to be annexed to the City of Livermore generating a potential population of about 6,000 people<sup>2</sup>. Using the City's generation factors, this increase in population would require about another 7.5 sworn officers and 4.2 non-sworn personnel.

**Mitigation Measure K.4-2 (a):** The City of Livermore should provide adequate police services for the portion of the Plan Area incorporated into the City.

**Mitigation Measure K.4-2 (b):** The City of Pleasanton should provide adequate police services for the portion of the Plan Area incorporated into the City.

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<sup>2</sup> *ibid.*

## **K.5 FIRE SERVICES**

### **1. EXISTING SETTING**

The Plan Area is within the jurisdiction of the Alameda County Fire Patrol and the California Division of Forestry. The cities of Livermore and Pleasanton have their own fire protection service within city limits. The recently approved Ruby Hill residential and vineyard development project will provide a new equipped fire station in the Plan Area. A mutual aid agreement for the Livermore-Amador Valley (Twin-Valley) includes the Livermore Fire Department, Pleasanton Fire Department, Dublin Fire Department, the Livermore Laboratory fire protection service, and the Alameda County Fire Patrol. This arrangement provides necessary backup in case of large fires or multiple calls during which one agency would be unable to meet the demands for service. A proposed reorganization of fire service for unincorporated areas of Alameda County is discussed below in addition to summary information relating to the individual fire agencies.

#### **Alameda County Fire Patrol**

Structural and wildland fire protection service is provided in the unincorporated Plan Area by the Alameda County Fire Patrol (ACFP). The fire patrol, a division of the Sheriff's Department, has one station on College Avenue in Livermore. The station, constructed in 1950, is considered to be in fair condition with repairs needed. Staffing of the ACFP has declined from 31 personnel in 1986 to the current 13. The ACFP average response time to the Plan Area closest to Livermore city limits is five minutes while average response time to outlying areas is ten minutes. (Alameda County Fire Protection Master Plan, Final Report, January 1992.)

#### **California Division of Forestry**

The California Division of Forestry (CDF) has responsibility for wildland fire protection on all State Responsibility lands. The CDF's local fire fighting stations, the Sunol Forest Fire Station on Pleasanton-Sunol Road, provides backup to the County Fire Patrol. The station is staffed only during the fire season, which varies from year to year depending on the amount of rainfall and prevailing temperatures.

### **City of Livermore Fire Department**

The Livermore Fire Department provides fire protection and fire fighting services within Livermore city limits. The Department has four stations in the city with a fire-fighting staff of 70 persons. A minimum of 14 fire-related personnel are on duty at any given time. (City of Livermore, North Livermore General Plan Amendment EIR, January 30, 1992.)

### **City of Pleasanton Fire Department**

The Pleasanton Fire Department provides fire protection and fire fighting services within City of Pleasanton city limits. The Department has adequate staff and equipment to meet its General Plan response time standard of 5 minutes. A fourth station is planned for the southwest portion of the City closest to the Plan Area but is currently unfunded. The City Council reviews Fire Department equipment and manpower needs annually through the budget and capital improvement program. (City of Pleasanton, Growth Management Report, January 1992.)

### **Proposed Fire Service Reorganization for Unincorporated Areas**

The Alameda County Administrator has recently released the Alameda County Fire Protection Master Plan (January 1992) that recommends the reorganization of the existing County fire protection system into a single consolidated unit which would "eliminate the currently complex, fragmented, and duplicative system of fire services and enable Alameda County to better meet the current and future service demands for fire protection, fire prevention, first responder emergency medical services and hazardous materials controls throughout all the unincorporated areas (County Administrator, Letter to Board of Supervisors, re. Fire Protection Master Plan, February 6, 1992.) The report, which was approved "in principle" by the Board of Supervisors, recommends that the Eden and Castro Valley fire districts and the County Fire Patrol be consolidated into one big fire district. An advisory committee has been formed to explore the consolidation possibilities for the Livermore Valley and Sunol. The recommended alternative is a contract would be developed with the cities of Livermore and Pleasanton for emergency response services in the areas currently served by the County Fire Patrol. The report also recommends implementation of various fire-prevention services and ordinances in unincorporated areas including use of fire-retardant roofs and automatic fire sprinklers in all new structures. Fire districts are generally funded by revenue received

from a variety of sources including property taxes, special district augmentation funds, fees, and charges for services. Specific funding mechanisms for the consolidated district have not yet been determined.

## **2. CRITERIA OF SIGNIFICANCE**

Implementation of the plan would create a significant impact on fire services if it reduced response times by fire fighters and/or lowered the existing level of fire protection services.

## **3. IMPACTS AND MITIGATION MEASURES**

The following public facility and service impacts could result from adoption and implementation of the South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce impacts to less than significant levels.

### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT K.4-1: Rural residential population growth would result in increased demand for fire service in unincorporated Alameda County.**

Future residents of the up to 290 new rural homes would create some additional demand for fire protection and fire fighting services although vineyards and related commercial uses would not present unusual fire problems. Implementation of Alameda County's new Fire Protection Master Plan, once finalized, will improve service performance for this unincorporated portion of the Plan Area. The new station provided as part of the Ruby Hill project could assist in serving the Vineyard Area.

**Mitigation Measure K.4-1:** Alameda County should ensure through the development review process that all new development be designed to minimize

risks to life and property through the implementation of the provisions of the Fire Protection Master Plan.

### **3.2 Impacts of New Urban Development**

The proposed Plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land, and the development of up to 2,510 additional dwelling units in Pleasanton and Livermore.

**IMPACT K.4-2: Urban population growth would result in increased demand for City of Livermore and City of Pleasanton fire services.**

Urban development under the proposed Plan would result in additional demand by future residents for fire services. Up to 385 new homes could be built in the East Vineyard Avenue transitional area to be annexed to the City of Pleasanton. Up to 2,125 homes could be built in the Vineyard Area and in the Alden Lane and Patterson Pass Road transitional areas to be annexed to the City of Livermore.

**Mitigation Measure K.4-2 (a):** The City of Livermore should provide adequate fire services for the portion of the Plan Area incorporated into the City.

**Mitigation Measure H.4-2 (b):** The City of Pleasanton should provide adequate fire services for the portion of the Plan Area incorporated into the City.



## **K.6 PARKS AND RECREATION**

### **1. EXISTING SETTING**

As shown in Figure K.6-1, the Plan Area is primarily within the jurisdiction of the Livermore Area Recreation and Park District, although some overlap with the East Bay Regional Park District occurs in the western portion of the Plan Area. The East Vineyard Avenue transitional area is located in the East Bay Regional Park District and upon annexation to the City of Pleasanton will receive local park and recreational services from that city.

#### **Livermore Area Recreation and Park District**

The Livermore Area Recreation and Park District (LARPD) encompasses 245 square miles of east Alameda County, an area which includes the City of Livermore and most of the South Livermore Valley Plan Area and extends east to the San Joaquin County line. As noted in the District Master Plan (adopted in 1989), "within its boundaries, the District owns and operates various parks and facilities. The District also develops, maintains and operates, through joint powers agreements, land and facilities owned by the City of Livermore and Alameda County. The City of Livermore owns and operates several of its own smaller parks and facilities, including Centennial Park, Hansen Park, Doolan Park, Lincoln Park downtown, the Civic Center and Quezaltenango Parkway. The District also maintains an agreement with the Livermore Valley Joint Unified School District, and many district parks and facilities are located adjacent to school property. The District and the school district maintain a cooperative effort, meeting regularly and co-sponsoring many programs at each others facilities." (LARPD, District Master Plan, 1989, p.8)

**Park and Recreation Facilities:** The six types of park and recreation facilities supported by the LARPD Master Plan are summarized below. Existing and future shortfalls in terms of District standards for each type of park or facility is noted.

Neighborhood Parks. Neighborhood parks are generally 6-10 acres in size serving 3,000 to 5,000 people in a 3/4 miles area and are used for daily impromptu recreation. There are 20 existing neighborhood parks; an additional 100 acres of neighborhood parks,



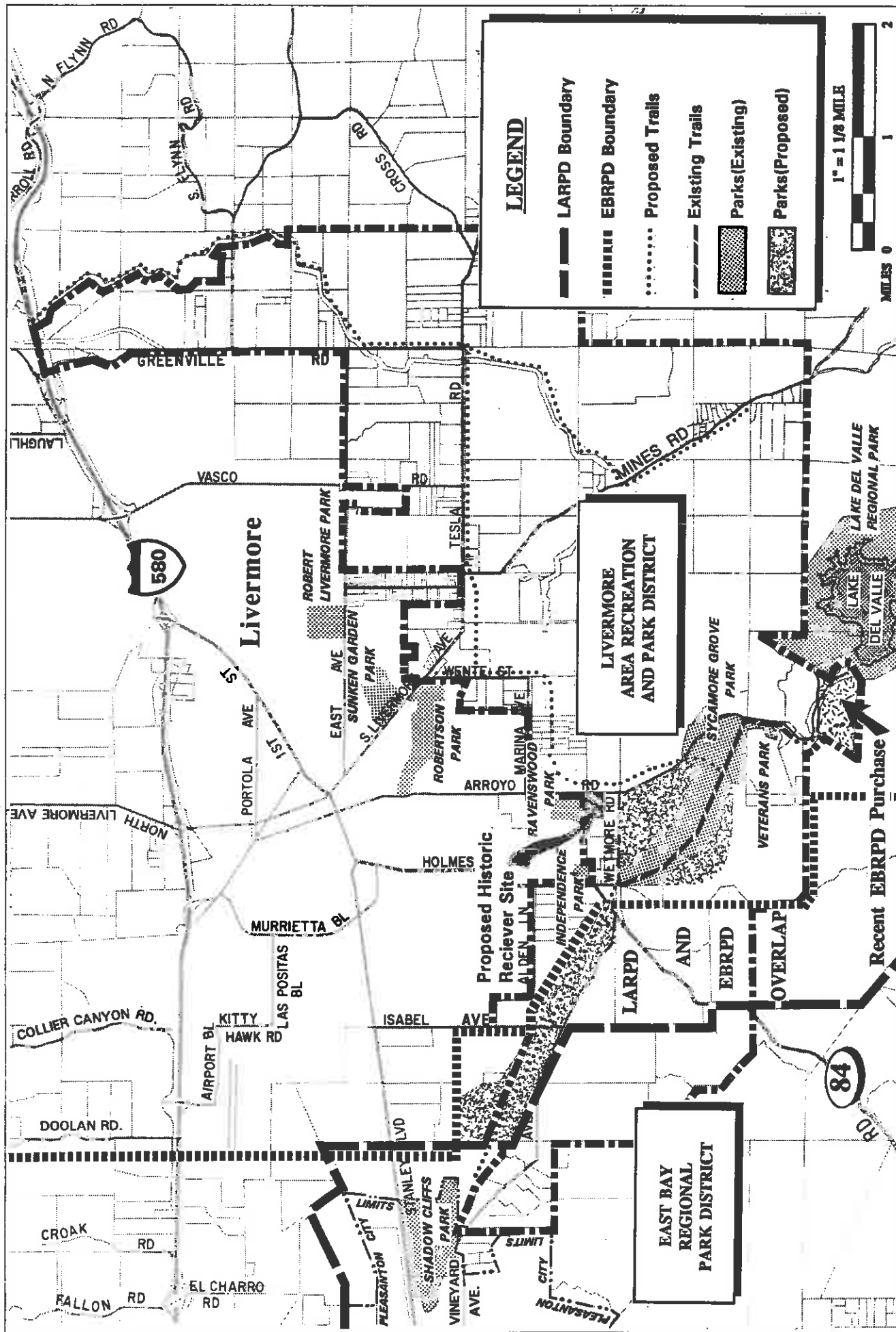


FIGURE IV K.6-1  
PARKS AND TRAILS

ALAMEDA COUNTY PLANNING DEPARTMENT

**SOUTH LIVERMORE VALLEY AREA PLAN**  
ENVIRONMENTAL IMPACT REPORT  
ALAMEDA COUNTY, CALIFORNIA



*K.6 Public Services and Utilities - Parks and Recreation*  
**South Livermore Valley Area Plan DEIR**

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equitably distributed in new neighborhoods, will be needed by the year 2010 to maintain the established standard of 2 acres per 1,000 people.

**Community Parks.** Community parks, each a minimum of 30 acres, are intended to be full-service recreation facilities. At the present time, the District has one community park. Two parks will be needed in the near future with an additional three needed by the year 2010.

**Special Use Facilities.** The existing 13 special use facilities (e.g. athletic complexes, senior center, equestrian center) respond to special recreation needs of the community. About 100 acres of new special use facilities will be needed by the year 2010 to meet the 3 acre per 1,000 person standard.

**Regional Parks.** The 364-acre Sycamore Grove Park is currently the sole regional park of the District. The District will actively acquire land, but only as it becomes available or offered, and develop open space areas when adequate funds are available. Future parks will be a minimum of 250 acres and possess unique natural resources and character. Brushy Peak, Cedar Mountain, and Duarte Canyon are areas currently under consideration. Development will emphasize low-intensity uses. (Although LAPRD is the regional park district for eastern Alameda County, the priority of the District, as evidenced by the focus of its efforts, is to provide active use facilities for the urbanized portions of its jurisdiction.)

**Trail and Bikeway System.** The LARPD Trail Master Plan, adopted in 1991, establishes an interconnected trail and bicycle route system in the District, a number of which are intended to connect to the East Bay Regional Park District regional trail system and the future "Chain-of-Lakes" area managed by Zone 7 of the Alameda County Flood Control and Water Conservation District. (A proposed trail would connect the existing EBRPD Ohlone Wilderness Trail from the Del Valle Recreation Area to Shadow Cliffs Regional Recreation Area via Sycamore Grove Park and the Arroyo del Valle.) In general, planned trails which affect the Plan Area follow the arroyos, existing rural streets, and the South Bay Aqueduct (see Figure K.6-1). Streets include: East Vineyard Avenue, Mines Road, Tesla Road, Marina Avenue and Arroyo Road. The Trail Master Plan calls for the inclusion of the proposed trail system into the South Livermore Valley Area Plan.

**Historical Special Use Sites.** The District recently renovated the 19th century country vineyard estate and winery known as Ravenswood, now on the National Register

*K.6 Public Services and Utilities - Parks and Recreation*  
**South Livermore Valley Area Plan DEIR**

---

of Historic Places, located on Arroyo Road in the City of Livermore immediately adjacent to the Plan Area.

District Operations, Maintenance, and Financing. The District is primarily funded by property taxes and developer fees. Developer fees include the City of Livermore's tax on residential construction for park development and the Quimby Act land dedication and/or in-lieu fees for residential subdivisions.

**Planned and Proposed Improvements:** The following projects, either planned or proposed by LARPD in its Master Plan, are relevant to the South Livermore Valley Plan Area.

Sycamore Grove Park Expansion. The District has identified properties on either side of the Sycamore Grove Park for future acquisition so that the existing park can be expanded (LARPD Master Plan, p.55).

Ravenswood. The District intends to further its role in preserving the Valley's agricultural history by assisting Friends of the Vineyards in the planning for a wine museum at the Ravenswood site. The District also proposes to establish an historic-building "receiver park" on land located in the Plan Area adjacent to Ravenswood when the land becomes available.

Chain-of-Lakes. The District lists as a candidate project the use of one of the future Chain-of-Lakes (the one to be located in the Plan Area) as an active water-oriented park. The Chain-of-Lakes is a major component of the Specific Plan for the reclamation of the Quarry Area and will consist of a series of connected lakes to be dedicated to Zone 7 for water management and flood control when implemented by 2030 (Alameda County, Specific Plan for Livermore-Amador Valley Quarry Area Reclamation, November 1981).

### **East Bay Regional Park District**

The East Bay Regional Park District (EBRPD) provides regional park facilities in the vicinity of the Plan Area including its operation of Del Valley Regional Park (3,900 acres owned by the California Department of Parks and Recreation and managed by the EBRPD) to the south and the Shadow Cliffs Regional Recreation Area (250 acres) just to the west of the Plan Area (EBRPD Master Plan, 1989). The District has a regional trail alignment planned between the Del Valle Regional Park and Shadow Cliffs that passes through the Plan Area following the Del Valle Arroyo. This trail coincides with that

planned by LARPD. Negotiations are currently underway between the two park districts for the East Bay Regional Park District to share in the planning, acquisition and management of regional facilities in the Livermore Area Recreation and Park District (Personal communication, Martin Vitz, East Bay Regional Park District, March 25, 1992). The EBRPD is funded through property taxes and bond measures.

### **City of Pleasanton**

The City of Pleasanton provides park and recreation services within its city limits. Pleasanton has 31 neighborhood and community parks totalling 275 acres in addition to the 230-acre passive-use Augustin Bernal Park in southwest Pleasanton. The General Plan standards for the provision of park land call for a 4-10 acre neighborhood park within one half-mile of residences with a projected ratio at General Plan buildout of over 8 acres of neighborhood and community park land per 1,000 population. The General Plan encourages developers to dedicate land for public parks in areas that are designated for park development on the General Plan land use map rather than contributing in-lieu fees through its Park Dedication Ordinance. Land for parks and recreation is designated in the City of Pleasanton General Plan in the vicinity of the East Vineyard Avenue transitional area. Of the City parks, Vintage Hills Park, a four-acre neighborhood park located on Arbor Drive about one-half mile southwest of the East Vineyard Avenue transitional area, is the closest to the Plan Area. The existing ratio of improved park acres to population dropped below the desired national standard of 5 acres of park per 1,000 population in 1988 due to rapid growth in the City. According to the City's Growth Management Report (1991), "In order to maintain the parks/population ratio above 5 acres per 1,000 population (and increase it to the General Plan standard of 8 acres per 1,000 population), new development will need to be made responsible not only for significant dedication of park land, but also for park improvements (or higher fees to enable the City to improve park land). The City may decide to consider increasing the in-lieu park dedication fee in a study of all City fees currently underway. City resources, beyond developer exactions, may also be necessary to achieve the higher General Plan rate."

## **2. CRITERIA OF SIGNIFICANCE**

Implementation of the Plan would create a potential significant environmental impact if demand for park and recreation services increased beyond existing or planned service capacity, or if plan policies conflicted with the provision of existing or planned park and recreation district facilities.

### **3. IMPACTS AND MITIGATION MEASURES**

The following public facility and service impacts could result from adoption and implementation of the South Livermore Valley Area Plan. Unless noted otherwise, proposed mitigation measures would reduce impacts to less than significant levels.

#### **3.1 Impacts of New Rural Residential and Vineyard Development**

The proposed SLVAP could potentially result in up to 290 new rural residences at a gross density of one unit per 20 acres; up to 3,260 additional acres of vineyards or other cultivated agriculture, and up to 25 bed-and-breakfast establishments and 20 additional wineries.

**IMPACT K.6-1: Rural development under the Plan would create additional demand for park and recreation services and facilities.**

Rural development under the proposed Plan would result in additional demand by future residents for park and recreation services and facilities. All rural residents in the Vineyard Area would be located in the Livermore Area Recreation and Park District and would use the LARPD facilities concentrated in the City of Livermore, although with less frequency than urban users due to the greater distances involved. The provision of neighborhood parks for residents of 20-acre parcels would be not be appropriate. School children of rural residents would probably use neighborhood parks where those parks were associated with local schools. A portion of the property taxes paid by new rural residents would go to the Livermore Area Recreation and Park District for the operation, maintenance, and financing of District and City of Livermore projects.

The Alameda County Planning Commission recently recommended that the County adopt a new park dedication ordinance that would assess new unincorporated residential development \$2,800 per unit for local park districts. Money collected under this ordinance in the Plan Area would thus go to either LARPD or the City of Pleasanton.

**Mitigation Measure K.6-1: None warranted.**



**IMPACT K.6-2: Rural development under the Plan could conflict with proposed trails under the LARPD Trail Master Plan.**

The LARPD Trail Master Plan shows proposed trails along the South Bay Aqueduct, the Arroyo del Valle, and a number of streets in the Plan Area. Because trails can be created within existing right-of-ways, land does not need to be set aside for trail implementation. Nevertheless, if rural development on a twenty-acre parcel was clustered in close proximity to a proposed trail, conflict between the trail and development could occur.

**Mitigation Measure K.6-2:** The County should ensure, through the development approval process, that rural development projects within the Vineyard Area do not conflict with or preclude proposed LARPD trails.

**3.2 Impacts of New Urban Development**

The proposed Plan could result in the annexation and development of up to 1,600 acres of currently unincorporated and undeveloped land, and the development of up to 2,510 additional dwelling units in Pleasanton and Livermore.

**IMPACT K.6-3: Urban development under the Plan would create additional demand for park and recreation services and facilities.**

Urban development under the proposed Plan would result in additional demand by future residents for park and recreation services and facilities. Up to 385 new homes could be built in the East Vineyard Avenue transitional area to be annexed to the City of Pleasanton; these residents would be served by the City of Pleasanton. Up to 2,125 homes could be built in the Vineyard Area and in the Alden Lane and Patterson Pass Road transitional areas to be annexed to the City of Livermore; these residents would be served by the City of Livermore in conjunction with the Livermore Area Recreation and Park District. New development in both cities would be subject to either park development fees (for individual residential projects) or Quimby Act land dedication and/or in-lieu fees (for subdivisions). Property taxes on all homeowners would support regional park facilities.

**Mitigation Measure K.6-3 (a):** The City of Pleasanton should ensure, through the development approval process, that urban development projects within the East

*K.6 Public Services and Utilities - Parks and Recreation*  
**South Livermore Valley Area Plan DEIR**

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Vineyard Avenue transitional area pay appropriate development fees and/or land dedication for park and recreation services and facilities. The City should work with development proponents to implement General Plan policies and land use which may be designated for park and recreation use in the East Vineyard Avenue transitional area.

**Mitigation Measure K.6-3 (b):** The City of Livermore, in conjunction with the Livermore Area Recreation and Park District should ensure, through the development approval process, that urban development projects within the Vineyard and transitional areas pay appropriate development fees and/or land dedication for park and recreation services and facilities.

**IMPACT K.6-4:** Urban development in the Vineyard Area could conflict with proposed plans for the Ravenswood historic receiver site.

Potential urban development in the Vineyard Area could conflict with LARPD plans to locate the historic receiver site for historic buildings just south of the Ravenswood historic site in the Plan Area. The historic receiver site would be part of the Ravenswood historic complex. Other elements of the historic complex would be a wine museum, an important feature encouraged by Plan policies.

**Mitigation Measure K.6-4:** The City of Livermore should work with LARPD to implement park policies. The City should also encourage urban development to include funding for a wine museum as part of the Ravenswood historic complex.

**IMPACT K.6-5:** Urban development in the Vineyard Area could conflict with planned expansion for Sycamore Grove Park.

Potential urban development in the Vineyard Area could conflict with Sycamore Grove Park expansion plans proposed by LARPD. The LARPD Master Plan identifies land near Wetmore Road on the north side of the existing Sycamore Park for future acquisition, a location in which urban development could also occur.

**Mitigation Measure K.6-5:** The City of Livermore should work with LARPD to implement park policies.

**IMPACT K.6-6: Urban development under the Plan could conflict with proposed trails under the LARPD Trail Master Plan.**

The LARPD Trail Master Plan shows proposed trails along the South Bay Aqueduct, the Arroyo del Valle, and a number of streets in the Plan Area including East Vineyard Avenue. Although most trails can be created within existing right-of-ways, the EBRPD/LARPD trail proposed to connect Sycamore Grove Park with Shadow Cliff Regional Recreation Park along the Arroyo del Valle will have to be sited on the north edge of the existing quarry in the Alden Lane Transitional Area. In other cases, land does not need to be set aside for trail implementation. Nevertheless, if urban development occurred in close proximity to a proposed trail, conflict between the trail and development could occur.

**Mitigation Measure K.6-6 (a):** The City of Livermore should ensure, through the development approval process, that urban development projects within the Vineyard Area do not conflict with or preclude proposed LARPD trails. Specifically, the City should ensure that sufficient room for a trail in the Alden Lane transitional area along the north side of the quarry site in the Arroyo del Valle be provided.

**Mitigation Measure K.6-6 (b):** The City of Pleasanton should ensure, through the development approval process, that that urban development projects within the transitional East Vineyard Avenue Area do not conflict with or preclude proposed EBRPD or LARPD trails.







V.

**PROJECT ALTERNATIVES**

The CEQA Guidelines require that an EIR describe a range of reasonable alternatives to a project and evaluate the comparative environmental impacts of these alternatives. The Guidelines also require evaluating impacts of the "no project" alternative and the designation of an "environmentally superior" alternative. If the alternative with the least environmental impact is the no project alternative, then one of the other alternatives must be designated as the environmentally superior alternative. Recent court cases have also suggested that alternatives analysis include a discussion of alternative sites.

The following is a detailed analysis of four alternatives to the proposed South Livermore Valley Area Plan that, together, represent a spectrum of possible alternative land uses for the area. The Preliminary Draft Plan, that was first proposed by County staff in January, 1991, represents a higher level of development, and different locations, than the proposed Plan. The Citizens Advisory Committee Alternative, that was proposed in April, 1989, represents similar development levels, but in different locations and with different requirements. A Viticultural Zoning Alternative that would permit 20 acre zoning on cultivable land represents a lower overall development level. The No Project Alternative is also considered.

Following a description of each alternative, the environmental impacts of implementing the alternative are discussed, relative to the proposed Plan. Each alternative's likelihood of reaching the agricultural preservation and enhancement goals of the proposed Plan is also analyzed. Several other alternatives that were considered but rejected are also briefly discussed. Finally, the environmentally superior alternative is identified, per the CEQA Guidelines.

To be consistent in the evaluation of the alternatives relative to the proposed draft South Livermore Valley Area Plan, it is assumed that the maximum amount of land use change will occur, both in terms of residential and commercial development and the development of new cultivated agriculture. To the extent that alternatives do not maximize development, impacts would be reduced.

## A. PRELIMINARY DRAFT SOUTH LIVERMORE VALLEY AREA PLAN

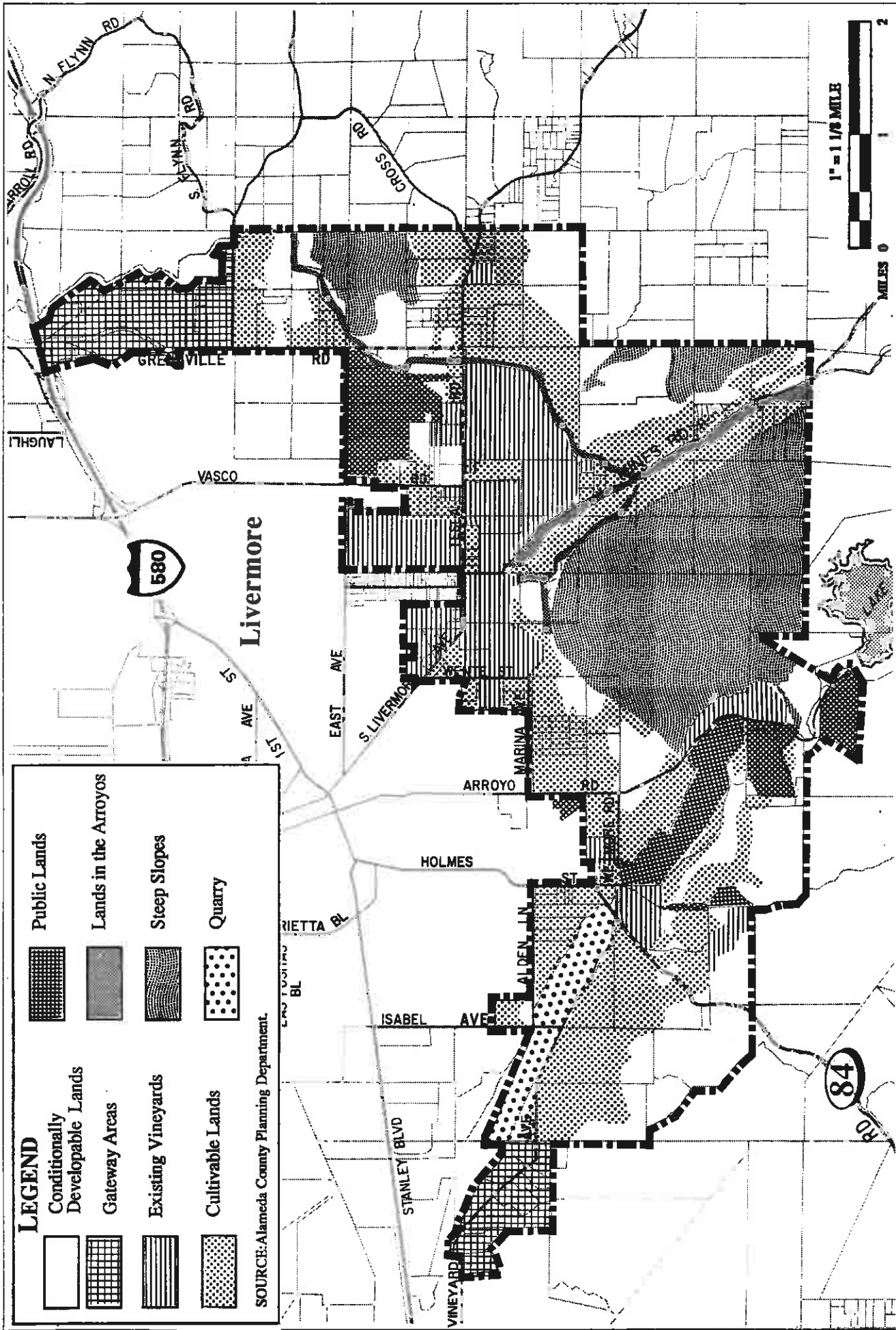
This alternative was proposed by County staff in January, 1991, and following review by the South Livermore Valley Study Steering Committee and the Alameda County Board of Supervisors, was selected as "the project" for environmental review in June, 1991. Due to preliminary findings of the environmental process and indications by the City of Pleasanton of its intent to annex the Ruby Hill area, this concept was replaced in February, 1992 by the Revised Draft South Livermore Valley Area Plan (as described and analyzed throughout this report) as "the project".

### Description

As a forerunner of the current proposed Plan, the Preliminary Draft contains many of the same elements. The stated goals include promotion and public recognition of the South Livermore Valley as a unique and historic Wine Region; proactive protection and enhancement of viticulture and other cultivated agriculture; preservation of the area's unique rural and scenic qualities; and discouragement of urban development on lands with existing vineyards or lands suited for agriculture. Specific objectives include expansion of agricultural acreage in the South Livermore Valley to between 4,000-7,000 acres; the development of additional wineries and other visitor attractions; and the creation of a mechanism to ensure permanent protection of the Valley's agricultural resources by forming an agricultural land trust that would use mitigation fees paid by new development within the Plan Area to purchase agricultural conservation easements.

Like the proposed Plan, the Preliminary Draft divides the Plan Area into several subareas, each with distinct land use policies (Figure V-1). The major subareas are 1) a Livermore Gateway corresponding with the proposed Plan; 2) a Pleasanton Gateway, roughly corresponding to the proposed Plan's Vineyard Avenue Corridor Transitional Area; and 3) a Vineyard District that includes the rest of the Plan Area, stretching from Patterson Pass Road west to the western limits of the Ruby Hill property. Within the Vineyard District, there are three major land classifications. "Cultivable Land" generally corresponds to those lands identified by a subcommittee of the Citizens Advisory Committee for the South Livermore Study as lands suitable for vineyard production. These lands were originally identified using the SCS "relative suitability" for grapes index, and local knowledge of soil conditions. "Steep Slopes" corresponds generally to lands with slopes over 25%, including relatively small but unconnected flatter areas within predominantly steep areas. "Conditionally Developable Lands" includes all remaining private land in the Vineyard District not under quarry permit or within the arroyos.





**LEGEND**

	Public Lands
	Lands in the Arroyos
	Steep Slopes
	Quarry
	Conditionally Developable Lands
	Gateway Areas
	Existing Vineyards
	Cultivable Lands

SOURCE: Alameda County Planning Department.

**FIGURE V-1**  
**PRELIMINARY DRAFT PLAN**



**SOUTH LIVERMORE VALLEY AREA PLAN**  
ENVIRONMENTAL IMPACT REPORT

ALAMEDA COUNTY PLANNING DEPARTMENT

ALAMEDA COUNTY, CALIFORNIA



Also like the proposed Plan, the Preliminary Draft maintains the base agricultural zoning in the Plan Area of 100 acre per residence. On lands designated "Cultivable", parcels with a maximum gross density of 20 acres per unit could be created if the property is rezoned to Planned Development (PD), 90% of the land is planted in cultivated agriculture and permanently protected with agricultural conservation easements, and design standards are met. Small-scale commercial establishments, such as wineries and bed-and-breakfast facilities would be conditionally permitted.

Lands over 25% are considered suitable for grazing, and will remain under existing agricultural zoning. Property owners controlling a minimum of 200 contiguous acres of "Conditionally Developable" lands may apply for PD zoning that allows low density residential development at a gross density of one unit per acre, and conditionally permits commercial and recreational uses such as golf courses, restaurants, inns, or other uses which promote the image of the Valley as a wine region. To permit good site planning, up to 20% of the "Cultivable Land" within a project may be developed, if other lands in the Plan Area currently classified as "Conditionally Developable" are removed from that classification by the installation of vineyards and protected with agricultural easements on an acre/acre basis. Smaller areas of Conditionally Developable Land could also be considered for development if adjacent to an existing planned development. A maximum of 2,675 units could be constructed on Conditionally Developable land within the Vineyard District.

The Preliminary Draft also calls for a Wine County Center of unspecified size, located near Ravenswood Park in Livermore, that would contain wine tasting rooms, accessory gift shops, restaurants, inns, conference centers, and retail outlets oriented to the wine country visitor trade.

Areas under 25% slope within the Livermore and Pleasanton Gateways could be developed at a density of 0-4 units, after the completion of specific plans that incorporated clustering, open space and other features to provide a graceful transition between the existing urban areas and the Vineyard District and to protect cultivable lands within the gateways.

Proposed development within a city's sphere of influence would have the first opportunity to process the development application. Livermore and Pleasanton would have the first opportunity to manage the development of their respective gateways. If a city rejected a development application, the applicants could apply to Alameda County for development under County jurisdiction.

The Preliminary Draft Plan calls for mitigation fees to be paid by all new development in the Plan Area. Proposed fees would be \$10,000 for each new dwelling unit on Conditionally Developable Land or Cultivable Land, \$30,000 per urban dwelling on Cultivable Land; and \$2,500 on each new dwelling in the gateway areas. However, a credit of \$20,000 would be given for urbanized Cultivable Land replaced with planted and dedicated Conditionally Developable Land. Commercial development would pay \$2.50 per square foot, excluding wineries. All fees would accrue to a newly established South Livermore Valley Agricultural Land Trust. The Trust's major purpose would be to purchase Plan Area lands in fee title or easements to retire development rights. Agriculture would also be promoted by prohibiting Williamson Act contract cancellation, and the encouragement of the development of new water supplies for irrigation.

### **Evaluation of Impacts**

**Land Use:** There are five main areas of Conditionally Developable Land that meet the 200 contiguous acre criteria for development. While these areas, generally located along the south and eastern periphery of the Vineyard District, would be expected to be the first to develop, the remaining lands designated as Conditionally Developable could potentially develop as well, since smaller areas that are adjacent to development can also develop. In addition, up to 20% of the Cultivable Land could be developed, if needed for logical site planning. Thus, while urban development is limited to a maximum of 2,675 units in the Vineyard District, it could cover up to 3,875 acres, including 1,200 Cultivable acres (20% of roughly 6,000 acres in the area). This does not include the Wine Center, which is mandated to be located on Cultivable land. If the approved Ruby Hill project is excluded, the Preliminary Draft Plan would permit up to 1,825 additional units on up to 3,000 acres, in the Vineyard District alone.

The Livermore Gateway contains approximately 600 acres less than 25% in slope, while the Pleasanton Gateway contains approximately 120. At the maximum density permitted (4 units/acre), these areas could generate 2,880 units on 720 acres.

In total, the Preliminary Draft could generate a maximum of 5,555 urban residences, on about 4,600 acres. Excluding Ruby Hill, an additional 4,705 units could be developed on 3,700 acres. This contrasts with the proposed draft Plan "worst case" maximum of 2,510 additional urban units on about 1,600 acres, excluding Ruby Hill.

The location of urban development would also be different. While the proposed Draft Plan clusters urban development adjacent to Livermore's southern edge and between Pleasanton and Ruby Hill, the Preliminary Draft places urban development along the

southern and eastern edges of the Plan Area, disconnected from existing urban areas. This would increase the potential interface between urban areas and agriculture in the South Livermore Valley. It would also place substantial residential development adjacent to existing and planned industrial areas along Greenville Road, including the Livermore National Labs.

Rural residential development permitted on Cultivable Lands could result in a maximum of some 300 residences on 20 acre parcels, including the subdivision of existing vineyards, and the creation of up to 4,000 additional acres of cultivated agriculture. The number, density and location of rural residential development and expanded agricultural activities is essentially the same in the Preliminary Draft and the proposed Plan.

**Population, Housing and Employment:** While potential rural residential population increases, and potential employment gains, would be the same as the proposed Plan, this alternative could result in an urban population increase of up to 13,268 persons, compared to up to 7,085 in the proposed Plan. How this population would be divided between the unincorporated County and the two cities would depend on whether new areas were annexed.

**Geology, Seismicity and Soils:** The increased number of structures and the larger population would increase the risk of damage or loss of life from seismic events. Location of substantial amounts of development east of Greenville Road would place more structures and people closer to an active fault and within the area most likely to have the strongest ground shaking as a result of seismic activity.

There would be fewer or no conflicts with quarry operations and designated Aggregate Resource Areas, since these areas are generally within the Cultivable Land designation.

Placement of urban development primarily on Conditionally Developable Land would preserve soils most suitable for intensive agriculture. However, at maximum buildout it could still result in up to 20% of Cultivable Land being urbanized, or 1,200 acres. In addition, the generalized nature of the classification, combined with the enormous potential difference in land value between Cultivable and Conditionally Developable land, could lead to difficulties and disputes in determining what portion of individual parcels were in which classification.

**Hydrology and Water Quality:** Potential impacts from flooding would be similar to the proposed Plan, although fewer people would be located within the Del Valle inundation area. Urban development on Conditionally Developable Land could require use of

wastewater package treatment plants. Package treatment plants would have to meet State Water Quality Control Board and Zone 7 requirements, with slight potential for malfunctions or leaks that could impact local surface water quality. This potential could be further reduced by requiring on-site storage capacity for such contingencies. It should be noted that the Veteran's Administration Hospital currently relies on an on-site wastewater treatment plant developed to a lower standard than what would be required for any new large-scale development, as witnessed by the system approved for the Ruby Hill project.

**Vegetation and Wildlife:** While potential impacts to sensitive plant and wildlife species could be expected to be mitigated, the Preliminary Draft could result in up to 3,000 acres more than the proposed Plan being urbanized. This would result in a greater loss of overall habitat than the proposed Plan. In addition, the location of urbanized development in areas separated from existing development along the southern and eastern edge of the Plan Area could result in the large-scale breakup of wildlife habitat in the Plan Area.

**Traffic:** The 87% increase in potential new urban dwellings under this alternative compared to the proposed Plan would be expected to increase traffic generation and impacts by a proportional amount. The location of significantly more development in the eastern portion of the Plan Area would further exacerbate anticipated future traffic conditions expected along Greenville Road as a result of industrial land buildout in Livermore. In addition, the location of urban development on the southern and eastern fringe of the Plan Area may require that local roads be improved and widened to accommodate significant amounts of increased traffic from these areas.

Due to the more remote locations of potential urban development, and the required lower densities, the Preliminary Draft Plan would be less amenable to transit improvements than the proposed Plan.

**Air Quality:** The Preliminary Draft Plan could be expected to have worse impacts on regional air quality than the proposed Plan, due to the 87% increase in traffic generation from urban residential development, combined with the potential for worse intersection impacts and less potential for transit improvements. Full development of this alternative would result in BAAQMD thresholds of significance for criteria pollutants.

**Noise:** Noise generation from the Preliminary Draft Plan would be higher than the proposed Plan, due to increases in traffic. Potential noise conflicts between quarry areas and urban residential development would be reduced, since the Alden Lane area would

not be urbanized under this alternative.

**Cultural and Historic Resources:** The significantly larger area that could be urbanized under this alternative would increase the potential for the disturbance or loss of archeological resources. There would be no significant difference in impacts to historic structures, including wineries.

**Visual Quality:** The location of new urban development on Conditionally Developable Land would result in a major change in landscape character in visually sensitive areas. Much of the Conditionally Developable lands consist of the rolling grassy hills that rise above the valley floor. While often relatively distant from major public roads, these development of portions of these areas could be highly visible to large portions of the Plan Area.

**Public Services and Utilities:** While potential impacts to public services and utilities would be the same under this alternative for rural residential and commercial development as the proposed Plan, the 87% increase in the potential number of urban residential units, and their potential location in the unincorporated County, would have significantly higher impacts on services. Unless annexed by an existing water retailer, new urban development would have to contract with Zone 7 directly to purchase treated water. Similarly, if urban development occurs in unincorporated areas and the cities refused to provide sewer connections, package wastewater treatment plants would be necessary. Large-scale unincorporated development would require additional County police and fire personnel, and development on the periphery of the Plan Area could require additional fire stations, and possibly police sub-stations, to maintain adequate response times. These impacts would be more severe if Ruby Hill or other large projects are annexed to cities, reducing the basis for funding services in the unincorporated County.

Most potentially developable areas would be within the Livermore Joint Unified School District. Assuming a maximum of 4,225 new urban residences within the Livermore District boundaries, student generation would require 2 new elementary schools and a middle school, and half of a new high school. The location of dispersed clusters of new urban development on the southern and eastern periphery of the Plan Area could result in the need for relatively inefficient on-site elementary schools, while new middle and high schools would probably require bussing.

Impacts on park services would proportionately increase with the increased amount of urban development under this alternative, relative to the proposed Plan. However, this

alternative is less likely to conflict with LARPD plans for a historical receiver site near Ravenswood Park, or expansion of Sycamore Grove Park, since these areas are designated as Cultivable Land.

### **Goals and Objectives**

While the Preliminary Draft Plan is similar to the proposed Plan in many aspects, it lacks the direct mitigation requirements of replacing agricultural lands lost to urban development. Under the Preliminary Draft, an urban development project that occupied only Conditionally Developable land would simply pay a per-unit fee of \$10,000 to an agricultural land trust as mitigation. Since a land trust must rely on voluntary sales of easements or fee title to protect agricultural lands in the Valley, a lack of willing sellers could result in a new urban development, a land trust with a large bank account, and no net increase in agricultural land in the Valley. Only if an urban development project included Cultivable Land is there a requirement for agricultural land mitigation, and even then the developer has the choice of simply paying more money in mitigation fees to the land trust.

The generalized nature of the Cultivable and Conditionally Developable Land classifications, which were derived in part from SCS data and in part from recommendations of local viticulturalists, could make it difficult for individual land owners or the County to accurately gauge the exact location of the transition between the two classifications. Since there is likely to be an enormous difference in value between Cultivable Land, which permits one dwelling per 20 acres if 90% of the land is planted and dedicated, and Conditionally Developable Land, which permits one unit per acre if mitigation fees are paid, the lack of a clearly demonstrable line between the two classifications could result in numerous disputes.

Because of the location of large areas of Conditionally Developable land separated by Cultivable Land from existing urban development, the Plan clause permitting development on up to 20% of Cultivable Land, and the challengeable classification system, the result could be that the expectations of Cultivable Land property owners for future urban development would be high enough to strongly discourage further agricultural investment or the dedication of agricultural conservation easements via a land trust or 20 acre parcels. If this were to happen, the net result would be large-scale urban development around the periphery of the Plan Area with little or no change in the amount of agricultural land in production, or under permanent agricultural easement, so that the basic Plan objective of a minimum of 5,000 acres of intensive agriculture would not be met. Modification of the Preliminary Draft to exclude development on



Cultivable Land, and to include direct mitigation requirements, similar to the proposed Plan, could increase the likelihood of reaching the goals and objectives.

## **B. CITIZENS ADVISORY COMMITTEE ALTERNATIVE**

This alternative was originally conceived by the South Livermore Valley Study Citizens Advisory Committee (CAC) in April, 1989 as a recommended planning framework for the South Livermore Valley.

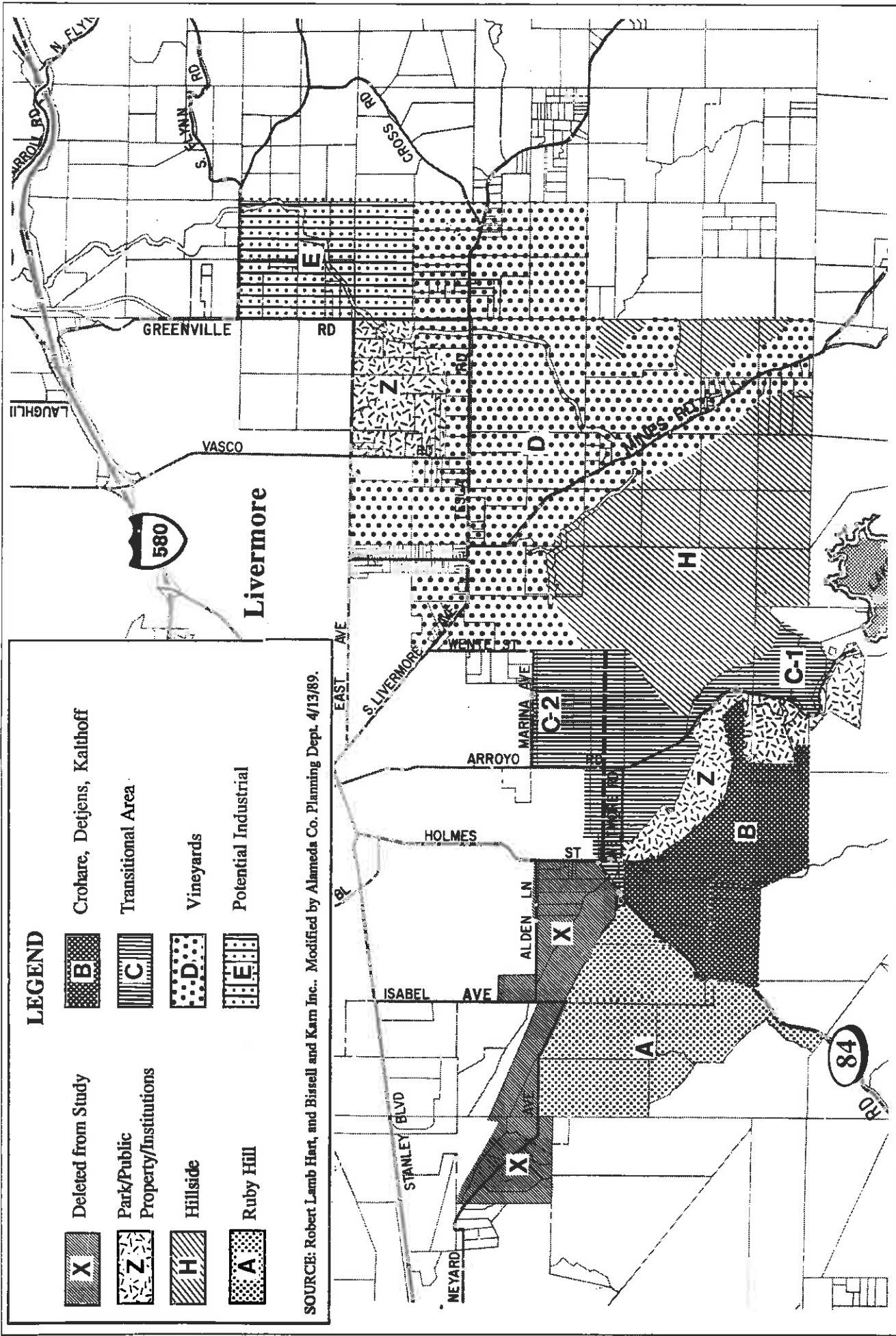
### **Description**

Like the proposed draft Plan, the CAC Alternative divides the Plan Area into sub-areas. The existing agricultural zoning is retained as a base, but proposed development in each subarea may be considered if the minimum standards for that subarea are met. Subarea standards include maximum gross densities for residential development, a minimum percentage of land that must be dedicated in conservation easements for intensive agriculture, and a minimum project size. In addition, the CAC Alternative requires that all new non-agricultural construction in the Plan Area would be subject to a \$1.00/square foot fee to be used to promote agriculture, through marketing, enhancement of the water supply, a land trust, or other (unspecified) means.

The CAC Alternative subareas are shown in Figure V-2. Proposed standards for each subarea are described below:

- **Area A (Ruby Hill)** allows a density of 1 unit per 1.5 acres if 25% of the area is dedicated in conservation easements for intensive agriculture. A minimum of 200 acres would be required in order for a rezoning application to be considered. Approximately 860 units would be allowed under these criteria, and 325 acres dedicated. (This is approximately what was approved in this area).
- **Area B (Kalthoff-Detjens-Crohare properties)** allows an overall density of 1 unit per 1.5 acres, with easement and application requirements similar to Ruby Hill. About 800 units would be allowed under these criteria, and 300 acres dedicated.
- **Area C-1 (Cresta Blanca - Olivina properties)** allows a density of about 1 unit per 20 acres if 30 percent of the area is dedicated in conservation easements for intensive agriculture. A minimum of 100 acres would be required for a rezoning application to be considered. A total of about 40 units would be allowed, and





**LEGEND**

- |  |                                   |  |                            |
|--|-----------------------------------|--|----------------------------|
|  | Deleted from Study                |  | Crohare, Deijens, Kalthoff |
|  | Park/Public Property/Institutions |  | Transitional Area          |
|  | Hillside                          |  | Vineyards                  |
|  | Ruby Hill                         |  | Potential Industrial       |

SOURCE: Robert Lamb Hart, and Bissell and Kam Inc.. Modified by Alameda Co. Planning Dept. 4/13/89.

**SOUTH LIVERMORE VALLEY AREA PLAN ENVIRONMENTAL IMPACT REPORT**

ALAMEDA COUNTY, CALIFORNIA



ALAMEDA COUNTY PLANNING DEPARTMENT

**FIGURE V-2**  
**CITIZENS ADVISORY COMMITTEE ALTERNATIVE**



240 acres dedicated.

Area C-2 (bounded by Wente Street on the east, Livermore on the north and west) allows an overall density of 2 units per acre with the expectation that the area would be annexed to Livermore. On a parcel-by-parcel basis, about 15 percent of the area would be required to dedicate conservation easements, with the purpose of creating a transitional buffer between the C-2 area and the adjoining C-1 and D areas. Area C-2 would allow about 800 new units, and require 90 acres to be dedicated to intensive agriculture.

Area D (bounded by Wente Street on the west, the edge of the Plan Area on the east and south, and the ridge 1/2 mile north of Tesla Road, excluding areas with 30 percent or more slopes) is the largest CAC Alternative subarea. Area D allows an overall density of 1 unit per 20 acres, if 70 percent of the area is dedicated through conservation easements. A minimum area of 100 acres would be required for a rezoning application to be considered. Approximately 250 units would be allowed in this area, if 3,500 acres are dedicated.

Area E (bounded by Greenville Road to the west, Patterson Pass Road to the north, and Area D to the south) allows industrial and industrially-related development. The development of viticulture in this area, in the CAC's view, is not considered critical to maintaining agriculture in the Plan Area. With minor exceptions, residential densities of 1 unit per 80 acres would be permitted.

Area H (Hillside Area containing slopes over 30 percent) allows residential densities of one unit per 80 acres. The CAC did not consider these lands to be suitable for development or for intensive agriculture. The primary use would be cattle grazing. A maximum of 31 units could be constructed.

Area Z (Public Lands) have no densities.

Area X (Area north of Ruby Hill) would be excluded from the Plan Area. This area corresponds to the quarries, Alden Lane and Vineyard Corridor Transitional Areas in the proposed Plan.

The CAC Alternative does not consider the area north of Patterson Pass Road and east of Greenville Road (the Livermore Gateway in the proposed Plan).

### **Evaluation of Impacts**

**Land Use:** The CAC Alternative would permit up to 2,781 additional residences in the Plan Area (excluding the Alden Lane and Vineyard Avenue Corridor Transitional Areas), or 1,921 above those approved in the Ruby Hill Area. Excluding Ruby Hill, 290 units would be rural residential (20 acre parcels) and 1,600 units would be urban. The total unit count and density mix would thus be virtually identical to the maximum possible development in the proposed draft Plan, if the transitional areas are excluded. However, while the proposed Plan would place all potential future urban development in the Vineyard Area adjacent to the City of Livermore, the CAC Alternative splits potential future urban development between lands adjacent to Livermore (Area C-2) and lands between Ruby Hill and the Arroyo del Valle (Area B). Between these two subareas, up to 1,410 acres could be urbanized, versus a maximum of 812 acres under the proposed Plan. Urban development in Area B could also increase the potential urban/agricultural interface.

It can be assumed (although not part of the CAC Alternative) that the Vineyard Avenue and Alden Lane transitional areas will be annexed and developed in Pleasanton and Livermore, respectively. Both cities have recently initiated the annexation process for the respective areas. Therefore, the total level of urban residential development is likely to be the same for the proposed Plan and the CAC Alternative, when these areas are considered.

Commercial development (a Wine Center) is not expressly considered in the CAC Alternative. Like the proposed Plan, however, the alternative considers that the most likely development to occur in the Patterson Pass area is industrial.

Maximum development permitted under the CAC Alternative would require the dedication of 4,455 acres for intensive agriculture. The large majority of this acreage (3,500 acres) would be located in Area D. Potential rural residential development would be similar in number and intensity as the proposed Plan.

**Population, Housing and Employment:** Potential population and housing impacts resulting from the CAC Alternative would be identical to the maximum potential impacts of the proposed Plan. The lack of a specific requirement for a Wine Center in the CAC Alternative could reduce the job-creation potential of this alternative, resulting in a slightly worse jobs/housing balance in Livermore.

**Geology, Seismicity and Soils:** Seismic hazard considerations would be similar to the

proposed Plan. However, because the CAC Alternative allows development on slightly higher slopes (up to 30 percent), there could be a minor increase in the risk of landslide and erosion hazards.

Because the Vineyard Avenue and Alden Lane transitional areas have been excluded from this Alternative, potential conflicts with quarry operations and designated Aggregate Resource Areas resulting from Plan implementation would be significantly reduced.

The additional amount of land that could be potentially urbanized under the CAC Alternative may result in additional acres of potentially productive agricultural soils being covered.

**Hydrology and Water Quality:** Potential impacts from flooding would be similar to the proposed Plan. Urban development in Area B could require use of a package treatment plant, unless it was served by the City of Livermore via a new sewer line up either Arroyo Road or Highway 84.

**Vegetation and Wildlife:** While potential impacts to sensitive plant and wildlife species could be expected to be mitigated, the increased acreage subject to development, and its location farther from existing urban areas would result in a proportionally higher loss of overall habitat than the proposed Plan.

If only areas required to be dedicated for intensive agriculture were cultivated, and these areas included all existing vineyards, the CAC Alternative would result in fewer total acres in cultivated agriculture than the maximum possible under the proposed Plan (4,445 vs. 6,000). This would correspond to a relative reduction in potential impacts to wildlife habitat from cultivated agriculture.

**Traffic and Circulation:** The CAC Alternative would generate similar amounts of overall residential and rural commercial traffic as the proposed Plan. The development of Area B could have localized impacts on Vallecitos and Arroyo Road. Because no Wine Center is proposed, overall commercial traffic could be significantly reduced in this alternative, resulting in a net decrease in trip generation of about 21%. Development of Area B would be difficult to serve with transit, due to the distance from existing bus routes.

**Air Quality:** Although total traffic volumes would be less than the proposed Plan, development of the CAC Alternative would still result in the generation of hydrocarbons,

nitrogen oxides and PM<sub>10</sub> that would exceed the "thresholds of significance" suggested by the BAAQMD.

**Noise:** The CAC Alternative would have similar noise impacts to the proposed Plan.

**Cultural and Historic Resources:** Potential impacts on archaeological resources could be slightly greater, given the larger acreage that would be subject to development. Potential impacts on historical resources are the same as the proposed Plan.

**Visual Quality:** The CAC Alternative will generally have similar visual impacts as the proposed Plan. However, potential impacts to visually sensitive areas south of Wetmore Road would be reduced. Development of Area B would, in general, be screened by wooded areas and topography from Plan Area roads.

**Public Services and Utilities:** Water and wastewater impacts would be similar to the proposed Plan, with the exception of Area B development. The development of 800 units in this area would require the extension of water and sewer services from Livermore, or the use of a package wastewater treatment plant. Development that could take place under the CAC Alternative would likewise have similar impacts on police, fire, school and park facilities and services as the proposed Plan, with the exception of Area B. If this area was developed in unincorporated Alameda County, independent funding for police and fire services would probably be required. While 800 homes would not be sufficient to generate the need for a new elementary school, the distance from existing schools in Livermore would require either bussing or private transportation of school children.

While development of Area B could conflict with LARPD plans for the expansion of Sycamore Grove Park to the south, the CAC Alternative would have less potential conflicts with expansion of the park to the north.

### **Goals and Objectives**

Implementation of the CAC Alternative may not result in the achievement of the proposed Plan's basic objective of a minimum of 5,000 acres of intensive agriculture. If only areas required to be dedicated for intensive agriculture as a condition of development were cultivated, and these areas included all existing vineyards, the CAC Alternative would result in fewer total acres in cultivated agriculture than the maximum possible under the proposed Plan (4,445 vs. 6,000).



Furthermore, since there is no direct tie between the various subareas in the CAC Alternative, considerable development could occur in Areas A, B, and C-2, with only a relatively small amount of acreage dedicated for intensive agriculture. Unless there was development of 20 acre parcels in Areas C-1 and D, the overall result could be almost 2,500 additional units in the Plan Area, and only 715 new acres dedicated for intensive agriculture.

Implementation of the CAC Alternative would result in significant funds accruing to a Land Trust. Assuming a 4,000 square foot average home size, the proposed fee of \$1.00/square foot could generate \$7,684,000. Together with the minimum mitigation fees of \$8.5 million anticipated from the Ruby Hill project, there would be some \$16 million available for the purchase of land or easements, and/or the promotion of the area as a unique wine region.

### **C. VITICULTURAL ZONING ALTERNATIVE**

This alternative was derived from public testimony during the Ruby Hill approval process that called for an examination of an alternative using traditional zoning techniques, such as used in Napa County, in areas intended for viticulture and other cultivated agriculture.

#### **Description**

This alternative retains the existing base agricultural zoning of 1 unit per 100 acres in the Plan Area. No subareas are created. Properties with cultivable lands (as determined by the Alameda County Soil Survey and modified by the CAC) could apply for PD zoning, permitting densities of up to 1 unit per 20 acres on these lands, subject to design and use standards. The higher density would not be contingent on cultivation or dedication of agricultural lands. Nor would there be any agricultural mitigation fees. Instead, this alternative would rely on smaller parcel sizes on cultivable lands to stimulate new investment in agriculture, based on the presumption that a major impediment to new investment in viticulture in the South Livermore Valley has been the large minimum parcel size. Lands with no cultivable soils would remain in the existing agricultural zoning designation.

Small commercial development, such as wineries and bed-and-breakfast establishments, would be allowed as conditional uses, as in the proposed Plan. There would be no further urbanization permitted, and the County would attempt to block annexations by Livermore or Pleasanton that would result in urban development. No Wine Center

would be developed.

As approved projects, Ruby Hill and Crane Ridge, including the required planting and dedication of agricultural acreage and the payment of mitigation fees, would still take place under this alternative.

### **Evaluation of Impacts**

**Land Use:** This alternative would permit up to approximately 350 new rural residential units on 20 acre parcels, including existing vineyards and lands within the three transitional areas and the Livermore Gateway. Land use impacts would be similar to those discussed for rural development under the proposed Plan. However, use of traditional 20 acre zoning in large areas of existing viticulture, with no provisions for clustering, could result in less efficient farming operations.

**Population, Housing and Employment:** Viticultural zoning could result in a population increase of approximately 1,000 persons in unincorporated Alameda County. Employment growth would be similar to rural employment in the proposed Plan. There would be no additional development in Pleasanton or Livermore as a result of this alternative, and therefore no population or jobs impacts.

**Geology, Seismicity and Soils:** Seismic, geologic and soils impacts would be similar to those identified for rural development in the proposed Plan. Lack of urban development would reduce overall seismic and geologic risks to life and property. However, there would be no direct mitigation for the loss of cultivable soils as a result of rural development. Assuming 350 two-acre development envelopes, this could represent a loss of up to 700 acres of cultivable soils. Traditional 20 acre zoning would not allow clustering of units on less valuable soils to mitigate this impact.

**Hydrology and Water Quality:** Viticultural zoning would have similar hydrologic and water quality impacts as rural residential and vineyard development under the proposed Plan. However, unless provisions were made for limiting horse farms, this alternative could result in higher levels of nitrate production, since there would be no requirement to cultivate.

**Vegetation and Wildlife:** Viticultural zoning would have similar impacts on vegetation and wildlife as rural residential development under the proposed Plan. However, as there would be no requirements for cultivation of viticulture or other agriculture, and no agricultural mitigation would result from new urban development, actual acreages of

agriculture resulting from this alternative could be much lower than the proposed Plan. This could result in less conversion of grassland habitat, with consequent reduction of impacts on plants and wildlife, than in the proposed Plan. In addition, lack of urban development under this alternative would eliminate habitat loss as a result.

**Traffic and Circulation:** Traffic impacts would be similar to rural development impacts under the proposed Plan. The very low density and dispersed nature of new development under this alternative would not result in significant impacts to road or interchange capacity. New driveways as a result of rural residential development along busy roads such as Vallecitos could create traffic safety problems. Development under this scenario would be too low density to be served by transit.

**Air Quality:** This alternative would generate substantially fewer vehicle trips than the proposed Plan. Production of hydrocarbons, nitrogen oxides and PM<sub>10</sub> would be less-than-significant according to BAAQMD's "thresholds of significance".

**Noise:** Due to the small amount of new development permitted under this alternative, and the low projected traffic volumes, no noise impacts would be expected from this alternative, as long as new rural residential development was required to be sited a minimum distance from heavily travelled roads in the area, as discussed the noise impact section of this report.

**Cultural and Historic Resources:** Impacts resulting from this alternative to cultural and historic resources would be similar to those identified for rural development under the proposed Plan.

**Visual Quality:** Visual impacts resulting from this alternative would be similar to those identified for rural development under the proposed Plan. However, mitigation techniques available under the proposed Plan, such as clustering of rural residential units in less visible areas, would not be available under traditional zoning.

**Public Services and Utilities:** Impacts to public services and utilities would be similar to those identified for rural development under the proposed Plan.

### **Goals and Objectives**

This alternative represents the traditional zoning method of agricultural preservation and enhancement. While the Viticultural Zoning Alternative would be straight-forward to implement, and could result in increased acreage under cultivation, the lack of a

permanent agricultural protection mechanism, together with a long-standing demand for developable land for housing, would probably result in a long-term net loss of agricultural land in the South Livermore Valley. In the absence of a mechanism that provides permanent separation of development rights from agricultural lands, there is no guarantee under this alternative that the viticultural zoning will not some day be rezoned to a higher density of development. While 20 acre zoning could lower barriers to entry into new cultivation, there is also no guarantee that cultivable lands would be used productively, since it would also reduce the relative cost for (very) large lot subdivisions, horse farms, and ranchette-type development. Following subdivision to 20 acres, there could be long-term pressure to further reduce required lot sizes, leading to large-scale rural residential development that would be too small for viticulture but too spread out for the efficient provision of public services. There would also be no guarantee that the expansion of Livermore and Pleasanton would not result in additional urban-density development in the South Livermore Valley.

#### **D. NO PROJECT ALTERNATIVE**

As required by the CEQA Guidelines, the following section describes the impacts of not adopting any Area Plan for the South Livermore Valley, and instead relying on existing plans and policies now in effect.

##### **Description**

This alternative would retain current zoning ordinance requirements as well as existing land use policies set forth in Alameda County's 1977 *Livermore-Amador Valley Planning Unit General Plan*. Existing policies are fully described in Section IV.-A (Land Use) above, and designations of the LAVPU General Plan are illustrated in **Figure A-7**. Key elements of this alternative include:

- Agricultural zoning, with a 100-acre minimum site area per residence.
- Preservation of agricultural land achieved through Williamson Act contracts only.
- Development within incorporated areas favored over unincorporated urban development.
- Consideration of projects (not to exceed 0.9 units per gross acre) only if

they promote existing agriculture, provide for renovation or construction of wineries, generate a long-term fiscal benefit to Alameda County, and provide a fair return to land owners.

The "no project" alternative includes the approved Ruby Hill and Crane Ridge projects, including their viticultural and mitigation fee components.

### **Evaluation of Impacts**

**Land Use:** Under existing policies, potential additional dwellings in the Plan Area would be limited to large parcels that could be divided into 100 acre parcels, or smaller currently vacant parcels that contain legal building sites. Subdivision of larger parcels could potentially result in about 30 new building sites. The number of vacant legal building sites is unknown, but given the limited access system in the area, is probably limited to about 50 additional dwellings. Additional agricultural activities, including the expansion of viticulture and the construction of wineries, could occur if deemed desirable by individual land owners, as permitted uses with no land use regulation.

As amended, the LAVPU General Plan also permits the consideration of additional large-scale "stand alone" suburban-density residential projects, similar to the approved Ruby Hill project. However, the number of projects, or a total number of units, that could result from these considerations is impossible to quantify.

This alternative would also not prevent further annexation and development of lands within the Plan Area by Pleasanton and Livermore. Given the cities' past history of urbanizing cultivable lands, and the recent initiation of annexation proceedings by the two cities for portions of the Plan Area, it is likely that these areas would eventually be developed at urban densities. However, with no Area Plan policies in place, it is unlikely that the development of these areas would be required to contribute to the preservation and enhancement of South Livermore Valley agriculture.

**Other Impacts:** To the extent that development of additional dwellings in the Plan Area is limited to that permitted by existing County zoning, this alternative would have a minimal effect on geologic, soils, hydrologic, biotic, air, cultural and historic or visual resources. The small increase in population and employment possible under existing agricultural zoning would minimize impacts to traffic and circulation, noise, and public services and utilities.

However, additional large-scale unincorporated development, or continued annexation

and development in the Plan Area by Pleasanton and Livermore, could contribute substantially to local and cumulative impacts in each of these areas. The extent of these impacts would need to be assessed on a project-by-project basis.

### **Goals and Objectives**

The No Project Alternative relies on traditional zoning to preserve agriculture. While this technique may be viable in the short-term, it provides no incentives for agricultural expansion, nor does it guarantee long-term protection of existing agricultural resources. Because of continued pressure for the urbanization of lands in the South Livermore Valley, it is highly unlikely that the goals and objectives of the proposed Plan for the preservation and enhancement of agriculture would be achieved. While existing County zoning would severely limit development to new 100 acre parcels, large-scale incorporated and unincorporated development could still be considered on a case-by-case basis, and there would be no formal mechanism for the long-term protection of agricultural resources.

## **E. OTHER ALTERNATIVES CONSIDERED AND REJECTED**

### **Off-Site Alternative**

Recent court cases have suggested that EIR alternatives analysis include an examination of off-site alternatives. The closest, and most comparable, area in terms of size and location would be the 15,500 acre North Livermore site presently under planning study by both Livermore and Alameda County. However, this alternative was rejected for several reasons. First, the soils characteristics of the North Livermore area are unlikely to support viticulture. There are no historical records of this area having vineyards. Furthermore, the predominant soils types, Clear Lake Clay, Linne Clay Loam, and Solano Fine Sandy Loam have Storie Index ratings of "fair" to "verypoor" suitability for intensive agriculture. The SCS also rates these soils types as "verypoor" for grapes. In addition, a high water table, no readily available source of imported untreated water, and low-quality groundwater would make the irrigation of intensively cultivated crops difficult.

Second, an off-site alternative would not provide for the preservation and enhancement of agriculture in the South Livermore Valley. Application of proposed Plan policies to another area would be, for all intents and purposes, the same as the No Project Alternative discussed above.

### **Livingston Draft Specific Plan**

In August, 1989, as part of the South Livermore Valley Study, a draft Specific Plan was prepared for the area by Livingston and Associates. The Livingston Plan contained the following key elements:

- . Establishment of a 6,100 acre agricultural preserve adjacent to the southern edge of Livermore, with a 40-acre minimum site requirement (with provisions for splitting off a second homesite), and a fluctuating number of "development credits";
- . Identification of "receiving areas" to the south and east of the agricultural preserve that could develop at varying densities, if development credits were purchased from preserve landowners. The two major receiving areas would be Ruby Hill and the area east of Greenville Road.
- . Establishment of a development credit guarantee fund, financed by a county-wide bond issue.

The Livingston Plan could result in up to 3,778 residential units in the Plan Area. Commercial development is limited to a conditionally permitted Wine Center and suitable visitor-serving establishments.

This alternative was rejected from further consideration in this analysis for two reasons. Approval of the Ruby Hill project since this draft Plan was prepared has eliminated one of two major receiver areas designated by the Plan, reducing the potential for a successful transfer system within the Plan Area. Furthermore, the Plan's reliance on the passage of a substantial County-wide bond measure solely for the protection of South Livermore Valley agriculture was considered infeasible.

### **F. THE ENVIRONMENTALLY SUPERIOR ALTERNATIVE**

Due to minimal development that could occur under existing County zoning, the No Project Alternative would have the least environmental impact. Therefore, per the CEQA Guidelines, the Viticultural Zoning Alternative is designated as the "environmentally superior alternative" because it would limit additional development within the Plan Area to approximately 350 rural residences and related commercial development.









## VI. CEQA CONSIDERATIONS

### A. CUMULATIVE IMPACTS

Cumulative impacts are defined as "two or more individual effects which, when taken together, are considerable or which compound or increase other environmental impacts" (CEQA Guidelines, Section 15355). This document is a program EIR which focuses on cumulative effects of potential development that could occur in the Plan Area as a result of the proposed South Livermore Area Plan policies. On a larger scale, CEQA requires discussion of significant cumulative impacts of a project when considered together with other closely related approved, proposed, or foreseeable development. As shown in Figure VI-1 and listed on Table VI-1, a number of large development projects are currently under study in the vicinity of the Plan Area. Smaller projects which are in the vicinity of the Plan Area have also been included on the cumulative project list. Appendix D lists EIRs and other planning documents containing information on potential impacts of these projects.

If all the projects listed on Table VI-1 were implemented, the population in the vicinity of the Plan Area (Tri-Valley and western San Joaquin County) could theoretically increase by nearly 200,000 people. A number of cumulative impacts could be expected to result from the development of all of these projects, to which the Plan Area would contribute. Cumulative impacts would include:

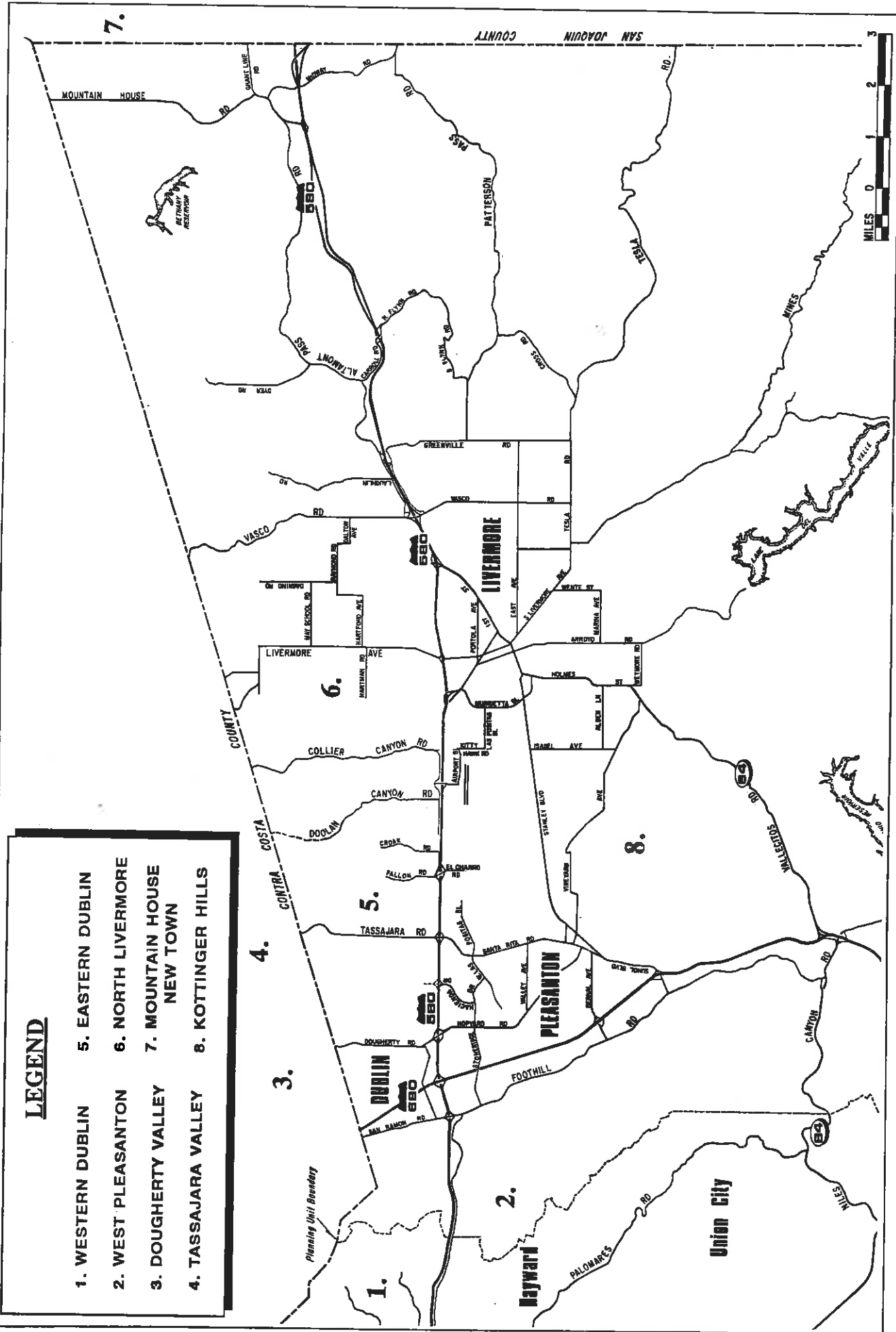
Land Use: Nearly 50,000 acres are presently being considered for development in the Plan Area vicinity. Much of this undeveloped land would be converted to urban or associated uses. Much of the development would be low-density and would therefore contribute to urban sprawl and loss of open space. Grazing and productive agricultural lands would also be lost, although needed additional housing units would be provided. Visual quality could be severely affected by loss of open space and ridgetop development.

Hydrology and Water Quality: Surface runoff from increased impervious surfaces from cumulative development in East Dublin, North Livermore, and the Plan Area



**LEGEND**

- 1. WESTERN DUBLIN
- 2. WEST PLEASANTON
- 3. DOUGHERTY VALLEY
- 4. TASSAJARA VALLEY
- 5. EASTERN DUBLIN
- 6. NORTH LIVERMORE
- 7. MOUNTAIN HOUSE NEW TOWN
- 8. KOTTINGER HILLS



**SOUTH LIVERMORE VALLEY AREA PLAN ENVIRONMENTAL IMPACT REPORT**

ALAMEDA COUNTY, CALIFORNIA



ALAMEDA COUNTY PLANNING DEPARTMENT

FIGURE IV-1

**CUMULATIVE PROJECT LOCATION**



could affect groundwater quality of the central basin and increase volume and frequency of flood flow events.

Vegetation and Wildlife: Conversion of currently undeveloped land would continue to adversely affect plant and wildlife species of special concern by destruction of habitat and human and domestic animal disturbance. Important plant communities in the Tri-Valley area, such as the oak woodlands and grasslands, would be reduced in size.

Traffic and Circulation: Potential cumulative traffic impacts could be so extensive as to preclude full development of all the projects on the cumulative list.

Air Quality and Noise: Air quality would be significantly reduced in the region, and noise levels would significantly increase, especially from traffic sources.

Public Services: All public services and facilities such as fire, police, schools, and recreation would have to be expanded to meet increased demand and service districts would have to extend their service area boundaries. Expanded wastewater treatment facilities and export capacity would be required. The existing water supply in Zone 7's service area would be inadequate to meet projected cumulative water needs.

## B. GROWTH-INDUCING IMPACTS

CEQA requires discussion of the ways in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

Approval of the proposed Plan by the County and subsequent annexation agreements with the cities of Livermore and Pleasanton could result in development as described on Table III-1 of this document. Under a maximum worst-case scenario, potential rural development could increase the population by about 800 people, the number of housing units by about 290, and commercial square footage by about 80,000 square feet. Also under a maximum worst-case scenario, potential urban development could increase the population by about 7,000 people, the number of housing units by about

**TABLE VI-1. Cumulative Project List\***

PROJECT	Housing Units	Commercial/Industrial (sq. ft.)	Land Area* (acres)	Status
East Dublin	15,000	13,000,000	7,000	proposed
West Dublin	3,250	100,000	3,250	proposed
North Livermore	2,700 to 16,500	5,150,000 to 7,700,000	15,000	proposed
Pleasanton Ridge	2,650	---	7,100	proposed
Dougherty Valley	7,000 to 11,000	---	6,000	proposed
Tassajara Valley	5,000	---	5,000**	proposed
Mountain House	15,300	7,000,000	4,650	proposed
Kottinger Hills	122	---	560	proposed
Ruby Hills	850	---	1,300	approved
<b>TOTALS:</b>	<b>51,850 to 69,650 dus</b>	<b>25,250,000 to 27,800,000</b>	<b>49,850 ac.</b>	

\* The land use numbers describing the proposed projects are approximate, and would not be totally urbanized.

\*\* Acreage assumed.



2,500 units, and commercial square footage by about 100,000 square feet. The actual development in the Plan Area would very likely be considerably less. The impacts associated with the growth-inducing effects of the proposed Plan have been analyzed throughout Chapter IV. of this DEIR document. Increased population would also stimulate an increased demand on local and regional commercial establishments. This in turn could result in an increase in commercial land uses and associated increase in secondary population growth and demand for housing in adjacent areas.

The proposed Plan proactively controls long-term growth by providing for the creation of agricultural easements on up to 5,400 acres of land within the Plan Area.

### **C. SIGNIFICANT UNAVOIDABLE IMPACTS**

As identified and discussed in Chapter IV. of this report, adoption and implementation of the proposed Plan would result in significant unavoidable adverse impacts. Rural residential development, together with the required expansion of cultivated agriculture, would result in the loss of grassland habitat and a general reduction in species diversity. Urban development anticipated by the proposed Plan would also result in the loss of grassland habitat, and would result in emissions of criteria pollutants that would exceed BAAQMD's "threshold of significance". Furthermore, urban development in the Alden Lane area would result in the loss of access to a significant mineral resource, as identified by the State Board of Mines and Geology.

### **D. SHORT-TERM USES vs. LONG-TERM PRODUCTIVITY**

CEQA requires a discussion that balances potential short-term uses of the environment that may be promoted by the project against maintaining options for long-term productivity and environmental protection. In other words, the EIR must address the following question: by approving a project today, no matter how beneficial it may be, what future beneficial options are foreclosed?

Proposed Plan policies secure the long-term productivity of a substantial amount of the Plan Area by means of agricultural mitigation fees from urban development allowed adjacent to existing service areas. Under the proposed Plan, nearly 40 percent of the Plan Area could potentially be brought under agricultural production and a somewhat lower percent of this area could be placed under permanent protection from urban development. On the other hand, up to 200 acres of prime farmland soils could be lost as a result of urban development.

If the Plan were not adopted and implemented, the overall long-term agricultural productivity of the Plan Area could be eroded by continued development pressure.

#### **E. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

CEQA states that environmental impacts associated with a proposed project may be considered significant and irreversible for the following reasons:

- Uses of nonrenewable resources to construct the project may be irreversible, since a large commitment of such resources makes removal or non-use thereafter unlikely.
- Both primary and secondary impacts generally commit future generations to similar uses.

In general, residential and commercial development resulting from the proposed Plan would entail the commitment of natural, energy and human resources. This commitment would be a long-term obligation since it is difficult to envision circumstances that would justify the return of the land to its original condition once it has been developed. Specifically, implementation of the proposed Plan could result in urban development occurring on top of significant mineral resource deposits, eliminating access to these resources. Approximately 180 acres of the Alden Lane Transitional Area is within State-designated Regional Significant Aggregate Resource Areas.





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## **APPENDIX A**



# ALAMEDA COUNTY PLANNING DEPARTMENT

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## DRAFT

### **REVISED SOUTH LIVERMORE VALLEY AREA PLAN** **Livermore-Amador Valley Planning Unit**

**February 6, 1992**

#### **INTRODUCTION**

The South Livermore Valley area, sometimes referred to as the "Fertile Crescent", has a long and colorful history as a premium varietal wine-producing region. Blessed with good soils and a Mediterranean climate, the area has consistently produced internationally acclaimed wines from local vineyards. Several wineries are over 100 years old, and include among their ranks the oldest family-owned winery in California.

Unfortunately, vineyards, wineries, and soils suitable for vineyards in the area have been steadily lost to encroaching urbanization as the cities of Livermore and Pleasanton have rapidly expanded over the last several decades. According to a study conducted for the Alameda County Planning Department, over 1,800 acres of soils considered suitable for viticulture were lost to annexation and development in Livermore alone in the last decade. Urbanization, together with increased development speculation and changing market conditions, has resulted in a steady decline over the years in both the acreage of productive vineyards and the number of active wineries in the South Livermore Valley area. Faced with uncertainty over future land use patterns, and the increasing cost of investing in vineyard expansion, many landowners in the area have had little incentive to expand viticulture or to invest in additional wineries. With no change in policy, it is apparent that urbanization will continue to encroach on the remaining vineyards in the South Livermore Valley, and that there will be intensified development speculation, leading to continued disinvestment in existing wineries and vineyards.

The South Livermore Valley Area Plan's intent is to preserve the remaining vineyards and wineries in the area, enhance the recognition and image of the area as an important premium wine-producing region in California, create incentives for investment and expansion of vineyards and other cultivated agriculture in the area, and coordinate the policies of Alameda County, Pleasanton and Livermore so that these goals can be achieved.

The Plan creates no new entitlements for additional development, and ties consideration of future development to furthering of the Plan purpose.

Area Plan policies will be adopted by the Alameda County Board of Supervisors as an amendment to the Livermore-Amador Valley Planning Unit of the Alameda County General Plan. The Cities of Pleasanton and Livermore will be encouraged to also adopt relevant policies of the Plan as amendments to their respective General Plans.

# **REVISED DRAFT SOUTH LIVERMORE VALLEY AREA PLAN**

**February 6, 1992**

**Page 2**

## **I. AREA PLAN BOUNDARIES**

The South Livermore Valley Area Plan encompasses approximately 15,585 acres of unincorporated Alameda County in a wide crescent around the south edge of the City of Livermore, running from the Greenville Road/I-580 Interchange in the northeast to the Pleasanton City Limits at Vineyard Avenue in the southwest. The Plan area generally encompasses the flatter, potentially suitable vineyard lands between the Livermore City Limits and the ridgelands to the south, east and west (see attached Map).

## **II. AREA PLAN GOALS**

The goals of the South Livermore Valley Area Plan are to:

1. Promote the South Livermore Valley as a unique and historic Wine Region;
2. Take a proactive approach to protect, enhance, and increase viticulture and other cultivated agriculture;
3. Preserve the area's unique rural and scenic qualities;
4. Discourage and minimize development on lands with existing vineyards and on lands suitable for viticulture; and
5. Direct development speculation away from productive and potentially productive agricultural land;
6. Coordinate land use planning of the area between Alameda County and the cities of Livermore and Pleasanton, so as to increase certainty over future land uses and to reduce speculation.

## **III. AREA PLAN OBJECTIVES**

1. Expansion of cultivated agricultural, particularly viticultural, use in the South Livermore Valley from the current 2,100 acres to a minimum of 5,000 acres;

## **REVISED DRAFT SOUTH LIVERMORE VALLEY AREA PLAN**

February 6, 1992

Page 3

2. Development of additional wineries with a range of sizes, and other wine-country uses that promote the area as a premier wine-producing area;
3. Formation of a land trust to permanently protect productive and potentially productive cultivated agricultural lands in the South Livermore Valley;
4. Prohibition of additional development unless it will directly further the Plan purpose of expanding and enhancing cultivated agriculture;
5. Limitation on further urbanization within the Plan Area to areas under City jurisdiction and to development that substantially enhances cultivated agriculture; and
6. Creation of a permanent boundary and open space buffer between the cities of Pleasanton and Livermore in the South Livermore Valley.

### **IV. AGRICULTURAL PRESERVATION AND ENHANCEMENT POLICIES**

1. Encourage the cooperation of Alameda County, Livermore and Pleasanton in reaching the goals and objectives of the Plan through coordination of land use plans, use of pre-annexation, development, joint powers, tax-sharing, or other agreements, or other appropriate devices to coordinate future land uses and appropriate mitigation measures.
2. Establish a South Livermore Valley Agricultural Land Trust as an autonomous non-profit corporation with Federal and State tax-exempt status. Alameda County, the City of Pleasanton and the City of Livermore should have appointment authority to the Trust Board of Directors. The Trust should be enabled to purchase or accept donations of lands in the Plan Area, in fee or easement, that will further the goals of the Plan, with reconveyance subject to unanimous agreement by the Board of Directors. Agricultural mitigation funds required to be paid by the Ruby Hill development, any other future urban development in the Plan Area, and other appropriate sources should be used to fund Trust purchases.

Standards and priorities for acquisition of land or easements shall be based on the following considerations:

- A. Development of a critical mass to sustain agricultural operation in the South Livermore Valley.

## **REVISED DRAFT SOUTH LIVERMORE VALLEY AREA PLAN**

**February 6, 1992**

**Page 4**

- B. Preservation of lands best suited for agriculture and most threatened by development pressures;**
  - C. Preservation of contiguous tracts of agricultural land of a size large enough to maintain commercial agricultural operations;**
  - D. Minimization of conflicts with non-farm uses;**
  - E. Creation of a permanent urban boundary.**
- 3. Encourage the promotion of the South Livermore Valley as a premier wine-producing center by encouraging appropriate tourist attracting and supporting uses, such as bed and breakfast establishments, bicycle and equestrian facilities, a conference center, a wine museum, or other uses, and by establishing clear, well-signed travel corridors from major highways to the area.**
  - 4. Maintain and enhance the visual quality of the Plan Area by limiting inappropriate uses in viticultural areas and encouraging good design through establishment of appropriate design guidelines.**
  - 5. Strongly discourage the non-renewal or early termination of Williamson Act contracts. County agriculture preserve guidelines and individual contracts may be modified to specifically accomplish the objectives of preserving and promoting agriculture.**
  - 6. Encourage the establishment and permanent protection of existing and new cultivated agriculture through use of agricultural easements, density bonuses, or other means.**
  - 7. Require that urban development within the Plan Area must mitigate impacts on and substantially enhance cultivated agriculture, by means of paying agricultural mitigation fees to the South Livermore Agricultural Land Trust, by the direct planting of new vineyards, by dedicating agricultural easements on lands within the Plan area, and/or by including major wine-oriented attractions that would increase recognition of the South Livermore Valley as a premium wine-producing region.**
  - 8. Encourage Pleasanton and Livermore to adopt policies and programs establishing other sources of funds for the Agricultural Land Trust, such as fees on appropriate development outside of the Plan Area.**



## **REVISED DRAFT SOUTH LIVERMORE VALLEY AREA PLAN**

**February 6, 1992**

**Page 5**

9. Encourage the development of additional sources of irrigation water for vineyards and other cultivated agriculture by investigating wastewater reclamation and development of other supply and delivery resources.

### **V. LAND USE POLICIES AND STANDARDS**

The South Livermore Valley Area Plan divides the valley into four land use designations. These are 1) the Vineyard Area; 2) Ruby Hill; 3) three separate Transition Areas; and 4) the Livermore Gateway (refer to Map). Land use policies and standards for each of these areas are outlined below:

#### **Vineyard Area**

1. Retain existing parcel size regulations as specified in the Alameda County Zoning Ordinance for the Agricultural (A) District, as of January 1, 1991, which normally set a 100 acre minimum per residence, and permit agricultural uses that are compatible with the promotion of the area as a Wine Region.
2. Establish a "Cultivated Agriculture Overlay District" coterminous with the Vineyard Area. Permitted and accessory uses normally allowed under the A (Agricultural) District shall be restricted to preclude incompatible uses within the Overlay District. The Overlay District base density shall be 100 acres per homesite. A density bonus of up to four additional homesites per 100 acres (or a fraction thereof) may be granted for lands less than 25% in slope, at the discretion of the Board of Supervisors, if the following criteria are met:
  - A. The parcel is rezoned to the PD District;
  - B. The proponent shows, to the satisfaction of the County and Zone 7, that adequate water supplies are available for both domestic and irrigation needs, and that all proposed homesites can be served by individual septic systems.
  - C. Sensitive or unique environmental and land characteristics, e.g., oak groves or creeks, are protected.

## **REVISED DRAFT SOUTH LIVERMORE VALLEY AREA PLAN**

**February 6, 1992**

**Page 6**

- D. Prior to final subdivision map approval, a minimum of 90% of the parcel, exclusive of environmentally sensitive areas, is planted in wine grapes or other cultivated agriculture, with provisions that will encourage its continued cultivated agricultural use, such as agricultural conservation easements, or other equivalent means.
  - E. Homesites, ancillary uses and parcel lines are sited to maximize productive use of the land for intensive cultivated agriculture.
3. Limit new commercial uses within the Cultivated Agricultural Overlay District to appropriate small-scale uses that promote the area's image as a wine region, subject to issuance of a conditional use permit. New commercial uses proposed as part of a PD should be limited to the 10% maximum area not dedicated to cultivated agriculture, subject to appropriate coverage limitations, and should be sited to maximize efficient use of cultivated lands. Wineries and small bed-and-breakfast establishments (maximum of four guest rooms) are examples of appropriate commercial uses. Develop a full list of conditionally-permitted commercial uses and standards.
  4. Establish appropriate design guidelines for the Cultivated Agricultural Overlay District. Require new residential and commercial structures to be subject to Site Development Review by Alameda County.
  5. The Vineyard Area may be expanded provided that a candidate parcel or group of parcels meet the following criteria:
    - A. It is contiguous to the existing boundary.
    - B. It contains at least forty acres less than 25% in slope.
    - C. The applicant demonstrates the parcel's significant agricultural potential.
    - D. The applicant submits a Planned Development (PD) District application satisfying the Overlay District criteria above.

### **Ruby Hill**

1. Require that the Ruby Hill area, located south of East Vineyard Avenue and west of the proposed State Route 84 right-of-way, be developed according to the provisions of the 1837th Zoning District in Alameda County. The provisions permit up to 850 homes, a

## **REVISED DRAFT SOUTH LIVERMORE VALLEY AREA PLAN**

**February 6, 1992**

**Page 7**

golf course, inn and small retail area; and require 300 acres of on-site vineyards and 167 acres of off-site vineyards to be planted, two wineries to be restored, and the payment of a minimum of \$8.5 million in agricultural mitigation fees to be used to fund the South Livermore Agricultural Land Trust. It is expected that this area will be annexed by the City of Pleasanton.

### **Transitional Areas**

- 1. Designate three areas within the Area Plan as "Transitional Areas", due to their physical or visual isolation from the main part of the Plan Area, adjacency and relationship to existing urbanized areas, and anticipation of eventual annexation to existing cities. These areas (shown on Map) are 1) the East Vineyard Avenue corridor, between the current city limits of Pleasanton and the Ruby Hill Area; 2) the Alden Lane area, between Holmes and Isabel Avenue and the Arroyo; and 3) the Patterson Pass Road area, east of Greenville Road and south of Patterson Pass Road to the crest of the ridge east of the Sandia National Laboratory.**
- 2. Acknowledge Transitional Areas as appropriate areas for eventual annexation and development within existing cities, recognizing environmental, circulation and service limitations in the Patterson Pass Road area. Work with the Local Area Formation Commission to adjust City Spheres of Influence accordingly.**
- 3. Encourage new urban development within Transitional Areas to provide a graceful transition between existing urban areas and the Vineyard Area, and promote recognition of the area as a premier wine-producing region through structural design, appropriate landscaping and open space, and signage.**
- 4. Ensure that urban development within Transitional Areas compensates for loss of cultivable or potentially cultivable soils through use of agricultural mitigation fees to fund the South Livermore Agricultural Land Trust. Fees should be calculated based on a one-to-one ratio between the cost per acre for agricultural easements to the Trust and the net acreage of potentially cultivable soils less than 25% in slope lost to development. Agricultural easements are assumed to have an average value of \$10,000/acre. The County should ensure collection and distribution of agricultural mitigation fees in Transitional Areas through use of joint powers, pre-annexation, tax-sharing, and/or development agreements, or other appropriate means.**

## **REVISED DRAFT SOUTH LIVERMORE VALLEY AREA PLAN**

February 6, 1992

Page 8

### **Livermore Gateway**

1. Designate the area located along Greenville Road from I-580 to Patterson Pass Road as the "Livermore Gateway" in recognition of its potential as a direct connection between the freeway and the Vineyard Area.
2. Encourage appropriate design, landscaping and signage to establish this portion of Greenville Road as an important "wine region corridor" as development occurs. Retain existing land use designations and policies.

## **VI. ANNEXATION AND URBAN DEVELOPMENT POLICIES**

1. Actively discourage the annexation of lands within the Vineyard Area unless the following criteria are met:
  - A. Properties to be annexed are under agricultural easements that permanently limit development to a gross density of one residence per 20 acres, and cultivable soils are planted in vineyards or other cultivated agriculture; or
  - B. An urban development project is proposed that would significantly contribute to the goal of a minimum of 5,000 acres of permanently protected vineyards in the Plan Area, and that meets the criteria in 2. below.
2. Require any urban development proposal within the Vineyard Area to meet the following criteria at a minimum:
  - A. All necessary public utilities and services are available;
  - B. The project will not require cancellation of a Williamson Act contract;
  - C. The project site will not displace a significant amount of any actively farmed vineyards, defined as vineyards that produced and harvested wine grapes in 1991;
  - D. The project site is contiguous to existing development within the City of Livermore;

**REVISED DRAFT SOUTH LIVERMORE VALLEY AREA PLAN**

**February 6, 1992**

**Page 9**

- E. At a minimum, the project protects and promotes viticulture or other cultivated agriculture through the following means:**
- a. Development is clustered, to the maximum extent feasible, adjacent to existing development within the City boundaries to minimize loss of potentially cultivable soils, and is sited and designed to create a logical, permanent urban edge to Livermore;**
  - b. To mitigate the loss of cultivable soils, a minimum of one acre in the Vineyard Area is planted in new vineyards or other appropriate cultivated agriculture, and permanently protected through dedication of agricultural easements for each acre developed. Mitigation acreage thus planted and protected should be contiguous to the extent possible to ensure mitigation acreage of sufficient size to form a viable agricultural unit;**
  - c. To enhance cultivated agriculture in the Vineyard Area, a minimum of one acre within the Vineyard Area, in addition to acreage required in b. above, is planted in vineyards or other appropriate cultivated agriculture, and is permanently protected through dedication of agricultural easements for each new dwelling unit permitted in the project. Mitigation acreage thus planted and protected should be contiguous to the extent possible to ensure mitigation acreage of sufficient size to form a viable agricultural unit;**
  - d. Mitigation acreage required under b. and c. above may be eligible for bonus densities, as permitted under the Cultivated Agricultural Overlay District described above. If bonus densities are awarded, projects requiring mitigation acreage shall pay an additional fee of \$10,000 per unit to be used by the South Livermore Agricultural Land Trust to purchase agricultural land or easements. The number of units affected by the fee amount shall directly correspond to the acreage receiving density bonuses within mitigation acreage.**
  - e. Development includes at least one major draw or attraction that would increase recognition of the South Livermore Valley as a premium wine-producing region. Examples of appropriate attractions include a wine-related institute, research center or conference center, wine museum, cultural arts center or a resort hotel. Consideration should be given to creating a "Wine Country Center" that would serve as a focal point for visitors to the region by combining one or more major attractions with ancillary retail uses, such as**

## **REVISED DRAFT SOUTH LIVERMORE VALLEY AREA PLAN**

**February 6, 1992**

**Page 10**

restaurants, art galleries or shops, bicycle rentals, delis, or other appropriate small-scale uses that would complement the major attraction. Ancillary retail uses would be limited, and should be carefully considered to complement businesses in Downtown Livermore. Retail uses and for-profit major attractions should be subject to an agricultural mitigation fee of \$2.50 per square foot.

3. Encourage the City of Livermore to reward development meeting the above criteria with sufficient flexibility in growth management awards to permit development in a timely and economical manner. Ensure that appropriate development is considered by the City in a timely manner through use of joint powers, pre-annexation, tax-sharing, and/or development agreements, or other appropriate means.

## Range of Development Needed to Reach South Livermore Valley Area Plan Goals

PLAN SUB-AREAS	LOW ESTIMATE				HIGH ESTIMATE				
	Dwelling Units (du)	Vineyards (acres)	Agriculture Mitigation Fees (million \$)	Dwelling Units (du)	Vineyards (acres)	Agriculture Mitigation Fees (million \$)	Dwelling Units (du)	Vineyards (acres)	Agriculture Mitigation Fees (million \$)
<b>EXISTING VINEYARDS</b>									
<b>APPROVED DEVELOPMENT</b>									
Ruby Hill	850 du	*467 ac	\$8.5	850 du	*467 ac	\$8.5	850 du	*467 ac	\$8.5
Crane Ridge	10 du	*175 ac	---	10 du	*175 ac	---	10 du	*175 ac	---
subtotal	860 du	2,786 ac	\$8.5	860 du	2,786 ac	\$8.5	860 du	2,786 ac	\$8.5
<b>VINEYARD AREA - OVERLAY DISTRICT (density bonus/ 20 ac parcels)</b>									
Existing Vineyards	75 du	*1,500 ac	---	30 du	*600 ac	---	30 du	*600 ac	---
New Vineyards	75 du	*1,350 ac	---	30 du	*540 ac	---	30 du	*540 ac	---
subtotal	150 du	2,850 ac	---	60 du	1,150 ac	---	60 du	1,150 ac	---
<b>TRANSITIONAL AREAS</b>									
Vineyard Avenue Corridor	100 du (50 ac)	---	\$0.5	160 du (80 ac)	---	\$0.5	160 du (80 ac)	---	\$0.8
Alden Lane	300 du (150 ac)	---	\$1.5	440 du (220 ac)	---	\$1.5	440 du (220 ac)	---	\$2.2
subtotal	400 du	---	\$2	600 du	---	\$2	600 du	---	\$3
<b>VINEYARD AREA - URBAN DEVELOPMENT</b>									
New Development	600 du (300 ac)	*900 ac	---	1,200 du (600 ac)	*1,800 ac	---	1,200 du (600 ac)	*1,800 ac	\$13
Mitigation Land	---	---	---	100 du	---	---	100 du	---	---
(density bonus/20ac parcels)	---	---	---	---	---	---	---	---	---
subtotal	600 du	900 ac	---	1,300 du	1,800 ac	---	1,300 du	1,800 ac	\$13
<b>TOTALS</b>	<b>2,010 DU</b>	<b>5,036 AC</b>	<b>\$10.5</b>	<b>2,820 DU</b>	<b>5,126 AC</b>	<b>\$10.5</b>	<b>2,820 DU</b>	<b>5,126 AC</b>	<b>\$24.5</b>
		<b>*4,392 AC</b>			<b>*3,582 AC</b>			<b>*3,582 AC</b>	

\* acreage placed under agricultural easements

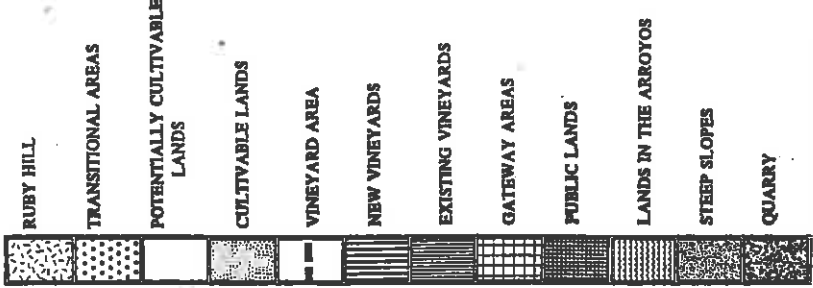




ALAMEDA COUNTY  
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FEBRUARY, 1992

GENERAL NOTE

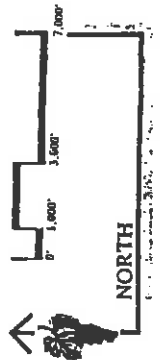
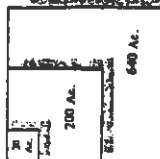
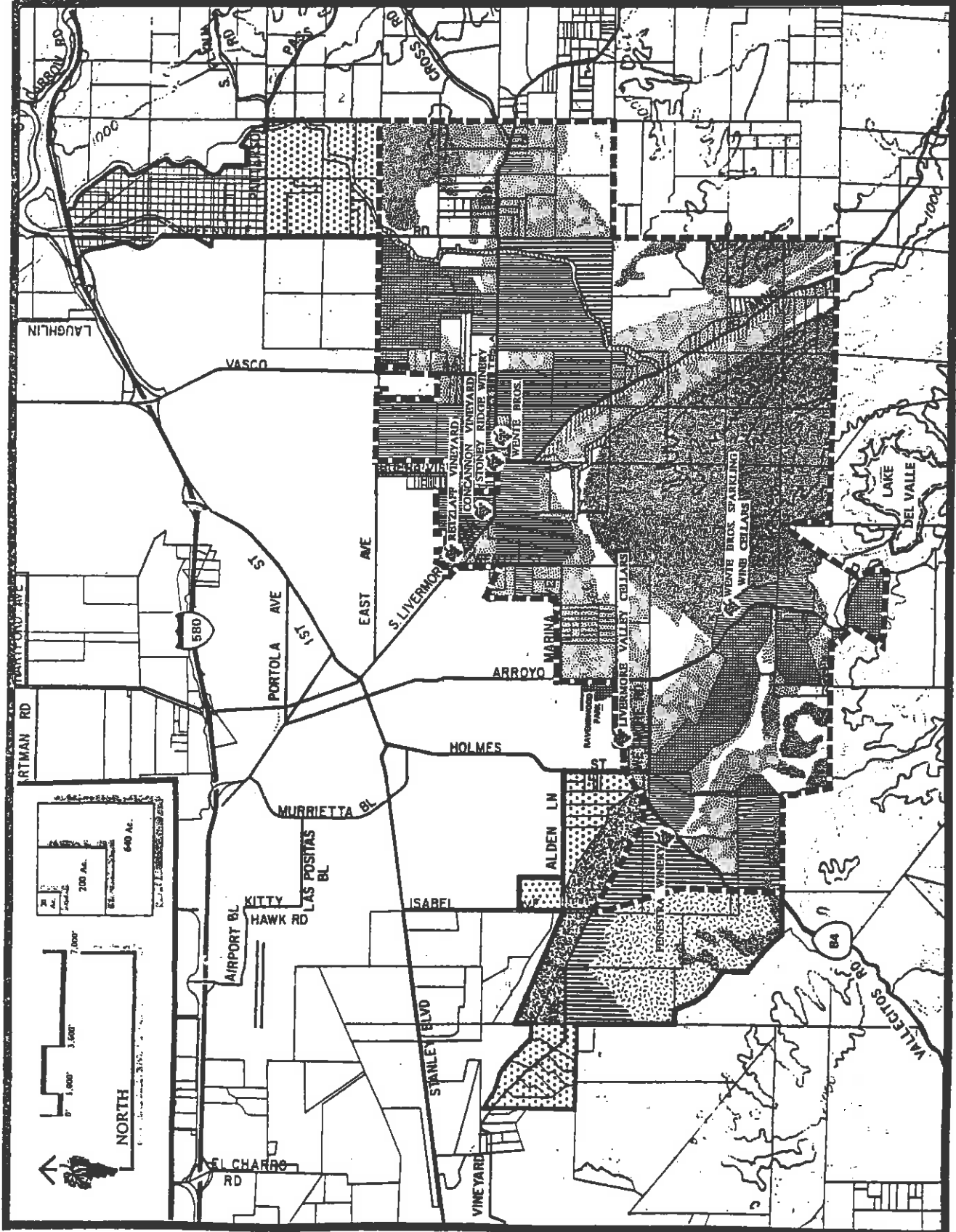


LAND CLASSIFICATIONS

PROJECT

SOUTH LIVERMORE VALLEY  
 AREA PLAN

ALAMEDA COUNTY, CALIFORNIA





## **APPENDIX B**



## **APPENDIX B**

### **ESTIMATION OF MAXIMUM DEVELOPMENT POTENTIAL**

The following maximum potential development levels will be used in the EIR for analysis of environmental impacts of the proposed SLVAP. These potential development levels do not reflect entitlements or endorsements of particular land uses, nor existing County or city policies. Instead, they are planning staff estimates of the highest level of development likely to occur in these areas, given adjacent development patterns, landowner expectations, and growth patterns.

#### **A. Transitional Areas**

**Vineyard Avenue Corridor (Pleasanton):** Total acreage = 270± . Approximately 120 acres are over 25% in slope. An additional 30± acres are under quarry permit. City of Pleasanton staff estimate that a maximum of 500 units could be developed on parcels between the current city limits and the Ruby Hill project, an area inclusive of approximately 350 acres. Pro-rating this to the Vineyard Avenue Corridor's 270 acres, some 385 units would be the maximum development level expected in this area. This corresponds to a gross density of 1.4 units per acre, or 3.2 units per acre on the flatter areas not under quarry permit.

**Estimated Maximum Development Potential: 385 units**

**Alden Lane Area (Livermore):** Total acreage = 250± . Generally flat. Adjacent developed areas are 1-3 units per acre. Proposed Topham project (which was rejected by Livermore) would have been approximately 2 du/acre. Constrained by adjacent quarry noise, smaller parcels along Holmes.

**Estimated Maximum Development Potential: 500 units (2/ac.)**

**Patterson Pass Area (Livermore):** Total acreage = 640. Approximately 25 acres are over 25% slope. Approximately 200 acres are on east side of the South Bay aqueduct. The presence of LLNL upwind and across Greenville Road could preclude adjacent residential development. The most likely development scenario would be industrial (warehouses/R+D). At 30% coverage, this could potentially include up to 4 million square feet of industrial development. However, the City of Livermore already has some 1,700 acres of undeveloped but serviced land within the city limits zoned for industrial development. Additional lands in North Livermore may also become available for industrial development. Therefore, Livermore staff believe that, while the area may someday be developed, it is unlikely to occur prior to 2010. Therefore, for the purposes of this analysis, it will be assumed that development could potentially occur on 415 acres, but that development of this area should not be

used in calculating impacts in 2010 (traffic, noise, air, etc.)

**Estimated Maximum Development Potential:** 415 acres of low-rise industrial development - but after the year 2010.

#### **B. Ruby Hill**

The proposed Plan subarea refers to the area west of the proposed alignment for State Route 84 (approximately 1,050 acres) that is being considered for annexation by Pleasanton. The approved project includes 850 units, a golf course, some 50,000 square feet of retail commercial space, and approximately 200 acres of vineyards in this area.

**Maximum Development Potential (approved):** 850 units, golf course, 50,000 sq.ft. of commercial, and 200 acres of vineyards.

#### **C. Vineyard Area**

##### **Viticulture and Cultivated Agriculture**

This area encompasses approximately 12,185 acres. After subtracting steep slopes, public lands, infrastructure, arroyos, and small parcels, approximately 6,500 acres remain. About 2,550 acres are planted, or required to be planted by Crane Ridge and Ruby Hill (another 200± acres are required to be planted in the Ruby Hill area). This leaves a maximum of 3,950 acres that could possibly be planted. Non suitable soils, such as riverwash, and limited access will further reduce potentially cultivable areas to approximately 3,250 acres. Therefore, a maximum of 5,800 acres could be planted in the Vineyard Area as a result of proposed Plan policies, for a total of 6,000 acres, including Ruby Hill. The actual vineyard potential could be higher, if smaller parcels are planted, but this would not be as a direct result of the Plan.

**Estimated Maximum Development Potential:** 6,000 acres maximum (3,250 acres above existing and required).

##### **Vineyard Area Rural Residential**

The proposed Plan permits subdivisions to a gross density of 20 acres per unit if lands are planted and easements dedicated. Existing vineyards could be subdivided if easements are dedicated. 5,800 acres of vineyards or other cultivated agriculture could therefore generate 290 rural agricultural units.

**Estimated Maximum Development Potential :** 290 units.

## **Vineyard Area Urban Development**

Proposed Plan criteria limits urban development in the Vineyard Area to lands adjacent to Livermore that are not existing vineyards, do not require Williamson Act contract cancellation, and can be served by municipal facilities. Approximately 575 acres meet these criteria now, although about 100 acres are subdivided into 5 acre parcels, and another 175 acres are in parcels between 10-20 acres, interspersed with other parcels under Williamson Act contracts. An additional 300 acres adjacent to Livermore, that are not planted in vineyards, have non-renewed, with termination dates in 7-9 years. In total, approximately 600 acres are relatively unconstrained in the next ten years. However, additional lands could become available if other Williamson Act contracts are non-renewed.

While the proposed Plan criteria encourages higher densities by requiring mitigation on an acre by acre basis, adjacent densities of about 2 units/acre in Livermore are likely to limit the number of units permitted in any Vineyard Area development to similar gross densities.

The amount of potential urban development is also limited by mitigation requirements to replace acre for acre each acre developed, and to plant and dedicate one acre for every unit approved.

Assuming 3,250 acres are potentially cultivable in the Vineyard Area, and that development will occur at 2 units per acre, the "worst case" development scenario would be 1,625 units on 812 acres of land. This would require 2,437 acres of mitigation land to be planted, for a total of 5,187 acres planted. For this scenario to occur, the development would probably have to be staged so that Williamson Act contracts were not canceled. It could also require use of areas with smaller parcels. Developers would have to secure all 3,250 acres, either for development or for mitigation acreage. It also assumes that no landowners independently seek 20 acre parcels, since this would reduce the acreage available for mitigation, or that Land Trust funds secure any potentially cultivable lands.

**Estimated Maximum Development Potential: 1,625 units on 812 acres.**

## **Vineyard Area Commercial Development**

The proposed Plan contains no specific constraints, either for wineries and related commercial development in rural areas, or commercial development that could occur as part of urban development.

New Wineries: Livingston estimated that the area could support 20 boutique wineries, and the "Vintage Visions" document recently released by the Livermore Valley Winegrowers Association has 20 wineries as a goal. To be conservative, it is

assumed that 20 additional wineries could be supported in the Plan Area. This would roughly equal the ratio of wineries to acres in viticulture in Sonoma and Napa Counties. It is assumed that the "retail" portion of new wineries (tasting rooms) would average 1,500 sq.ft.

Other Rural Commercial Establishments: The proposed Plan would also conditionally permit small-scale commercial establishments, such as bed-and-breakfasts. No such establishments currently exist in the Plan Area to serve as a model. If the area follows other California tourist-drawing regions, it is likely that bed-and-breakfast establishments are likely to occupy existing (especially historic) homes. However, to be conservative, it is assumed that new structures could be built to accommodate this type of establishment, and that up to 25 such establishments would be created. Assuming each B&B averages 2,000 sq.ft. in size, this represents a total of 50,000 sq.ft. of "hotel" space.

Wine Center: The proposed Plan requires that new urban development in the Vineyard Area include a major visitor attraction, and permits consideration of ancillary retail activities. While no proto-types exist in the area, there have been recent attempts to attract a culinary academy, and there have been long-standing goals of building a wine museum.

The feasibility of ancillary retail uses in urbanized portions of the Vineyard Area is unknown, and will depend on the amount of development approved in the area, the "drawing power" of any major attractions, and the specific location relative to the road system.

For the purposes of this EIR, it is estimated that 100,000 sq.ft. of ancillary commercial/retail space is a reasonable maximum that could be expected to develop in this area.

**Estimated Maximum Development Potential:** 180,000 sq.ft. of commercial space within Vineyard Area, including wineries, rural commercial, and wine center commercial.

**D. Livermore Gateway:**

The proposed Plan policies would not change land use policies in this 665 acre area.

**E. Total Maximum Development Potential**

Transitional Areas:	885 units,
Ruby Hill: (approved)	850 units, 50,000 sq.ft. of commercial, and 200 acres of vineyards
Vineyard Area:	



## **APPENDIX C**



APPENDIX C

WILLIAMSON ACT CANCELLATIONS

GOVERNMENT CODE

SECTIONS 51282 AND 51284

51282. Cancellation as to all or part of land; conditions for approval.

(a) The landowner may petition the board or council for cancellation of any contract as to all or any part of the subject land. The board or council may grant tentative approval for cancellation of a contract only if it makes one of the following findings:

(1) That the cancellation is consistent with the purposes of this chapter (California Land Conservation Act of 1965; Williamson Act); or

(2) That cancellation is in the public interest.

(b) For purposes of paragraph (1) of subdivision (a) cancellation of a contract shall be consistent with the purposes of this chapter only if the board or council makes all of the following findings:

(1) That the cancellation is for land on which a notice of non-renewal has been served pursuant to Government Code Section 51245.

(2) That cancellation is not likely to result in the removal of adjacent lands from agricultural use.

(3) That cancellation is for an alternative use which is consistent with the applicable provisions of the city or county general plan.

(4) That cancellation will not result in discontinuous patterns of urban development.

(5) That there is no proximate non-contracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that development of the contracted land would provide more contiguous patterns of urban development than development of proximate non-contracted land.

As used in this subdivision, "proximate, non-contracted land" means land not restricted by contract pursuant to this chapter, which is sufficiently close to land which is so restricted that it can serve as a practical alternative for the use which is proposed for the restricted land.

As used in this subdivision "suitable" for the proposed use means that the salient features of the proposed use can be served by land not restricted by contract pursuant to this chapter. Such nonrestricted land may be a single parcel or may be a combination of contiguous or discontinuous parcels.

- (c) For purposes of paragraph (2) of subdivision (a) cancellation shall be in the public interest only if the council or board makes the following findings: (1) that other public concerns substantially outweigh the objectives of this chapter; and (2) that there is no proximate noncontracted land which is both available and suitable for the use to which it is proposed the contracted land be put, or, that development of the contracted land would provide more contiguous patterns of urban development than development of proximate noncontracted land.

As used in this subdivision "proximate, noncontracted land" means land not restricted by contract pursuant to this chapter, which is sufficiently close to land which is so restricted that it can serve as a practical alternative for the use which is proposed for the restricted land.

As used in this subdivision "suitable" for the proposed use means that the salient features of the proposed use can be served by land not restricted by contract pursuant to this chapter. Such nonrestricted land may be a single parcel or may be a combination of contiguous or discontinuous parcels.

- (d) For purposes of subdivision (a), the uneconomic character of an existing agricultural use shall not by itself be sufficient reason for cancellation of the contract. The uneconomic character of the existing use may be considered only if there is no other reasonable or comparable agricultural use to which the land may be put.
- (e) The landowner's petition shall be accompanied by a proposal for a specified alternative use of the land. The proposal for the alternative use shall list those governmental agencies known by the landowner to have permit authority related to the proposed alternative use, and the provisions and requirements of Section 51283.4 shall be fully applicable thereto. The level of specificity required in a proposal for a specified alternate use shall be determined by the board or council as that necessary to permit them to make the findings required.
- (f) In approving a cancellation pursuant to this section, the board or council shall not be required to make any findings other than or in addition to those expressly set forth in this section, and, where applicable, in Section 21081 of the Public Resources Code.

**51284. Public hearing; notice and publication.**

No contract may be canceled until after the city or county has given notice of, and has held, a public hearing on the matter. Notice of the hearing shall be published pursuant to Section 6061 and shall be mailed to the Director of Conservation and every owner of land under contract, any portion of which is situated within the same agricultural preserve and within one mile of the exterior boundary of the land upon which the contract is proposed to be canceled.

WILLIAMSON ACT CONTRACT PROVISIONS

ANNEXATIONS AND PROTESTS

GOVERNMENT CODE, SECTIONS 51243(b) and 51243.5

Section 51243(b) Contract Provisions (portion)

...On the annexation by a city of any land under contract with a county, the city shall succeed to all rights, duties and powers of the county under such contract, unless the land being annexed was within one mile of such city at the time that the contract was initially executed, the city has filed and the local agency formation commission has approved a protest to the contract pursuant to Section 51243.5, and the city states its intent not to succeed in its resolution of intention to annex...

Section 51243.5 Notice to City of Intention to Consider Contract

The clerk of the board of supervisors shall give written notice to any city within the county of its intention to consider a contract which includes land within one mile of the exterior boundaries of that city. Such notice shall be given at least 30 days prior to the time the board of supervisors intends to consider the execution of such a contract. If such city files with the local agency formation commission a resolution protesting the execution of a contract which includes land within one mile of the exterior boundaries of the city, and the commission, following a hearing, upholds the protest upon a finding that the contract is inconsistent with the publicly desirable future use and control of the land in question, then, should the board of supervisors execute such a contract, the city shall have the option provided for in subdivision (b) of Section 51243 of not succeeding to the contract upon annexation of the land to the city.



## APPENDIX D





**Appendix D**

**CUMULATIVE PROJECT LIST - STUDIES AND EIRS**

**East Dublin General Plan Amendment/Specific Plan, City of Dublin  
Environmental Studies: November 1988.  
DEIR: June 1992.**

**Western Dublin Specific Plan/General Plan Amendment , City of Dublin  
DEIR: December 1991.**

**North Livermore General Plan Amendment, City of Livermore  
DEIR: January 30, 1992**

**West Pleasanton Sphere of Influence Study, City of Pleasanton  
DEIR: January 1990  
FEIR: April 1990**

**Ruby Hill General Plan Amendment and 1837th Zoning Unit, County of Alameda  
DEIR: November 1989  
DEIR Addendum: May 1990  
DEIR Summary and Response to Recirculation Comments: September 1990  
FEIR: May 11, 1990**

**Kottinger Hills Project, City of Pleasanton  
DEIR: April 1992.**

**Mountain House New Town General Plan Amendment, County of San Joaquin  
DEIR: December 1991.  
FEIR: March 1992.**

**Dougherty Valley Growth Management and Specific Plan, City of San Ramon  
DEIR: September 13, 1991.**

