

**FINAL  
ENVIRONMENTAL IMPACT REPORT**

SCH #90020776

**MOUNTAIN HOUSE  
MASTER PLAN AND SPECIFIC PLAN I**

**Volume I**

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# CHAPTER 1

## INTRODUCTION

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### **PURPOSE OF THE DEIR**

This Draft Environmental Impact Report (DEIR) is prepared in conjunction with the Draft Master Plan, Draft Specific Plan I, a Draft Development Agreement, and associated General Plan Amendments, Text Amendments, and Zoning Reclassification applications to provide an assessment of the environmental effects for the proposed Mountain House New Town. This DEIR has been prepared pursuant to the California Environmental Quality Act (CEQA), as amended, the State CEQA Guidelines issued by the California Office of Planning and Research, and the San Joaquin County Environmental Guidelines. San Joaquin County is the lead agency for the project evaluated in this DEIR.

CEQA and the CEQA Guidelines establish a variety of mechanisms for reducing redundant environmental review in situations, such as the Mountain House New Town project, where a project has previously been analyzed in certified EIRs. For example, provisions of CEQA limit the necessity of further environmental review when:

- A project is consistent with an adopted General Plan. Further review may then be limited to significant effects that were not addressed as significant in previous certified EIRs, or to effects for which substantial new information shows that impacts will be more significant than described in a prior certified EIR.
- Subsequent changes to the project or changes in circumstances will require important revisions to the prior EIRs, or new information of substantial importance to the project becomes available.

In addition to further analysis that might be required to satisfy these and other provisions of CEQA, this DEIR also addresses the previously adopted mitigation monitoring program and the proposed implementation of those mitigations.

This DEIR, together with the previously certified Final Environmental Impact Report (FEIR) and Final Supplemental Environmental Impact Report (FSEIR) for the Mountain House New Town 1995 General Plan Amendment (BASELINE, 1992a, 1993) and the San Joaquin County Comprehensive Planning Program (General Plan 2010) FEIR (BASELINE, 1992b), may meet the requirements for a "Master Environmental Impact Report" in accordance with the terms of the CEQA amendments of 1993. Preparation of this DEIR, in accordance with CEQA provisions for a "Master EIR" and

other CEQA provisions for successive environmental review, may affect the type of environmental review that will be required at future stages of the approval process.

## **PREVIOUS ENVIRONMENTAL REVIEW**

The Mountain House project was analyzed in an EIR pertaining to an Amendment to the San Joaquin County General Plan 1995. The General Plan 1995 Amendment FEIR was certified in March 1992. The Board of Supervisors voted not to grant the Amendment to the 1995 General Plan.

The Mountain House new community was also evaluated as one of five "new or expanded communities" that were proposed for inclusion in the San Joaquin County General Plan 2010. The San Joaquin County Comprehensive Planning Program FEIR analyzed the impacts of new growth proposed in the updated General Plan, including the Mountain House, New Jerusalem, Forest Oaks, Liberty Hills, and Riverbrook new communities. The analysis was at a General Plan, or countywide, level of detail. In July 1992, the San Joaquin County Board of Supervisors voted not to include the Mountain House project in the County General Plan 2010.

The Mountain House developer subsequently submitted a General Plan 2010 Amendment application. A Supplemental Environmental Impact Report (SEIR) was prepared for that application. An SEIR was determined to be necessary due to new information regarding cumulative projects, changes in the project's land use program, and the adoption of the County's General Plan 2010.

The Board of Supervisors certified the SFEIR and approved the Mountain House General Plan 2010 Amendment in February 1993. Policies in the San Joaquin County General Plan 2010 require a proposed new community to submit a comprehensive Master Plan for the project, as well as a Public Financing Plan, followed by one or more Specific Plans. Only after the adoption of these three subsequent plans, can a new community project apply to the County for development permits (e.g., subdivision maps and use permits).

## **DEFINITION OF SUBSEQUENT PLANS**

To clarify the process by which a new or expanded community may receive final approval from the County, the Board of Supervisors took action in December 1991 to define the subsequent plans that would be required, after a new community had received General Plan approval. The subsequent plan process consists of three sets of detailed plans:

- a **Master Plan**, sets forth the policies, requirements and standards, for development of all the required infrastructure systems of the new community, as well as any resource management programs. This Master Plan must cover all lands proposed for development, not just properties owned or controlled by a single developer or applicant;
- a **Public Financing Plan** is a separate document that identifies how all of the needed public facilities and services outlined in the Master Plan will be funded or financed over time. The

Public Financing Plan establishes fiscal and financial policies and guidelines to ensure that the community can be developed without negative fiscal impacts to the County, and describes the specific funding programs that will be utilized; and

- one or more **Specific Plans**, which correspond to the phasing of the new community. These Specific Plans (as defined under State planning laws) must be consistent with the adopted Master Plan for the new community and include a greater level of detail regarding the development and design of a specific area, as well as establishing zoning.

In addition to the three plans described above, this project would also be required to prepare Special Purpose Plans for certain types of development within the community (e.g., Freeway-Service Commercial). A Development Agreement between the County and the applicant is also currently under preparation. A Development Agreement is a contract delineating the rights and obligations of each party for site development. The Development Agreement must be consistent with the requirements of the Master Plan and the County's General Plan.

This DEIR evaluates the Draft Master Plan for the Mountain House project, as well as the first Draft Specific Plan (Specific Plan I). General Plan Amendments (GPAs) and related Development Title Text Amendments and Zoning Reclassification applications are also evaluated for environmental impacts, **as is a Draft Development Agreement in terms of its consistency with adopted plans and policies.**

## **MITIGATION MONITORING PROGRAM**

The two previous EIRs for the Mountain House project contained extensive mitigation monitoring programs, which outlined the timing and implementation of specific mitigation measures required to reduce project impacts to an acceptable level during all phases of project implementation. The monitoring program in the FSEIR was adopted by the Board of Supervisors as part of the project's General Plan Amendment approval, as required under State planning law. This DEIR contains a review of the project's compliance with the previously adopted mitigation monitoring program (Appendix D).

This DEIR and the accompanying mitigation monitoring program differentiates impacts and mitigation measures for the Draft Master Plan and for the Draft Specific Plan I; impacts and mitigation measures are also identified for the three distinct subareas proposed within Specific Plan I.

## **ENVIRONMENTAL REVIEW PROCESS FOR THIS DEIR**

### **Notice of Preparation and Public Meeting**

An Initial Study and Notice of Preparation (NOP) (Appendix A) for this project were prepared by the San Joaquin County Community Development Department and distributed to local, regional, and State agencies and other interested parties on 20 September 1993 (Appendix B). Letters received in response to the NOP are also included in Appendix B. A public scoping meeting was held on 12 October 1993 in Stockton for public agencies and the interested public.



### **DEIR Review and Preparation of FEIR**

This DEIR will be distributed for public review for a minimum of 45 days. Following receipt of comments on the DEIR, responses will be prepared and incorporated with the comments into the FEIR. The FEIR will be considered by the San Joaquin County Board of Supervisors. If the Board finds that the FEIR adequately describes the environmental impacts of the project, the Board will certify the EIR and then take action on the project.

### **Project Approvals**

The Board of Supervisors will make the final decision for certification of the FEIR. Upon review and consideration of the FEIR, the San Joaquin County Planning Commission and Board of Supervisors will determine whether to approve, reject, or revise the proposed Master Plan; Specific Plan I; related General Plan Amendments, Development Title Text Amendments, and Zoning Reclassification applications; and the Development Agreement.

Approval of the project, as proposed or revised, would be accompanied by written findings for each significant adverse environmental effect identified in the FEIR. Findings must be accompanied by a brief explanation of the rationale for each finding and will indicate that: 1) mitigation measures to reduce adverse impacts to less-than-significant levels have been adopted; 2) mitigation measures to reduce adverse impacts to insignificant levels are within the jurisdiction of another public agency and either have been or should be adopted by that public agency; or 3) specific impacts are unavoidable and substantially unmitigable, but are considered acceptable because overriding considerations indicate the benefits of the project outweigh adverse effects.

When making findings and at the time of approval of the project, the County must adopt a monitoring program for mitigation measures incorporated into the approved project that reduces or avoids significant effects on the environment. The mitigation monitoring program has been prepared in conjunction with this DEIR (Chapter 2). This program will not be adopted until the time of possible approval of the project.

### **FUTURE ENVIRONMENTAL REVIEW**

One intent of CEQA is that an environmental analysis "should be prepared as early as feasible in the planning process to enable environmental considerations to influence project program and design and yet late enough to provide meaningful information for environmental assessment" (CEQA Guidelines, Section 15004[b]). For the previous EIRs, numerous details regarding the project were not available, such as the location of major infrastructure facilities. This DEIR analyzes impacts related to the more detailed design aspects included in the Mountain House Draft Master Plan and Draft Specific Plan I.

Some detailed uses will not become better known until the specific plan for each portion of the site has been proposed and approved. For example, because the planned marina facilities are not included in Draft Specific Plan I, an analysis of this use will be conducted when the specific plan for that area of the project is submitted to the County. Potential impacts related to marina

development will be analyzed at a general level of detail in this DEIR and rely on previous analyses, and more detailed analysis will occur following submittal of the specific plan for that area.

If the Mountain House Master Plan and Specific Plan I were adopted, and other actions required by these plans were completed, the developer could proceed to the final step in seeking discretionary approvals for that portion of the site that is covered under Specific Plan I.

Discretionary approvals by the County would be subject to environmental review under CEQA; discretionary approvals include tentative maps and use permits. CEQA and the Government Code provide for exemptions to CEQA review if a residential development project were consistent with a specific plan for which an EIR had been certified after 1980; however, such an exemption would not apply if there had been a change in the project, a change in circumstances, or new information. The specific environmental review to be undertaken by the County at discretionary approval stages could be Negative Declaration(s) or Supplemental EIR(s), depending on the level of additional analysis required to satisfy CEQA requirements.

## **CONTENTS OF THIS DEIR**

This DEIR contains the following sections:

- Chapter 1 provides an introduction and overview describing the intended use of the DEIR and the review and certification process.
- Chapter 2 summarizes the DEIR findings, identifying potential impacts and proposed mitigation measures. Impacts and mitigation measures from the two GPA EIRs (as applicable) as well as those revised in this DEIR are included in Chapter 2.
- Chapter 3 provides a description of the project, its location, the applicant's objectives in proposing the project, specific land planning features, and required approvals.
- Chapter 4 presents a discussion of the environmental effects of the project. Where text remains unchanged from the two original EIRs, that text is reprinted or summarized. For example, the "Setting" section for some topics remains unchanged. The "Impacts and Mitigation Measures" sections include a discussion of potential impacts. Each impact and mitigation measure has been coded to indicate whether it applies to the Master Plan, the Specific Plan, or to individual subareas of the Specific Plan.
- Chapter 5 discusses alternatives to the project. The alternatives discussion is summarized from the analysis prepared for the two previous GPA EIRs. Chapter 5 of this DEIR also includes one additional alternative, the Mitigated Alternative.
- Chapter 6 provides CEQA-required discussions regarding growth-inducing impacts, the relationship between short-term uses of the environment and maintenance of long-term

## 1.0 INTRODUCTION

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productivity, and significant irreversible environmental changes; these sections are summarized from the previous GPA EIRs. The cumulative impacts section has been updated and the unavoidable adverse impacts have been assembled from the analyses in Chapter 4.

- Chapter 7 lists references and persons consulted during the DEIR preparation.
- Chapter 8 identifies the persons involved in the DEIR preparation.
- Chapter 9 contains all the comments received on the DEIR.
- Chapter 10 contains responses to comments received on the DEIR.

# CHAPTER 2

## SUMMARY

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### PROJECT DESCRIPTION

Trimark Communities, the applicant, has submitted applications to San Joaquin County for the construction of a new community in the western portion of the County along the Alameda-San Joaquin County line and north of Interstate 205 (I-205).

In February 1993, the Board of Supervisors approved a General Plan Amendment to the County's General Plan 2010 and associated land use map, providing for urban land uses on the project site. Prior to approving the General Plan Amendment, the Board considered the environmental impacts of the Amendment contained in a Final Supplemental EIR (Final SEIR); an EIR had been previously prepared for a General Plan Amendment to the County's General Plan 1995; that Amendment was denied, and when an Amendment to the General Plan 2010 was submitted by the applicant, the Supplemental EIR was prepared. Part of the requirements for new communities in the General Plan 2010 include that a master plan, specific plan, and a public financing plan be developed and approved prior to development of tentative maps and project construction.

Master Plan	
Total acreage	4,784 acres
Residential	16,105 units (2,524 acres)
Commercial	275 acres
Industrial	441 acres
Open space	759.5 acres
Schools	285 acres
Public facilities	499.5 acres
Jobs	21,925
Specific Plan I	
Total acreage	1,345
Residential	4,140 units (611.5 acres)
Commercial	94.5 acres
Industrial	211 acres
Open space	84.5 acres
Schools	94.5 acres
Public facilities	243 acres
Jobs	9,696

This Draft Environmental Impact Report (DEIR) evaluates the environmental impacts associated with the applications submitted to the County by the applicant. The applications for review consist of:

- Draft Master Plan for the 4,784-acre project site.
- Draft Specific Plan I for development of three subareas on the site, totalling 1,345 acres. The three subareas include Central Mountain House (primarily residential); Mountain House Business Park in the southeastern portion of the site (primarily business park offices and

freeway commercial); and Old River Industrial Park in the eastern portion of the site, north of Byron Road (primarily industrial and public land uses).

- Amendment to the General Plan 2010 land use map; significant changes include the elimination of a previously approved 500-foot open space buffer zone along the western site boundary and the inclusion of Grant Line Village into the project site.
- Reclassification of the project site from AG-40 to AU-20, and specific zoning for the Specific Plan I subareas.
- Various General Plan 2010 text amendments.
- **Draft Development Agreement (limited to consistency with other plans).**

## **IMPACTS AND MITIGATION MEASURES**

All impacts and mitigation measures for this project are summarized in Tables 2.1 and 2.2, Summary Table/ Mitigation Monitoring Program. The impacts and mitigation measures are separated for the Draft Master Plan and Draft Specific Plan I. All impacts would be reduced to a level of insignificance by the suggested mitigation measures unless the impact is identified as unavoidable. Unavoidable adverse impacts have been identified in the following areas: transportation, biological resources, land use, and air quality.

## **ALTERNATIVES**

This DEIR discusses six alternatives. Five of these alternatives were discussed in detail in previous EIRs for the project site and are summarized in this DEIR; one additional alternative has been developed for this DEIR, the Mitigated Alternative. The Mitigated Alternative is considered the environmentally superior alternative.

## **MITIGATION MONITORING PROGRAM**

~~A Draft Mitigation Monitoring Program for this project is included in Tables 2.1 and 2.2. The program identifies required monitoring activities, the responsible agency, and the timing or frequency of monitoring for the Master Plan and Specific Plan I.~~

TABLE 2.1

SUMMARY TABLE OF MASTER PLAN IMPACTS AND MITIGATION MEASURES AND MITIGATION MONITORING PROGRAM

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
<p>■ LAND USE AND AGRICULTURAL ISSUES</p>		
<p><b>M4.1-1</b> Development of the proposed project would result in the loss of approximately 3,600 acres of Prime Farmland.</p>	<p><b>M4.1-1</b> The following should be added as an Implementation in Chapter Three of the Draft Master Plan:  "If a Countywide agricultural mitigation fee were established, an agricultural mitigation fee, based on each acre converted to an urban use, shall be paid by the developer to the County at the time of the approval of each subdivision map or other discretionary permit, if a Countywide agricultural mitigation fee has been established by the County.  "Any off-site mitigation resulting in the set-aside of lands by the applicant shall be considered when assessing the fee. Further, consideration shall be made for dual use of mitigation lands, as appropriate. For example, land set aside for Swainson's Hawk mitigation that is also prime agricultural land could be credited as mitigating both impacts."</p>	<p>SU</p>
<p><b>M4.1-2</b> Conflicts between urban/rural land uses would occur, particularly where existing agricultural operations abut planned residential development.</p>	<p><b>M4.1-2</b> (a) The following Objective, with corresponding Policies and Implementations, should be inserted as Objective 11 under West Edge Treatment in Development and Design (Appendix C) in place of existing Policies a) and b):  "Objective 11: "The project site shall be developed to minimize land use conflicts between planned urban uses and existing agricultural operations to the west.  "Policy: "a) A buffer area, minimum 500 feet wide, shall be provided along the western site boundary. This minimum 500-foot buffer requirement applies to all portions of the western project boundary except in the south, where planned housing abuts the Delta Mendota Canal.  "b) A combination of hard and soft treatments may be applied in the 500-foot buffer area that is required along the western boundary to mitigate potential agricultural impacts, such as aerial spraying, trespass, and vandalism. The 500-foot buffer can be located entirely on the project site (in San Joaquin County) or can be located entirely or partially west of the project boundary (in Alameda County). If existing agricultural lands west of the project are used to satisfy the buffer requirement, conservation easements must be placed on the lands and dedicated to the Alameda County Open Space Land Trust. The conservation easement shall stipulate that development rights are permanently restricted and shall be limited to those crops that do not require aerial spraying (e.g., oats, wheat, beans, pasture).</p>	<p>1</p>

Table 2.1, continued

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>"c) A combination of windrow tree plantings of a mature height and width, berms, fences, four-lane roadways, adjacent multi-use pathways, local streets, and utility easements should be included in any portion of the 500-foot buffer that is on the project site. To the greatest extent possible, the buffer area within the project site should be owned and maintained by a public or quasi-public agency. The inclusion of private residential backyards and private commercial facilities such as parking lots and loading zones shall be limited to a maximum of 50 feet of the total required buffer (e.g., the private back yards of homes along Marina Boulevard shall be no more than 50 feet deep). The buffer area shall ensure that along the continuous length of the western boundary of the project, all privately owned, urban uses such as residential back yards or commercial loading areas would be located a minimum of 500 feet from agricultural operations requiring aerial spraying. The design of any buffer area located in Alameda County shall be reviewed and endorsed by a qualified neutral party with specific expertise in urban/agricultural interface. Any off-site mitigation resulting in conservation easements shall be considered when assessing any per-acre agricultural mitigation fee or any wildlife mitigation."</p> <p>(b) The following Policy and Implementation should be inserted under Objective 3, in Community Monitoring Programs in Jobs/Housing &amp; Affordable Housing (Appendix C) in place of Policy a) and b):</p> <p>"On-site residents shall be notified of the County's Right-to-Farm ordinance and that they are purchasing land in homes in an agricultural area. The disclosure shall cite specific examples of potential nuisances (e.g., noise, dust, odor, vectors, spraying) associated with ongoing and future agricultural activity.</p> <p>"Implementation: "Notification shall be recorded by separate instrument or on the face of the deed for each newly created parcel."</p>	
<p><b>M4.1-3</b> The construction of wastewater storage ponds on Fabian Tract may be inconsistent with the Sacramento-San Joaquin Delta Protection Act.</p>	<p><b>M4.1-3</b> If the preferred location for the project's wastewater irrigation and storage ponds is determined to be Fabian Tract, all mitigation measures in Sections 4.4.2 (Wastewater) and 4.11 (Biological Resources) should be complied with, to mitigate all potential impacts. <u>Alternatively</u>, another location for the wastewater disposal should be identified outside the Delta "primary zone," such as the alternative location in Alameda County described in the Draft Master Plan, or alternative wastewater treatment options (i.e., tertiary treatment) should be implemented.</p>	<p>I</p>
<p>■ <b>GENERAL PLAN AND DEVELOPMENT TITLE CONSISTENCY</b></p>		
<p><b>M4.2-1</b> Policies in the Draft Master Plan conflict with some of the policies of the County's General Plan 2010.</p>	<p><b>M4.2-1</b></p> <p>(a) A new policy should be added to the County General Plan 2010, Volume II, General Plan Policies specific to the Mountain House New Community (page XII-41) allowing the combination of the R/L and R/M General Plan land use designations. <u>Alternatively</u>, the Draft Master Plan land use map should be revised to designate separate Low Density and Medium Density Residential areas within each neighborhood.</p> <p>(b) A General Plan Text Amendment should be adopted that would allow new communities, or projects that have an adopted Master and Specific Plan, to deviate as specified in the Plan from land use definitions and Development Title permitted uses. <u>Alternatively</u>, Table 3.5 of the Draft Master Plan should be amended to delete "Automotive Sales" as a permitted use in the C-FS and I-P zoning districts, and to delete "Retail Sales and Services, Intermediate and General" as permitted uses in the C-1's zone.</p> <p>(c) The density for the Residential-Medium Density land use in Table 3.1 of the Draft Master Plan should be changed to 6.0-10.0 dwelling units per gross acre. <u>Alternatively</u>, a General Plan Text Amendment should be adopted to allow new communities with adopted Master Plans to deviate from the General Plan land use densities.</p>	<p>I</p>

	<p>(d) The County General Plan Table VII-2 (Implementing Zones for General Plan Land Use Designations) should be amended to add the A-U zone for Mixed Use designations.</p> <p>(e) A General Plan Text Amendment should be adopted that would amend Table IV-8 or allow new communities, or projects that have an adopted Master and Specific plan, to deviate as specified in the Plan from the General Plan roadway classifications and right-of-way standards (see Mitigation Measure M4.12-5(h) in the Transportation section). <u>Alternatively</u>, standards for roadway classifications and roadway right-of-way widths in Table 9.6 of the Draft Master Plan should be amended to conform with classification, right-of-way, and capacity requirements in the General Plan (Table IV-8 in Volume 1).</p> <p>(f) A General Plan Text Amendment should be submitted that will allow new communities, or projects that have an adopted Master and/or Specific plan, to deviate as specified in the Plan from the General Plan LOS standards (see Mitigation Measure M4.12-5(f) in the Transportation section). <u>Alternatively</u>, Draft Master Plan policies and text referring to County roadway LOS standards should be changed to conform with LOS requirements in the General Plan. In Chapter Nine of the Draft Master Plan, assumptions 9.3 a) and b) and Policies a) and b) under Objective 3 (Appendix C) should be revised to delete the exception to LOS C for "Mountain House gateway road segments."</p> <p>(g) Draft Master Plan policies and performance standards for regional park standards and for wildlife mitigation should be changed to conform with Mitigation Measures in sections 4.3.1 and 4.11.</p>	
<p><b>M4.2-2</b> Some of the Draft Master Plan design and land use standards conflict with standards in the County Development Title.</p>	<p><b>M4.2-2</b> For each inconsistency between the Master Plan and the County Development Title that allows more lenient standards in the Master Plan, either the Master Plan standard must be changed or the Development Title must be amended to permit the difference. If any regulations in the Development Title are changed to reconcile inconsistencies, the proposed Development Title Amendment should be phrased to apply only to the project, only to new communities, or only to projects that have an adopted Master and Specific Plan.</p>	1
<p>■ <b>PUBLIC SERVICES/Parks and Recreation</b></p>		
<p><b>M4.3.1-1</b> Regional park facilities proposed for the new community would not be adequate to serve residents of the project or to meet County General Plan standards. Parks may not be available to the first residents who occupy the project site.</p>	<p><b>4.3.1-1</b> (a) The Land Use Map, Policies, and/or Implementations under Recreation and Open Space (Appendix C) should be revised in accordance with one of the following <u>alternative</u> mitigation measures:</p> <p>(1) The Land Use Map for the project should be changed to include an additional 365 acres of on-site regional park land to be developed on an incremental basis as the site develops, <u>or</u></p> <p>(2) The on-site golf courses should be dedicated to the County for public use and maintenance. The Land Use Map also should be changed to provide for 34 acres of regional park in addition to the 70-acre Old River regional park; the regional park facilities and golf courses should be developed incrementally as the site develops, <u>or</u></p> <p>(3) 365 acres (or less if golf course(s) were donated to the County) of off-site regional park land in the Tracy or Delta Planning Area along a waterway shall be acquired and developed incrementally on a specific plan-by-specific plan basis as approved by the San Joaquin County Department of Parks and Recreation. If more than one park site were acquired there must be one site of 100 acres minimum in size. The Park land could be developed as part off-site mitigation for wildlife habitat and/or wastewater reclamation areas only if the development priority were recreational use, <u>or</u></p> <p>(4) If an in-lieu fee program were adopted on a Countywide basis by the County, in-lieu fees shall be contributed to the County to allow the County to expand regional park facilities. An in-lieu fee could be imposed on the project at any time during project site development. This requirement shall be codified in the Development Agreement to apply to all phases of the project, <u>or</u></p> <p>(5) The County Park and Recreation Department should enter into discussions with the East Bay Regional Park District regarding a reciprocity agreement regarding use of District facilities by county residents and residents within District boundaries using County facilities.</p>	1



Table 2.1, continued

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>(b) The Draft Master Plan should be amended to ensure neighborhood and regional park availability for the first site residents: the Phasing and Costs section should be amended to read:</p> <p>"Regional parks shall preferably be implemented incrementally on a specific plan-by-specific plan basis; by completion of the first specific plan (which would result in about 25 percent project buildout), 25 percent of the proposed 70-acre regional Old River park shall be developed.</p> <p><u>Alternatively</u>, the park can be developed in two stages, with the first stage being during construction of the first specific plan."</p>	
<p>■ PUBLIC SERVICES/Schools</p>		
<p><b>M4.3.2-1</b> The proposed twelve elementary/middle schools may be insufficient to accommodate the community's students.</p>	<p><b>M4.3.2-1</b> The Draft Master Plan should include a revised and an additional Implementation under Objective 1 in Education (Appendix C), and Master Plan Table 17-2, as follows:</p> <p>"f) Funding sources for school facilities, including temporary facilities at existing off-site locations shall be identified in the public financing plan.</p> <p>"g) The second and each subsequent specific plan shall contain an evaluation of the student generation rates in previous specific plan(s) to assess the appropriateness of the assumed student generation rates for medium, medium high, and high density residential development. If the rates were higher than assumed, additional schools may be necessary in subsequent specific plan areas; if the rates were lower, fewer students may be attending each school; the number of schools shall not change. The land use plan containing twelve K-8 and two high schools shall not be changed to reduce the number of schools without a Master Plan revision and concurrence from the school district."</p>	<p>I</p>
<p><b>M4.3.2-2</b> Several proposed schools are located in proximity to high voltage transmission lines, natural gas lines, and/or a household disposal area. The presence of these utilities may present health risks to students.</p>	<p><b>M4.3.2-2</b> The underground pipelines should be moved and the household disposal area hazards remediated prior to construction. <u>Alternatively</u>, the Land Use Map for the project should be revised/refined to ensure that the elementary school in Neighborhood I is not near underground fuel lines and the high school in Neighborhood D should be located to ensure that it is not underlain by underground pipelines or an inactive household disposal area.</p>	<p>I</p>
<p><b>M4.3.2-3</b> The school sites may not conform to all siting criteria for schools in accordance with California Code of Regulations (CCR) Title 5, Educational Code, Public Resources Code, California Department of Education guidelines, and San Joaquin County General Plan 2010.</p>	<p><b>M4.3.2-3</b></p> <p>(a) Refer to Mitigation Measure M4.3.2-2 regarding school locations near a household disposal site and fuel pipelines.</p> <p>(b) Refer to Mitigation Measure M4.10-1 regarding investigations for the presence of hazardous materials in the subsurface.</p> <p>(c) Refer to Mitigation Measure M4.11-1 regarding development in areas of special natural resource areas.</p> <p>(d) Site-specific soil investigations should be conducted prior to construction to determine the liquefaction potential of the soils in Neighborhoods I, J, and K. All construction should be performed in accordance with the recommendations of the licensed professional preparing the report.</p>	<p>I</p>

(e) The potential extent of the landfill should be identified and remediation implemented in accordance with local and State regulatory oversight. Alternatively, the Land Use Map of the Master Plan should be revised to ensure that the high school in Neighborhood D is not underlain by the solid waste landfill site.

■ **PUBLIC SERVICES/Fire Protection**

**M4.3.3-1**

The proposed project would temporarily increase the demand for local fire protection service until on-site services were provided.

**M4.3.3-1**

The following Implementations are recommended for addition to Objective 1 in Fire Protection and Emergency Response (Appendix C):

"i) The on-site fire station shall include an ambulance if the Fire Services were responsible for emergency medical service transport.

"j) Fire service and protection standards during construction and occupation of the project, including the addition of staff and equipment to existing off-site facilities and the construction, staffing, and outfitting of on-site facilities, shall be included in the Fire Protection Plan. The standards shall be submitted to the County and local fire protection service agency for review and approval prior to approval of the first Development Permit."

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■ **PUBLIC SERVICES/Police Protection**

**M4.3.4-1**

The proposed project would temporarily increase the demand for police services from the County Sheriff's Department.

**M4.3.4-1**

The Master Plan should include Implementations under Objective 1 in Police Protection (Appendix C), as follows:

"e) A proposal for institutional and funding arrangements for providing police services shall be submitted at the time of formation of the Community Services District, as well as phasing of on-site police services, if required.

"f) Deputy officers shall be added to the Sheriff's Department when the first residences in the first Specific Plan area are constructed. Sworn officers shall be provided at a ratio of 1.5 officers per 1,000 residents within the community."

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**M4.3.4-2**

The number of marine patrols on Old River would be insufficient at project buildout to provide effective law enforcement along Old River and in the Delta within the project vicinity.

**M4.3.4-2**

The Master Plan should include additional Implementations under Objective 1 in Police Protection (Appendix C), as follows:

"g) The Fire Protection Plan shall include provisions to patrol the Mountain House marina and the immediate vicinity of the marina.

"h) Fees, based on the number of berths, shall be assessed to help offset costs for providing marine patrol services by both San Joaquin and Contra Costa counties. If the counties cease patrol services in the future, the fees shall be used to contract for patrol services; and/or provide with the provisions of the plan to be completed by the Delta Protection Commission for coordinated marine patrols in the Delta.

"i) Specific plan(s) for the areas along Old River must incorporate crime prevention policies, such as providing security fencing, good lighting, visible berth numbers, and locked gates on berths for the marina and related facilities along Old River."

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Table 2.1, continued

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
<p>■ <b>PUBLIC SERVICES/Solid and Hazardous Waste</b></p>		
<p><b>M4.3.5-1</b> Solid waste projected for project buildout could be 63,532 tons per year without implementing a recycling program. At buildout, the project could generate 524 tons of household hazardous waste. Solid and hazardous waste generated by the project would contribute to the reduction in local and regional landfill capacities.</p>	<p><b>M4.3.5-1</b> The following Implementations are recommended for addition to the Draft Master Plan under Objective 1 in Waste Management:</p> <p>"i) The size of land(s) to be allocated for the on-site transfer station, recycling, and composting center(s) shall be determined on the basis of the actual waste generation rates and projected recycling rates to meet State-mandated reductions in solid waste disposal. Alternative sites for on-site waste management shall be identified in each specific plan.</p> <p>"j) Areas for recycling containers or adequate provisions to ensure on-site recycling opportunities at proposed commercial facilities and large apartment complexes shall be incorporated into Tentative Maps.</p> <p>"k) Recyclable construction waste, such as wood and metal, shall be separated and arrangement shall be made with the County, or on-site recycling services, for collection. Recycling of construction wastes shall be made part of the construction specifications for contractors."</p>	<p>I</p>
<p>■ <b>PUBLIC SERVICES/Libraries</b></p>		
<p>No impacts identified.</p>		
<p>■ <b>PUBLIC UTILITIES/Water Supply</b></p>		
<p><b>M4.4.1-1</b> Inadequate raw water storage facilities may result in interruption of water service, especially if restrictions on water diversion were imposed by State or Federal agencies.</p>	<p><b>M4.4.1-1</b> (a) A new Implementation should be added under Objective 1 in Potable Water Supply and Distribution (Appendix C), as follows:</p> <p>"b) Specific Plan II and each subsequent specific plan shall reevaluate the adequacy of the confirmed water supply for the remainder of the project in light of any potential or adopted restrictions on water diversion by BBID or DWR. The specific plans shall not be approved unless it can be demonstrated that the confirmed water supply is sufficient to serve the project through buildout. If potential or proposed restrictions on diversion would cause the confirmed water supply to be insufficient to serve the project as proposed in the Draft Master Plan, then the specific plans shall identify additional water conservation/reuse measures to be incorporated into the project to ensure that the demand would not exceed the confirmed supply."</p> <p>(b) A new Policy should be added under Objective 8 in Potable Water Supply and Distribution (Appendix C), as follows:</p> <p>"b) Adequate raw water storage will be provided to ensure a continued supply to the project in case of restriction to water diversion and emergencies that would prevent diversion."</p>	<p>I</p>

	<p>(c) A new Implementation should be added under Objective 8 in Potable Water Supply and Distribution (Appendix C), as follows:</p> <p>"c) Assumptions and calculations for determining adequate raw water storage volume, and plans for providing the storage shall be submitted to the County for review and approval prior to the submittal of the first Development Permit."</p>	
<p><b>M4.4.1-2</b> Changing part of BBID's service area from agricultural water use to municipal/industrial water use would create institutional issues requiring resolution. Indirectly, impacts to agricultural operations could include disruption of irrigation water supply and agricultural drainage service.</p>	<p><b>M4.4.1-2</b></p> <p>(a) The second paragraph of Implementation a) under Objective 1 in Potable Water Supply and Distribution should be revised as follows:</p> <p>"Prior to the submission of a Development Permit including land that may require use of water associated with its riparian water rights, an agreement between BBID and the CSD shall be executed, or the Development Permit shall demonstrate that an existing agreement is still in force. This agreement shall indicate that the parties have agreed to the terms under which BBID will wheel riparian water through their pumping and conveyance facilities to the Mountain House community as provided for in the BBID Water Services Agreement."</p> <p>(b) Policy a) under Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:</p> <p>"a) Continued irrigation water and drainage service shall be provided to the land within the BBID service area located east of the project site and Patterson Pass Road throughout project buildout."</p> <p>(c) Implementation Measure a) under Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:</p> <p>"a) The appropriate specific plans shall identify how water and drainage services to the land east of the project and Patterson Pass Road within the BBID service area would be affected. They shall identify the infrastructure needed to maintain these services and when construction of these facilities would need to be completed (schedule may be expressed in terms of when certain parcels are developed)."</p> <p>(d) Implementation Measure b) under Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:</p> <p>"b) To ensure an uninterrupted source of irrigation water to undeveloped land, Development Permits, as applicable, shall include a detailed assessment of how irrigation water and drainage services to land within the project site that has not been or is not immediately planned for development would be affected. The assessment shall include consideration of interruption of irrigation patterns, temporary interruptions in service due to installation of underground utilities, and access to farm fields by workers, equipment and trucks. A plan for constructing/modifying facilities to maintain irrigation water and drainage services and a schedule for constructing these facilities shall be included."</p>	1
<p><b>M4.4.1-3</b> The projected available supply of water to the project site from BBID (9,413 acre-feet per year) and from riparian water rights (possibly 2,600 acre-feet per year) is less than the project demand (12,874 acre-feet per year based on County Standards) and could result in an inadequate water supply for the project.</p>	<p><b>M4.4.1-3</b></p> <p>(a) Implementation b) under Objective 2 in Potable Water Supply and Distribution (Appendix C) should be replaced with the following:</p> <p>"b) Specific plans subsequent to Specific Plan I shall include a comparison of the actual water demand for the project with that calculated in the Draft Master Plan (assuming a 14 percent savings) to assess the effectiveness and adequacy of the water conservation measures. If the water savings specified in the Draft Master Plan were not achieved for a previous specific plan, the next specific plan shall specify additional actions that would be implemented to achieve the water conservation projections contained in the Draft Master Plan. Actions could include public information campaign, additional water conservation fixtures to be included in subsequent development, mandatory water rationing and on-site reclamation. Approval of the specific plan(s) shall be contingent on the adequacy of the proposed actions to increase water conservation effectiveness, if appropriate."</p>	1

Table 2.1, continued

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>(b) A new Policy should be added under Objective 1 in Potable Water Supply and Distribution (Appendix C), as follows:</p> <p>"b) Riparian water rights associated with land between Byron Road and Old River shall be reserved for project use. Until the parcels with riparian water rights are developed, the water diverted under riparian rights must be reserved for agricultural irrigation."</p>	
<p><b>M4.4.1-4</b> Drinking water may not be available to the project if the water treatment plant were not permitted and constructed prior to occupancy within the project.</p>	<p><b>M4.4.1-4</b> Implementation a) under Objective 7 in Potable Water Supply and Distribution should be revised as follows:</p> <p>"a) Review Process. A Development Permit shall be required for the water treatment plant and shall be approved prior to the approval of the first tentative map. The Development Permit shall provide a schedule for ensuring that the water treatment plant is fully operational prior to approval of the first final subdivision map, in accordance with the requirements of applicable state agencies."</p>	<p>I</p>
<p><b>M4.4.1-5</b> Water treatment sludge disposal could adversely impact local water quality or unnecessarily occupy scarce landfill space.</p>	<p><b>M4.4.1-5</b></p> <p>(a) Policy a) under Objective 10 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:</p> <p>"a) Water treatment plant sludge shall be disposed of through industrial reuse, land spreading, and/or dedicated land disposal inside and in the vicinity of the Mountain House community to the maximum extent feasible in accordance with applicable regulations. Landfill disposal of sludge would be chosen only if the other alternatives were determined to be infeasible.</p> <p>(b) The following new Policies should be added under Objective 10 in Potable Water Supply and Distribution (Appendix C):</p> <p>"c) Industrial reuse of water treatment sludge shall be practiced to the maximum extent possible. The Community Service District shall consider other disposal options only if industrial reuse were infeasible.</p> <p>"d) Adequate sludge treatment and drying facilities shall be provided at the plant through project build out."</p> <p>(c) Implementation Measure a) under Objective 10 in Potable Water Supply and Distribution (Appendix C) should be revised as follows:</p> <p>"a) Sludge Disposal Program. The initial Development Permit for the water treatment plant shall specify the water treatment sludge reuse/disposal method(s) that will be used throughout the development of Specific Plan I. Approval of subsequent specific plans shall be contingent on the identification of means of water treatment sludge reuse/application/disposal consistent with applicable local, state, and federal policies and regulations, and which minimizes landfill disposal. If landfill disposal were proposed, an agreement or "will serve" letter with a landfill that would accept the sludge for at least the next five years shall be provided with the initial Development Permit for the water treatment plant or subsequent specific plan. If land spreading or dedicated land disposal were proposed, then guarantees of adequate acres for sludge disposal for at least the next five years must be provided. Provisions for sludge disposal shall be updated annually so that there are always firm provisions for disposal for at least five years into the future."</p>	<p>I</p>

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	<p>(d) A new Implementation Measure should be added under Objective 10 in Potable Water Supply and Distribution (Appendix C), as follows:</p> <p>"e) A detailed assessment of water sludge treatment and drying needs shall be provided in the Development Permit for the water treatment plant. The assessment shall provide the supporting calculations for determining sludge production rates, estimates on percent moisture content in raw sludge and dried sludge, application rates and design parameters for sludge drying beds, projected surface area requirements for the drying bed, and land required for sludge disposal (if appropriate)."</p>	
<p><b>M4.4.1-6</b> An uncontrolled release of hazardous materials associated with water treatment practices could potentially occur and impact water resources and public health.</p>	<p><b>M4.4.1-6</b> (a) Objective 5 in Waste Management (Appendix C) should be revised, as follows: "To insure the safe handling and to minimize the use of chemicals and other hazardous materials at the water and wastewater treatment plants." (b) The following new Implementation should be added under Objectives 1 through 5 in Waste Management (Appendix C), as follows: "i) Chemical Selection and Facilities. Prior to design of the plants, chemicals associated with water and wastewater treatment operations shall be carefully selected to minimize the hazard. Chemical handling and storage facilities shall be designed to minimize and effectively mitigate the potential for accidental releases, including such features as secondary containment, alarms, remote sensing instruments, and other safety features."</p>	I
<p><b>M4.4.1-7</b> Water treatment plant capacity may be insufficient to meet project demand if any unit process in the plant were under-designed, or if plant expansion did not keep pace with project growth.</p>	<p><b>M4.4.1-7</b> The following new Implementation should be added under Objective 8 in Potable Water Supply and Distribution (Appendix C): "d) Calculations, including assumptions and process loading parameters, to support the determination of the amount of land necessary for raw water storage, different water treatment processes, treated water storage, sludge disposal, and support facilities shall be included in the Development Permit application for the water treatment plant."</p>	I
<p>■ <b>PUBLIC UTILITIES/Wastewater</b></p>		
<p><b>M4.4.2-1</b> Inadequately treated reclaimed wastewater could impact local surface and groundwaters and public health. Insufficient reclamation sites could result in illegal and inappropriate discharge of treated wastewater.</p>	<p><b>M4.4.2-1</b> (a) Objective 1 in Wastewater Treatment Plant (Appendix C) should be revised, as follows: "To ensure that wastewater treatment processes be selected, designed, constructed, and operated to provide adequate treatment capacity and water quality for the method(s) of disposal throughout project buildout." (b) Policy a) under Objectives 1 and 2 in Wastewater Treatment Plant should be revised, as follows: "a) Initial treatment processes shall be selected to meet effluent quality required for restricted use reclamation such as irrigation of agricultural lands." (c) Two new policies should be added under Objectives 1 and 2 in Wastewater Treatment Plant (Appendix C), as follows: "c) Additional wastewater treatment processes shall be provided if unrestricted use reclamation, including irrigation on-site, industrial/commercial reuse, or surface water discharge were implemented. "d) Expansion of the wastewater treatment plant shall be constructed and completed before the existing capacity has been exceeded."</p>	I

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>(d) Implementation b) under Objectives 1 and 2 in Wastewater Treatment Plant should be revised, as follows:</p> <p>"b) Ultimate Treatment. The facultative lagoons shall be replaced by activated sludge treatment, or other similarly effective process(es), to provide secondary treatment after Specific Plan 1 buildout is complete. Additional treatment processes shall be added to produce the required effluent quality necessary for disposal options other than restricted use reclamation, if implemented."</p> <p>(e) Implementation c) under Objectives 1 and 2 in Wastewater Treatment Plant should be revised, as follows:</p> <p>"c) Level of Treatment. Initially, all process designs shall be sufficient to treat effluent for surface irrigation of crops and/or landscape irrigation with limited public access. Processes shall be upgraded or replaced to produce higher quality effluent suitable for other disposal methods; such other disposal methods may include irrigation with potential human contact, if on-site reclamation and discharge to Old River were implemented."</p> <p>(f) Implementation f) under Objectives 1 and 2 in Wastewater Treatment Plant (Appendix C) should be revised, as follows:</p> <p>"f) Development Permit. A Development Permit shall be required for the wastewater treatment plant and shall be approved prior to the approval of the first tentative map. The permit application shall include a schedule for design, construction, and permitting for the plant to ensure that the wastewater treatment and reclamation facilities would be operational prior to the approval of the first final subdivision map. A separate Development Permit shall be required for each change in disposal method or area, or with each specific plan after Specific Plan 1, whichever is sooner. Each Development Permit for the wastewater treatment plant shall describe the mechanism by which the construction of additional facilities for incremental expansion in treatment capacity shall be completed before the existing capacity is exceeded."</p> <p>(g) The following new Implementation should be added under Objectives 1 and 2 in Wastewater Treatment Plant (Appendix C):</p> <p>"g) Specific plans subsequent to Specific Plan 1 shall include a comparison of the actual wastewater generation rates for the project with that calculated in the Draft Master Plan. If wastewater flow rates were higher than those predicted in the Draft Master Plan assuming implementation of water conservation measures, then the next specific plan shall specify actions that would be implemented in the next specific plan to reduce the wastewater generation rates. Approval of the specific plan(s) shall be contingent on the adequacy of the proposed actions to reduce wastewater generation rates to those calculated in the Draft Master Plan, if appropriate."</p> <p>(h) Objective 1 in Wastewater Reuse Program (Appendix C) should be revised, as follows:</p> <p>"All wastewater from the project shall be reclaimed to the maximum extent possible by assuring that the best beneficial use of the wastewater is implemented throughout the life of the project."</p> <p>(i) Policy c) under Objective 1 in Wastewater Reuse Program (Appendix C) should be revised, as follows:</p> <p>"c) Water reclamation facilities shall be designed and operated to minimize physical adverse effects on crop production, public health, groundwater, or surface waterways from agricultural irrigation with reclaimed water. Physical adverse impacts include salt and trace metal buildup in soil that prevents the growth of crops, or impacts to surrounding surface waterways due to discharge from agricultural drainage systems underlying the reclamation site."</p>	

(j) Implementation a) under Objective 1 in Wastewater Reuse Program (Appendix C) should be replaced with the following:

"a) A Reclamation Plan shall be approved by the County prior to the submittal of the Development Permit for the wastewater treatment plant. The Reclamation Plan shall include an engineering report and a schedule for ensuring that the design, construction, and permitting of the reclamation facilities would be completed prior to the approval of the first Tentative Map. The Reclamation Plan shall be updated and approved prior to the approval of specific plans subsequent to Specific Plan I."

(k) Implementation b) under Objective 1 in Wastewater Reuse Program (Appendix C) should be revised, as follows:

"b) Specific Plan Requirement. With the exception of Specific Plan I, no specific plan shall be approved unless guarantee has been provided to the County that sufficient land to meet the required storage and disposal acreage is under the control of the plan applicant or the community, and the consent of all agencies which have the legal responsibility to approve and/or issue permits has been obtained. Alternatively, if sufficient off-site land cannot be secured, then on-site reclamation shall be practiced to the maximum extent possible. Other disposal options, including discharge to Old River and piping the effluent to non-contiguous lands for irrigation, shall be considered, if necessary. If future specific plans propose an interim or permanent wastewater reclamation at a site other than the sites identified in the Master Plan, all the policies in the proposed Master Plan and all the adopted mitigation measures, shall be applicable to the proposed alternative reclamation site(s). Any alternative wastewater reclamation site shall also be subject to the permitting requirements of the Central Valley Regional Water Quality Control Board and the Department of Health Services. Prior to the approval of any specific plan utilizing an alternative wastewater reclamation site not specifically identified in the Master Plan/Specific Plan I EIR, site-specific environmental review shall be performed (including but not limited with respect to human contact, biological impact, crop types, etc.) and additional mitigation measures will be adopted to mitigate any site-specific environmental impacts not previously addressed."

(l) Implementation h) under Objective 1 in Wastewater Reuse Program (Appendix C) should be replaced, as follows:

"h) Monitoring. A detailed Salt and Trace Metal Management Plan shall be submitted as part of the reclamation plan to ensure that irrigation with reclaimed water is a viable long-term disposal option and to ensure minimization of salts and trace metals that are discharged to surface waters via the agricultural drains."

(m) The following new Implementation Measures should be added under Objective 1 in Wastewater Reuse Program (Appendix C), as follows:

"j) The location and design specifications for the wastewater storage ponds shall be provided in the Reclamation Plan. The location of agricultural drains within a one-half mile radius of the storage ponds and the sources and characteristics of soil that would be used to construct the ponds shall be identified. The design specifications shall address levee and pond bottom permeability, levee stability, and flood protection.

"k) An estimate shall be made of the wastewater volume that may seep from the ponds, and an assessment of potential flow paths from pond seepage shall be determined for the interim and potential permanent reclamation sites. The result of the assessment shall be submitted to the CVRWQCB for determination of whether agricultural drain discharge from land irrigated with reclaimed water would be regulated as a point-source discharge under the NPDES program. The determination by the CVRWQCB shall be provided in the reclamation plan. If it appears likely that the CVRWQCB would regulate the agricultural drain discharge, then assurance that the discharge would be allowed must be documented prior to approval of the reclamation plan."

(n) A new Policy should be added to Objective 3 in Wastewater Reuse Program as follows:

"f) The project shall be constructed such that on-site wastewater reclamation could be practiced to the maximum extent possible upon the completion of an advanced wastewater treatment plant with minimal retrofitting of developed areas."



Table 2.1, continued

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>(o) A new Implementation should be added to Objective 3 in Wastewater Reuse Program.</p> <p>"g) <u>On-Site Reclamation</u>. A reclaimed water distribution system shall be installed throughout the project upon initial development. The system shall provide for transmission of treated wastewater from the treatment plant to all public landscaped areas, parks, industrial and commercial areas, and other areas where reclaimed water could reasonably be used in the future. Major reclaimed water pipelines shall be sized to serve "downstream" areas upon development."</p> <p>(p) A new Implementation should be added under Objective 3 in Potable Water Supply and Distribution, as follows.</p> <p>"d) <u>On-Site Reclamation</u>. Upon operation of the advanced wastewater treatment plant to produce reclaimed water suitable for human contact on-site reclamation with reclaimed water shall be used to replace potable water to the maximum extent possible. The Community Services District, and/or other public municipal agencies, shall use reclaimed water for irrigation of public areas and operations (e.g., equipment/vehicle/bus washing). The Community Services District shall ensure that industrial and commercial operations that use water for washing or processing be required to use reclaimed water to the maximum extent possible."</p>	
<p><b>M4.4.2-2</b> Illegal discharge of waste and wastewater to the intake channel of the Delta-Mendota Canal via agricultural drains may occur if the drains were not abandoned upon development.</p>	<p><b>M4.4.2-2</b></p> <p>(a) A new Policy should be added to Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C), as follows:</p> <p>"Obsolete agricultural irrigation and drainage facilities shall be removed or properly abandoned upon development of an area."</p> <p>(b) Implementation c) under Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:</p> <p>"c) <u>Farm Drainage Requirements</u>. All Development Permit submittals shall include a report on the impact on existing farm drainage facilities. The report shall include a map of all existing farms drains that flow through the area covered by the permit or map, an assessment of the impact on the drainage system, and a determination of the planned dispossession of the system. The potential for drains to act as conduits for waste or wastewater to be discharged to nearby surface waterways shall be eliminated. Drains are to be identified on the maps as to type, location, and function. Portions of a system that would be abandoned shall be removed unless they could be incorporated into the storm drainage system."</p>	<p>I</p>
<p><b>M4.4.2-3</b> An inadequate wastewater sludge treatment and disposal system could adversely impact water resources and public health. Scarce municipal landfill space may be occupied by sludge if alternative disposal/reuse options were not aggressively pursued.</p>	<p><b>M4.4.2-3</b></p> <p>(a) The following Policies should be added under Objective 1 in Sludge Disposal (Appendix C), as follows:</p> <p>"b) <u>Beneficial reuse of sewage sludge</u> shall be implemented to the maximum extent possible to minimize sludge disposal at a landfill or at a dedicated site.</p> <p>"c) <u>Sludge quality from the project</u> shall not limit sludge reuse options. This shall be accomplished via effective pre-treatment, public education, recycling programs, and additional treatment, if necessary."</p>	<p>I</p>

	<p>(b) Implementation b) under Objective 1 in Sludge Disposal (Appendix C) should be revised, as follows:</p> <p>"b) Interim Disposal. If the sludge meets acceptance criteria of a specific landfill, the sludge shall be initially disposed of at an appropriately permitted landfill. Sludge shall meet nonhazardous classification and shall be dried to a minimum of 50 percent solids prior to disposal at a landfill. The duration of landfill disposal shall not exceed two years from the startup of the activated sludge treatment process, unless the sludge disposal program described in Implementation e) concludes that landfill disposal of wastewater sludge is the only viable option."</p> <p>(c) Implementation e) under Objective 1 in Sludge Disposal (Appendix C) should be revised, as follows:</p> <p>"e) Initial Wastewater Sludge Disposal Plan. Within one year after the startup of the permanent secondary treatment process, the Community Service District shall submit an Initial Wastewater Sludge Disposal Plan to the County and other appropriate agencies for review and approval. The Plan shall document the sludge characterization findings, a detailed impact/benefit analysis of sludge disposal options, and a proposed sludge disposal method for the duration of the current specific plan."</p> <p>(d) The following new Implementations should be added under Objective 1 in Sludge Disposal (Appendix C), as follows:</p> <p>"f) Sludge disposal options shall be evaluated as early as possible, not later than one year after the startup of the permanent secondary treatment process, to allow for early identification of disposal options. Evaluation shall include sludge characterization, survey of potential sites where sludge may be used as a soil amendment, and assessment of viability of the compost market.</p> <p>"g) In all specific plans where wastewater treatment sludge requires disposal, the specific plans shall identify the proposed method(s) of sludge disposal for the duration of the plans. The CSD may subsequently adopt other sludge disposal options provided the new method(s) will achieve an equivalent or higher degree of environmental and public health protection, as determined by the County, and meets all applicable regulatory requirements. The County shall be notified of the proposed change in disposal method at least six months prior to implementation of the new disposal method.</p> <p>"h) If landfill disposal of the wastewater sludge were proposed, an agreement or "will serve" letter with a landfill that would accept the sludge for at least the next five years shall be provided with the initial Wastewater Sludge Disposal Plan or subsequent specific plan. If land spreading or dedicated land disposal were proposed, then guarantees of adequate acres for sludge disposal for at least the next five years must be provided. Provisions for sludge disposal shall be updated annually so that there are always firm provisions for disposal for at least five years into the future."</p>	
<p><b>M4.4.2-4</b> An uncontrolled release of hazardous materials could occur during wastewater treatment operations and could impact water resources and public health.</p>	<p><b>M4.4.2-4</b> Refer to Mitigation Measure M4.4.1-6.</p>	I
<p><b>M4.4.2-5</b> Failure of the levees around wastewater treatment and storage ponds could cause flooding in the surrounding areas.</p>	<p><b>M4.4.2-5</b> (a) A new Policy should be added under Objective 1 in Wastewater Reuse Program (Appendix C), as follows:</p> <p>"d) The wastewater treatment and storage pond levees shall be capable of withstanding a maximum credible earthquake; ponds located within the 100-year floodplain shall prevent inundation due to levee failure along Old River or other nearby waterways, be capable of withstanding the effects of flooding, and shall not impair the structural integrity of existing flood control levees."</p>	I

Table 2.1, continued

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>The following new Implementations should be added under Objective 1 in Wastewater Reclamation as follows:</p> <p>"j) The detailed design of the wastewater treatment and storage pond levees shall be included in the Reclamation Plan and initial Development Permit for the Wastewater Treatment Plant, and in all subsequent reclamation plans where additional ponds are proposed. The pond levees within the 100-year flood plain shall meet, as a minimum, the requirements of Section 65.10 Mapping of Areas Protected By Levee Systems, 44 CFR Ch. 1 and the design standards specified herein.</p> <p>"k) The wastewater treatment and storage ponds located within the 100-year floodplain shall be set back from existing flood control levees to not interfere with inspection, maintenance, or repair of the flood control levees, if applicable.</p> <p>"l) The wastewater treatment and storage pond levees shall be set back an appropriate distance from existing flood control levees to ensure that there will be no loss of integrity of the flood control levees."</p>	
<b>PUBLIC UTILITIES/Storm Drainage</b>		
<p><b>M4.4.3-1</b> The accumulation of floating debris and petroleum residual in detention ponds could create a nuisance condition (e.g., odors, mosquito infestation, and excessive algae growth) and cause adverse aesthetic effects.</p>	<p><b>M4.4.3-1</b> The following mitigation measure should be included as an Implementation under Objective 3 in Primary Storm Drain Collection System (Appendix C):</p> <p>"e) Any proposed plans for construction or grading which include a detention basin shall include a proposed schedule and description of necessary routine maintenance activities for such detention basin(s) (including access roads). The maintenance plans may be in the form of a general operations and maintenance manual or may be specific to the detention basin(s) for which construction/grading plans are being submitted."</p>	I
<b>• PUBLIC UTILITIES/Gas and Electricity</b>		
<p><b>M4.4.4-1</b> The Draft Master Plan does not provide specifications for moving existing utilities and establishing easements.</p>	<p><b>M4.4.4-1</b> The following Implementations should be included under Objective 1 in Electricity (Appendix C):</p> <p>"e) A formal application shall be submitted to PG&amp;E to relocate the Weber-Herdlyn 60-kV electrical transmission line or provide an adequate open space corridor or other appropriate land use approved by PG&amp;E for the easement prior to submittal of the first Development Permit north of Byron Road.</p> <p>"f) A detailed proposal to relocate the eight-inch natural gas pipeline located north of Byron Road shall be included in the draft specific plan(s) for that area. A preliminary response from PG&amp;E regarding the proposed relocation shall be secured and documented in the applicable final specific plan(s).</p> <p>"g) An open space corridor or appropriate land use approved by PG&amp;E shall be provided for the Rio Oso-Testa transmission line easements. PG&amp;E's approval shall be secured prior to the first Development Permit in the applicable specific plans.</p> <p>"h) Construction plans shall be submitted to PG&amp;E and other easement owners for review prior to construction in applicable specific plan areas. In particular, the construction plans should identify proposed land uses in utility easements, and procedures for movement of heavy machinery over pipelines installed in non-roadway areas which may not be designed to withstand forces exerted by heavy loads."</p>	I

	<p>The Master Plan should include Policies under Objective 1 in Electricity (Appendix C) to read as follows:</p> <p>"i) Land uses shall be compatible with overhead transmission line corridors, existing or proposed.</p> <p>"j) Specific plans that propose residential or school development adjacent to an overhead transmission line shall summarize and provide an evaluation of the latest information regarding EMF exposure and incorporate additional measures to mitigate those effects, if appropriate."</p>	
<p><b>M4.4.4-2</b> The project would have a significant energy demand and would contribute to the depletion of non-renewable resources and the demand for environmentally-detrimental renewable resources such as hydroelectric power.</p>	<p><b>M4.4.4-2</b></p> <p>(a) The following Implementations should be added under Architectural Guidelines in the Design Manual (Appendix 4-A of the Draft Master Plan):</p> <p>"rr) Residential street layouts that include building and roof orientations that optimize the ability of residences to use solar energy to the maximum extent possible."</p> <p>(b) The following Implementation should be added under Landscape Concepts and Policies, General Issues, in the Design Manual (Appendix 4-A of the Draft Master Plan):</p> <p>"m) Street trees shall not be located in areas that would prevent residents' ability to use solar energy, unless they are deciduous trees that will not impact solar access during winter months."</p> <p>(c) The Design Manual for the Master Plan should be amended to include a section on energy efficiency that would provide guidelines for energy efficient designs for residential and non-residential development within the entire community.</p> <p>The guidelines for buildings should meet or exceed the most recent standards established by the California Energy Commission and promote passive solar design. The guidelines for the community should incorporate PG&amp;E's recommendations, encourage efficient street design, and transportation alternatives to reduce automobile use.</p> <p>(d) A new Implementation should be added under Commercial Objective 2 (Appendix C):</p> <p>"c) The neighborhood commercial areas shall be sited so that as many homes as possible are located within one-quarter mile walk of the closest neighborhood or community shopping area."</p>	1
<p>■ <b>PUBLIC UTILITIES/Telephone</b></p>		
None identified		--
<p>■ <b>CULTURAL RESOURCES</b></p>		
<p><b>M4.5-1</b> Development of the project could result in the disturbance of currently unknown subsurface prehistoric cultural deposits or artifacts related to the prehistoric setting or historic archaeological deposits or features dating from the establishment of Euro-American settlement in San Joaquin County.</p>	<p><b>M4.5-1</b> The following measures should replace Implementations a) and b) under Objective 8 in Development Standards (Appendix C).</p> <p>a) When specific land use and development plans are formulated as part of a specific plan, additional archaeological surveys shall be conducted in areas of development that have not been subjected to intensive archaeological reconnaissance. This shall include areas outside the specific plan area that are proposed for interim or permanent wastewater treatment or reuse.</p> <p>b) Because of the possibility that a buried site, Ca-SJo-136, may be located in the vicinity of Mountain House Creek, construction activity in the Mountain House Creek area near that site shall be monitored by an archaeologist.</p> <p>c) Because of the potential historic significance of Ca-SJo-229H, the site of the village of Wicklund, and because of the potential for buried features or artifact deposits in that area, an archaeologist shall monitor any construction work.</p>	1

Table 2.1, continued

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>d) If, during the course of construction, subsurface historic archaeological features were identified on sites Ca-SJo-230H and Ca-SJo-231H or anywhere within the project site, excavation shall cease and an archaeologist shall be contacted to evaluate these materials.</p> <p>e) If, during the course of any construction activity, buried prehistoric cultural resources were found, excavation shall cease and an archaeologist shall be contacted immediately to evaluate these resources. Such evaluation may entail archaeological test excavation and/or mitigative data recovery.</p> <p>f) A demolition permit, to be approved by the Planning Division of the Community Development Department, shall be required prior to destruction of any building in excess of 50 years of age.</p>	
<p><b>M4.5-2</b> Development of the proposed project could disturb previously unknown human prehistoric burial sites.</p>	<p><b>M4.5-2</b> The following should be added as an Implementation in Development Standards (Appendix C):</p> <p>g) The County Coroner, the Native American Heritage Commission, and an archaeologist shall be informed and consulted if a human prehistoric burial site were discovered during site construction. An agreement shall be formulated between the Native American representative, the archaeologist, San Joaquin County, and the developer with regard to the proper treatment and disposition of human remains and associated artifacts in individual specific plans. Such treatment and disposition may require archaeological excavation and reburial</p>	I
<p><b>M4.5-3</b> The proposed project could destroy structures over 50 years of age which may have significant historical value.</p>	<p><b>M4.5-3</b> The following Implementation should be added under Development Standards (Appendix C):</p> <p>h) Each specific plan shall contain a determination by a qualified architectural historian as to whether any of the structures that are more than 50 years old would be affected by specific plan implementation. If specific plan implementation were determined to affect the structures, recommendations by the qualified professional shall be implemented; such mitigation measures could consist of avoidance of impacts by incorporating the structure into planned developments, detailed architectural documentation and history, or removal of a structure to another location. Each specific plan shall map the location of all structures 50 years of older that have been determined by a historian to be of historic significance, except for Specific Plan I.</p>	I
<p><b>■ GEOLOGY, SOILS, AND SEISMICITY</b></p>		
<p><b>M4.6-1</b> Strong ground shaking during an earthquake could cause structural damage to improvements and injuries to residents of the proposed project.</p>	<p><b>M4.6-1</b> The preparation and distribution of a Community Earthquake Preparedness Plan, proposed in the Draft Master Plan, would reduce this impact. This remains an unavoidable adverse impact. Implementation a) under Objective 5 of Potential Site Hazards (Appendix C) should be amended to ensure that the Plan be prepared prior to the first Development Permit. No further mitigation is possible.</p>	SU

■ HYDROLOGY AND WATER QUALITY		
<p><b>M4.7-1</b> Increased sedimentation within Old River would be caused by runoff from Mountain House Creek and operation of the proposed marina.</p>	<p><b>M4.7-1</b> The Draft Master Plan should include the following Objective, Policy, and Implementations under Parks and Recreation (Appendix C) as mitigation measures for reduction of sedimentation impacts related to construction and operation of the proposed marina:</p> <p>Objective: To ensure that the design and operation of private recreation areas do not adversely affect water resources.</p> <p>Policy: The marina on Old River shall be designed, constructed, operated, and maintained to minimize the accumulation of sediment within the marina and the Old River Channel.</p> <p>Implementation: a) A dredging plan shall be developed at the specific plan stage for the Marina portion of Neighborhood K along Old River for removal of accumulated sediment from the Old River channel in the area of the proposed marina outlet. This plan shall comply with the requirements of dredging permits issued by the U.S. Army Corps of Engineers and shall have provisions for controlling turbidity during dredging.</p> <p>b) Prior to obtaining a dredging permit, a disposal area for the dredged sediments shall be established by the applicant and approved by the Central Valley Regional Water Quality Control Board. The disposal area shall be identified in the recommended dredging plan. The characteristics and design of the dredge disposal area shall minimize the potential discharge of sediments to surface water and potential discharge of contaminants to the surface water or groundwater. A sampling plan to evaluate the potential levels of contaminants within the sediments shall be incorporated in the recommended dredging plan. The collected samples shall, as a minimum, be analyzed for trace metals, salts, pesticides, and herbicides.</p>	I
<p><b>M4.7-2</b> Inadequate water circulation would potentially create water quality problems within the proposed on-site marina.</p>	<p><b>M4.7-2</b> The following Objective, Policy, and Implementations are recommended for inclusion under Parks and Recreation (Appendix C):</p> <p>"Objective: "To minimize the potential for water quality degradation at the marina on Old River.</p> <p>"Policy: "The marina shall be designed and operated to minimize the potential for water quality degradation associated with inadequate water circulation or waste discharge at the marina.</p> <p>"Implementation: "a) The design of the marina shall include, if necessary, a forced circulation system capable of reducing the residence time of water in the marina to less than five days. The marina design and operation plan shall be presented at the specific plan stage for Neighborhood K, which includes the marina.</p> <p>"b) Convenient and adequate waste disposal facilities for human waste, bilge water, engine fuels and lubricants, and garbage shall be incorporated in the marina design and operation plan."</p>	I
<p><b>M4.7-3</b> Water quality in Old River could be impacted by increased turbidity caused during construction of the proposed marina.</p>	<p><b>M4.7-3</b> The following Implementation should be included under the Objective and Policy proposed by Mitigation Measure M4.7-2:</p> <p>"c) Construction of the marina shall be staged to delay breach of the Old River levee until construction of the marina basin is completed and stabilized. The Storm Water Pollution Prevention Plan for marina construction shall specifically require construction techniques to minimize erosion and sediment transport during and after breaching of the levee."</p>	I

Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Hydrology and Water Quality

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
<p><b>M4.7-4</b> Shallow groundwater at the project site could present adverse conditions for construction of foundations and detention/retention basins. Ultimate development of the project site could cause a rise in shallow groundwater levels as a result of removal of subsurface drains.</p>	<p><b>M4.7-4</b> The following Implementation is recommended for inclusion under Objective 3 in Primary Storm Drain Collection System (Appendix C):</p> <p>"e) Preliminary Soils Report. The soils report required for each subdivision shall identify the seasonal high groundwater level at the site of any detention/retention basins proposed as part of the stormwater management system. The report shall provide recommendations for appropriate design elevations for the detention/retention basins that would avoid saturation or partial filling by groundwater. The report shall specifically address the potential for increased groundwater levels caused by removal or disruption of existing subsurface drains. The report will provide recommendations for subsurface drains for all newly constructed structures or facilities. These recommendations all include provisions for routing and disposal of drain discharges that will not result in adverse flooding or saturation hazards within other areas of the project site."</p>	<p>1</p>
<p><b>M4.7-5</b> Increased boating within Old River and the South Delta waterways, expected as the result of the operation of the proposed marina, would contribute to the erosion of levees by waves generated as boat wakes. Erosion could result in adverse sedimentation within the waterways and levee instability.</p>	<p><b>M4.7-5</b> The following Implementations should be added to the Draft Master Plan under Objective 1 in Flood Protection (Appendix C):</p> <p>"g) The design of the levee improvements shall consider and mitigate the potential causes of erosion, including boat wakes. Possible design components for the prevention of erosion could include rock revetment structures, such as riprap. The erosion controls shall, to the extent possible, be designed to provide protection of existing riparian vegetation. Specific design components for erosion abatement shall be required as a condition of levee design approval.</p> <p>"h) Boat speed limits to reduce the generation of potentially damaging boat wakes shall be established and enforced by the San Joaquin County Sheriff's Department, Boating Safety Division, in conjunction with other Delta area law enforcement agencies."</p>	<p>1</p>
<p><b>M4.7-6</b> The sediment load transported by Mountain House Creek could be deposited within the project site, potentially interfering with flood control and the enhanced habitat function of the Mountain House Creek corridor.</p>	<p><b>M4.7-6</b> The following Implementation should be added to the Draft Master Plan under Objective 2 in Mountain House Creek Improvements (Appendix C):</p> <p>"• A sedimentation basin or other effective sediment control structure shall be designed and constructed near the point where Mountain House Creek crosses the western project boundary. The basin shall be designed to effectively remove sediment from the creek flows entering the project site. The basin maintenance shall be the responsibility of the CSD. The basin design and maintenance program shall minimize the potential for wetland development in the basin which could hinder the function or maintenance of the structure."</p>	<p>1</p>

**■ VISUAL QUALITY**

**M4.8-1**

The proposed project would significantly alter the existing rural visual quality of the site as seen from local roads, regional freeways, and proposed public pathways.

**M4.8-1**

(a) The following two policies should be added under Landscape Concept and Policies in Development and Design (Appendix C):

"Landscaping plans that include fencing, trails, bikeways, and a conceptual plant and tree palette for both existing and proposed roadways, of collector classification and above, and other edge treatments shall be included in each adopted specific plan, if not already set forth in the Design Manual.

"The landscaping plans included in each specific plan shall be used as criteria by the proposed Community Review Board to review the design and landscaping plans of all major projects within the community prior to construction."

(b) The Specific Plan and Special Purpose Plan for Mountain House Business Park should include a comprehensive sign program for the Freeway Service Commercial district which would limit pole signs identifying the Freeway Service area to no more than two locations; height and size restrictions shall be imposed where feasible to lessen the visual impact. The height limits of the one or two pole signs shall not exceed the heights specified in the Development Title for C-FS areas

(c) The following Policy should be added under Old River Regional Park (Objective 6) in Recreation and Open Space (Appendix C):

"j) Additional trees shall be provided along Old River where necessary to screen the project from boaters, while still affording views of the water for people using the regional park. Along Old River, the landscaped area shall be planted with species of trees and shrubs compatible with existing riparian vegetation. Species shall also be chosen to provide effective screening so that the public using the levees for walking or bicycling would have a limited view of development on site. Provisions to accomplish this shall be included in the Park and Open Space Plan."

(d) The Draft Mountain House Design Review Manual should be amended to define the Community Review Board and describe its typical duties. The Community Review Board could include some members of the larger Community Services District Board of Directors augmented with one or more design professionals. The main purpose of the Review Board would be to review Development Permits of other development applications for their consistency with established design standards in the Draft Master or specific plans. The Community Review Board would also be advisory to the CSD Board and the County on design issues that are not directly regulated by master or specific plan policies or implementations (such as the choice for public art in common spaces, minor design details of playgrounds or community parks, and choosing an appropriate gateway monument along the I-205 frontage).

1

**M4.8-2**

Views from public roads toward Mt. Diablo and the Mt. Diablo foothills to the west of the site would be screened by new buildings.

**M4.8-2**

The following Policy and Implementation should be added under Landscape Concept and Policies in Development and Design (Appendix C):

"Policy: View corridors towards the foothills and Mt. Diablo shall be protected and enhanced to the greatest extent possible, without compromising the ability of windrows planted along the western boundary to mitigate wind, dust, and aerial spraying.

"Implementation:

"a) Critical view corridors shall be identified in the Parks and Open Space Plan.

"b) East-west roadways and pedestrian corridors throughout the project site shall be landscaped with trees to frame views to the west and, whenever feasible, the trees shall be planted at least 40 feet apart to allow open views.

"c) Periodic breaks in the continuous landscaping plans for north-south arterials and other roadways shall be identified to maximize views toward Mount Diablo and the foothills.

1



Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Visual Quality

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
<p><b>M4.8-3</b> Industrial and high density residential buildings along major view corridors or open space corridors could affect views or create a strong visual contrast to the open space and generate long shadows.</p>	<p><b>M4.8-3</b> Table 4.1 should be amended to note that any High Density Residential structures in the High Density Residential area west of the open space corridor along Mountain House Creek must be set back from the lot line adjacent to the creek by at least 50 feet, as already required by a policy in the Draft Master Plan.</p>	<p>I</p>
<p><b>M4.8-4</b> Project development could result in the removal of mature trees currently visible from public roads; the trees frame views along the public roads.</p>	<p><b>M4.8-4</b> Policy a) under Tree Mapping and Conservation Policy (Objective 6) in Recreation and Open Space (Appendix C) should be revised as follows:  "a) Existing healthy mature trees, particularly those along Patterson Pass and Grant Line roads, shall be preserved and incorporated to the greatest extent practical into the landscape design of the community. Land uses adjacent to the existing mature trees should be compatible with the preservation program for mature trees."</p>	<p>I</p>
<p><b>M4.8-5</b> The project could generate light and glare that would be visible from major roads, residences within the project, and residences outside the project.</p>	<p><b>M4.8-5</b> Include the following Policy b) and Implementation c) under Lighting (Objective 4) in Development and Design (Appendix C) and make appropriate revisions in the Lighting section of the Design Manual (Appendix 4-A of the Draft Master Plan):  "Policy: "b) Lighting throughout the project shall be designed to minimize glare and impacts to adjacent land uses, especially residences.  "Implementation: "c) Special Purpose Plans and building plans for significant commercial and industrial structures shall include specific designs to ensure light and glare from the project would be minimized, especially between commercial/industrial and residential uses. Mechanisms such as screening of parking areas with evergreen trees, setbacks from residential neighborhoods adjacent to commercial areas, and a design review process to review development plans shall be included in the Design Manual. The design review process shall include review of lighting proposals and architectural materials for all proposed projects. The proposed Community Review Board, a Design Review Committee, consisting of both architects and landscape architects, shall oversee the design review process."</p>	<p>I</p>
<p><b>M4.8-6</b> The planned relocation of the 60-kV Weber-Herdlyn power line could create additional visual impacts if it is reconstructed aboveground elsewhere on the project site.</p>	<p><b>M4.8-6</b> A new Policy should be added under Electric and Magnetic Fields in Public Health and Safety (Appendix C) as follows:  "The 60-kV Weber-Herdlyn power line shall be relocated to an alignment that parallels the Mococo SP rail line. The proposed relocation shall be shown in the first residential Specific Plan that is prepared for lands north of Byron Road."</p>	<p>I</p>

POPULATION, HOUSING, AND EMPLOYMENT

M4.9-1

The proposed project may not attain an adequate balance between jobs and housing, especially during the initial phases of the project.

M4.9-1

(a) To more realistically plan for a range of absorption rates, a "Low Growth" absorption schedule, as well as a "High Growth" schedule should be included in the Master Plan. The Jobs/Housing Program policies and Tables 3.7 and 3.8 should be revised to indicate the number of jobs that would need to be created on-site to reach the "minimum" jobs/housing ratio goals for each increment of housing development, under both "High Growth" and "Low Growth" absorption schedules. This additional information will assist County staff in evaluating the project's performance in meeting jobs/housing goals during the annual monitoring process.

(b) Implementations d) and e) under Objective 1. Jobs/Housing Program in Land Use (Appendix C) should be revised as follows:

"d) Jobs/Housing Reviews. The Jobs/Housing Program shall be monitored by the Review Authority as described in the monitoring and enforcement section below. In addition, the San Joaquin County Board of Supervisors shall hold a Public Hearing to review the progress of the Jobs/Housing Program at the following specified times:

- Prior to the approval of any Specific Plan, excluding the first Specific Plan or Specific Plan Amendment.
- Every three years after construction begins, but no sooner than after 2,000 residential units have been completed, provided a Jobs/Housing Review has not already been conducted in the previous calendar year; or
- At any other times determined appropriate by the Board of Supervisors (e.g., scheduling a Jobs/Housing Review by the Board to evaluate the circumstances for nonachievement of jobs/housing ratios.

"To determine whether the Community is meeting its jobs/housing goals, the following will be tracked:

- Best Case Ratios: The jobs/housing ratio is estimated to improve over time from 0.79 by the end of the first seven years of Specific Plan I under the "High Growth" schedule to 0.99 at project buildout. These "Best Case" jobs/housing ratios are presented in Table 3.7: Analysis of Jobs/Housing Balance Over Time;
- Minimum Ratios: The Minimum Ratio averages only 4 percent to 9 percent less than the Best Case Ratio; over time, the Minimum Ratio approaches the Best Case Ratio. Minimum Ratios for years or residential units not shown shall be interpolated. The Minimum Ratios are presented in Table 3.8: Analysis of Various Jobs/Housing Scenarios Over Time; and
- Minimum Job Densities: Commercial and industrial land uses designated for each neighborhood should generally conform with the average densities shown in Table 3.1: Land Use Program."

"e) Enforcement. The San Joaquin County Community Development Director shall prepare a written report and findings and determine through the annual monitoring of the Jobs/Housing Program that the minimum jobs/housing ratios and minimum job densities (per Table 3.1 of the Master Plan) have been achieved. Annual monitoring shall include an inventory of built and occupied residential units, and gross commercial/industrial square footage built and occupied, broken down by land use category, with estimated number of employees for each land use category. In the event that the minimum jobs/housing ratios and minimum job densities (per Table 3.1 of the Master Plan) have not been achieved, the Board of Supervisors shall decide whether to schedule public hearings before the Planning Commission and the Board of Supervisors to evaluate the circumstances for nonachievement, and to develop an appropriate course of action. The County Planning Commission shall make recommendations to the Board regarding the issue. Both the Planning Commission and the Board of Supervisors shall consider the following issues:

NA

Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Population, Housing, and Employment

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<ul style="list-style-type: none"> <li>• Recent efforts in the job creation program;</li> <li>• Commitments for future jobs;</li> <li>• The financial effects that discontinued or interrupted residential development will have on Community Services District operations, and public financing districts in the community;</li> <li>• The effects of including construction jobs in the calculation of the jobs/housing ratio;</li> <li>• The types of the jobs created to date (e.g., the wage scale or salary level of the jobs, and what portion are full-time or part-time positions) and how many of the new jobs are in "basic" industries (non-local);</li> <li>• The relationship of the job creation rate in the project with local, State, and national economic or market trends and financing availability;</li> <li>• Efforts that have been made by the County to facilitate and encourage job development; and</li> <li>• Actual job densities (jobs per acre or square foot) that have been achieved for commercial and industrial uses, compared to the average job densities specified in Table 3.1.</li> </ul> <p>"Following consideration of all public testimony, written materials and recommendations of County staff and the Planning Commission, the Board shall decide on a course of action to address the jobs/housing issue. Although the Board may take whatever action it deems appropriate to further jobs/housing goals, the Board shall focus on taking one or more of the following actions:</p> <p>"(1) Find that no action is necessary and direct County staff to continue processing applications for the construction of additional residential units in the project as before; or</p> <p>"(2) Direct County staff to continue processing applications for the construction of additional residential units in the project according to revised jobs/housing targets that will ensure that jobs/housing ratio goals will be substantially met in the future: and/or</p> <p>"(3) Recommend that certain actions be taken by the Master Developer and/or other developers within the project to increase job creation: and/or</p> <p>"(4) Approve future Specific Plans only if it can be demonstrated that the community will reach minimum jobs/housing ratios.</p> <p>"Any proposed action by the Board that would constrain residential development shall require the preparation of a study for Board consideration and action that assesses the impacts on affected parties (e.g., the CSD, CFDs, private developers, bond shareholders, the County). This study shall also consider potential undesirable impacts arising from such Board action (e.g., possible restriction on the creation of a population-serving jobs and region-serving jobs due to a reduction in population growth; possible limitation on the operation of existing population-serving and some region-serving businesses)."</p> <p>(c) Guideline (d) under Monitoring and Enforcement should be moved to become an Implementation under Objective 1, Jobs/Housing and Affordable Housing (Appendix C) and should be revised as follows:</p> <p>"Redesignation and rezoning of commercial and industrial land to non-employment uses (such as residential uses) shall be approved only if the County determines that the proposed redesignation or rezoning will not have a negative impact on the Mountain House Jobs/Housing and Affordable Housing programs."</p>	

**M4.9-2**

The proposed project may not provide a sufficient supply of housing that is affordable to Very Low and Low Income workers employed in the community, especially if 25 percent of the planned second units were not occupied by Very Low and Low Income renters.

**M4.9-2**

(a) The Affordable Housing Program in the Draft Master Plan should be amended to include policies and an implementation program that ensures qualified Very Low Income and Low Income families can rent or buy the designated affordable housing units. An income test should be applied to all potential tenants and home buyers for the High Density and Medium-High Density units proposed for affordable rents or condominium prices. The Senior Citizen housing units should be subject to the same income tests and restrictions as the other affordable units. The assumptions for the Affordable Housing Program (Section 3.9.1 of the Draft Master Plan) should be amended to state that only one-quarter of the proposed number of Senior Citizen housing units is assumed to provide Very Low and Low Income housing opportunities. The income qualifying mechanism could be administered by the Mountain House Affordable Housing Trust Fund, by the County, or by a reputable non-profit housing organization.

The Affordable Housing Program should also be amended to include policies and implementation programs to provide reasonable assurance that the number of affordable housing units remain occupied by qualified Very Low and Low Income tenants or homeowners over time. The income test and verification process outlined above should be applied each time an affordable unit is vacated and re-rented or sold.

Alternatively, to increase the possibility that an adequate number of affordable housing units would be constructed earlier in the project and would continue to be occupied over time by Very Low and Low Income households, an additional 17 to 22 acres of land should be designated on the Land Use Map for High Density housing (which would create 300-400 units).

(b) The Affordable Housing Program goals for each 4,000-unit milestone should be amended so that the number of affordable housing units proposed for the first half of the project corresponds more closely with the proposed goals. The Affordable Housing Program policies and Table 3.12 in the Draft Master Plan should be revised to indicate the exact number of affordable units by income category in each 4,000-unit development increment, which would serve as the adopted Affordable Housing goals for the program.

(c) To clarify the assumed role of second units, the Draft Master Plan should be amended by adding a paragraph in the "Assumptions" section of the Jobs/Housing and Affordable Housing discussion. The added paragraph should state the assumption that one-quarter of the 857 planned second units will be affordable to low income households.

(d) The Draft Master Plan should be amended with an Implementation that requires that the Design Manual include Second Unit land use, zoning and design regulations (prepared prior to the first Development Permit). The Second Unit regulations should specify development standards such as maximum square footage and lot coverage, required setbacks from the existing primary structure and structures on adjacent lots, maximum height, and the maximum number of units that can be located on any given block within a neighborhood. Table 4.1 (Lot and Structure Standards) in the Draft Master Plan should be revised to include the Second Unit standards, or a reference to where the detailed design standards are located.

(e) The Mountain House Affordable Housing and Housing Trust Fund (MHHTF) programs in the Draft Master Plan should include another example of how the MHHTF could be used to ensure the provision of affordable housing. It is recommended that the example provided describe the possible involvement of the Trust monies in constructing High Density, Medium-High Density, and Second Units, and marketing the units at affordable prices. The Affordable Housing Program should consider a plan to construct the High Density housing, and then dedicate and sell the units to an established non-profit housing corporation which can then manage the units. In this way, the independent non-profit corporation can take advantage of Federal tax incentives, and leverage additional funds from other housing programs. The Draft Master Plan should be amended to include policies concerning the construction, ownership, management, and maintenance of affordable units using Trust monies, and provide a projected phasing schedule for the marketing of affordable units and collection of Trust monies.

(f) Implementations k) and l) under Objective 2 of Jobs/Housing and Affordable Housing (Appendix C) should be modified as follows:

NA

Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Population, Housing, and Employment

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>"k) Affordable Housing Reviews. The Affordable Housing Program shall be monitored by the Review Authority as described in the monitoring and enforcement section below. In addition, the San Joaquin County Board of Supervisors shall hold a Public Hearing to review the progress of the Affordable Housing Program at the following specified times:</p> <ul style="list-style-type: none"> <li>• Prior to the approval of any Specific Plan, excluding the first Specific Plan or Specific Plan Amendment;</li> <li>• Every three years after residential construction begins, but no sooner than after 2,000 residential units have been constructed, provided a Public Hearing on the progress of the Affordable Housing Program has not already been conducted in the previous calendar year; or</li> <li>• At any other times determined appropriate by the Board of Supervisors (e.g., scheduling of an Affordable Housing Review by the Board to evaluate the circumstances for non-achievement of affordability indices).</li> </ul> <p>"l) Enforcement. To determine whether the Community is meeting its Affordable Housing goals, the specific minimum affordability indices presented in Table 3.12 will be tracked. The San Joaquin County Community Development Department shall prepare a written report and findings and determine through its monitoring of the Affordable Housing Program that the specified affordability indices have been achieved beginning after first three years of construction. Annual monitoring shall include an inventory of built and occupied residential units, broken down by sales price or rental price range. In the event that the minimum affordable housing indices have not been achieved, the Board of Supervisors shall decide whether to schedule public hearings before the County Planning Commission and Board of Supervisors to evaluate the circumstances for nonachievement, and to develop an appropriate course of action. The County Planning Commission shall make recommendations to the Board. Both the Planning Commission and the Board of Supervisors shall consider the following issues:</p> <ul style="list-style-type: none"> <li>• The portion of new High Density, Medium High Density, and Second Units that are being offered for rent or sale at affordable levels and have been occupied by Very Low Income and Low Income families;</li> <li>• The amount of Housing Trust funds that has been collected and the Housing Trust programs that have been established and funded;</li> <li>• The involvement of other public or private housing program monies that have been leveraged with Trust funds, whether any other specific programs will contribute to the Affordable Housing Program within the next two years, and the effects of the programs to ensure affordable housing opportunities;</li> <li>• The types of the jobs created to date (e.g., wage scale or full or part time) and what portion of the new jobs are "basic" (non-local); and</li> <li>• The relationship of the Affordable Housing Program to local, State, and national economic or market trends and financing availability.</li> </ul> <p>"Following consideration of all public testimony, written materials, and recommendations of County staff and the Planning Commission, the Board shall decide on a course of action to address the affordable housing issue. Although the Board may take whatever action it deems appropriate to further affordable housing goals, the Board shall focus on taking one or more of the following actions:</p> <p>"(1) Find that no action is necessary and direct County staff to continue processing applications for the construction of additional residential units in the project as before; or</p> <p>"(2) Direct County staff to continue processing applications for the construction of additional residential units in the project according to revised Affordable Housing targets that will ensure that the Affordable Housing goals will be substantially met in the future; and/or</p>	

	<p>"(3) Recommend that certain actions be taken by the master developer, other developers, and/or by the MHHTF Board to increase the number and/or type of affordable units; and/or</p> <p>"(4) Direct County Staff to prepare a study for Board consideration and action that assesses the impacts of certain specified amendments to the Master Plan to achieve affordable housing goals (e.g., revising residential densities, adjusting the affordable housing fee, restructuring the Affordable Housing Program, etc.); and/or</p> <p>"(5) Approve future Specific Plans only if it can be demonstrated that the community will reach affordable housing targets.</p> <p>"Any proposed action by the Board that would constrain residential development shall require the preparation of a study for Board consideration and action that assesses the impacts on affected parties (e.g., the CSD, CFDs, private developers, bond shareholders, the County). This study shall also consider potential undesirable consequences arising from such Board action (e.g., interruption in the flow of affordable housing fees into the MHHTF possibly adversely affecting new affordable housing development)."</p> <p>(g) Guideline e) under Monitoring and Enforcement should be moved to become two Implementations under Objective 2. Jobs/Housing and Affordable Housing (Appendix C) and should be revised as follows:</p> <p>"Redesignation of higher density residential land (e.g., multi-family R/H) to lower density land (e.g., single family R/M) uses shall be approved only if the County determines that the proposed redesignation or rezoning will not have a negative impact on the Mountain House Jobs/Housing and Affordable Housing programs.</p> <p>"Subject to the provisions of Section 3.3: Land Use Regulations and Permitted Uses, residential densities in each land use category shall not fall below a specified minimum number of dwelling units per acre by neighborhood as indicated in Table 3.3: Maximum and Minimum Residential Units by Neighborhood."</p>	
<p>■ <b>PUBLIC HEALTH AND SAFETY</b></p>		
<p><b>M4.10-1</b> Public and environmental health may be affected by potential historic pesticide and/or herbicide residues in the environment, as well as by future pesticide and/or herbicide applications off-site.</p>	<p><b>M4.10-1</b></p> <p>(a) The following Implementation should be included under Objective 2 in Potential Site Hazards (Appendix C):</p> <p>"b) In anticipation of the development of specific areas, pesticide and/or herbicide applications shall be reduced or eliminated six months prior to Development Permit submittal."</p> <p>(b) The following Implementation under Objective 2 in Potential Site Hazards (Appendix C) should be added:</p> <p>"c) Aerial spraying shall be restricted within 500 feet of the nearest dwelling along the western site boundary."</p> <p>(c) Implementation b) under Objective 6 in Potential Site Hazards (Appendix C) should be revised as follows:</p> <p>"b) Site Searches. Prior to the submittal of any Development Permit for areas to be developed, the property owner shall submit a Site Assessment prepared in accordance with ASTM standards to assess the presence of any fuel. . ."</p>	<p>1</p>
<p><b>M4.10-2</b> Potential health impacts may result from public exposure to PCBs associated with transformers or electromagnetic fields associated with overhead electrical lines.</p>	<p><b>M4.10-2</b></p> <p>The following measures are recommended to be added as Implementations under Objective 2 in Electric and Magnetic Fields (Appendix C):</p> <p>"d) Prior to development permit submittal for areas containing electrical transformers, the developer shall request that PG&amp;E investigate whether existing electrical transformers on the site contain PCBs and whether there are any records of spills from such equipment. If PCB-containing equipment (50 to 500 parts per million PCBs in the oil) or PCB equipment (over 500 parts per million) were identified, this equipment shall be replaced with non-PCB containing equipment prior to construction. Any identified spill areas shall be evaluated for cleanup.</p> <p>"e) An information packet shall be prepared by the developer; the packet shall include a summary of major studies regarding EMF effects and a list of reference studies, with copies available to residents upon request. The information packet shall be updated annually.</p>	<p>1</p>

Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Population, Housing, and Employment

Impact	Mitigation Measure	Level of Significance After Mitigation
	<p>"f) Any metal structures or objects located within and adjacent to transmission line easements shall be grounded to avoid nuisance induction effects such as shocks (experienced upon initial contact)."</p>	
<p><b>M4.10-3</b> Asbestos, if present in existing farm structures, could cause adverse health impacts to workers during renovation and/or demolition.</p>	<p><b>M4.10-3</b> The following are recommended to be added as Objective 7 to the Draft Master Plan under Potential Site Hazards (Appendix C):</p> <p>"Objective: "To protect the public from exposure to asbestos-containing materials.</p> <p>"Policy: "Demolition or renovation of structures that were built prior to the 1970s or are suspected to incorporate asbestos-containing materials shall be surveyed and abated as required by State and County guidelines and regulations.</p> <p>"Implementation: "a) Structures that would be removed or renovated as part of the project shall be screened or surveyed for the presence of asbestos-containing materials. Removal of structures shall only occur after obtaining a demolition release form from SJVUAPCD and a demolition permit approved by the Planning Division of the Community Development and Environmental Health Department. If asbestos were present, renovation and/or demolition shall be undertaken only by licensed asbestos abatement contractors trained in proper asbestos removal and disposal procedures.</p> <p>"b) A demolition permit, to be approved by the County Community Development Department and the Environmental Health Department, shall be required prior to all proposed building demolition."</p>	<p>I</p>
<p><b>M4.10-4</b> Materials disposed of at the small household landfill on the site may affect soil and groundwater quality.</p>	<p><b>M4.10-4</b> The following is recommended to be added as an Implementation under Objective 6 in Potential Site Hazards (Appendix C):</p> <p>"d) It must be demonstrated that disposed materials currently in the on-site landfill do not constitute a health or environmental hazard. Such demonstration shall be achieved through removal of disposed material in conjunction with soil sampling and groundwater sampling prior to construction in and within 500 feet of the affected area(s) to ensure minimum exposure to nearby residents and provide access for possible remediation activities, if needed."</p> <p><u>Alternatively</u>, a health risk assessment could be performed to determine whether an engineered cap would effectively mitigate environmental and public health impacts associated with the landfill.</p>	<p>I</p>
<p><b>M4.10-5</b> Open water bodies within the project site could provide active breeding sites for mosquitoes, potentially causing an environmental nuisance condition and disease transmission.</p>	<p><b>M4.10-5</b> The following Implementation should be added under Objective 1 in Mosquito Abatement (Appendix C):</p> <p>"a) The Flood Control/Storm Drainage Plans shall include general criteria and standards for implementation schedules and maintenance requirements for all wetlands and open bodies of water within the specific plan area. Implementation and maintenance schedules shall be approved by the Mosquito Abatement District prior to the construction of the improvements and shall include Mosquito Abatement operations to be assumed by the District."</p>	<p>I</p>

	<p>The following Implementation should be added to the Mosquito Abatement Program (Appendix 6-A of the Draft Master Plan):</p> <p>"m) Implementation and Maintenance Schedules. Construction plans for any detention basins and any plans for wetland enhancement/maintenance shall include implementation and maintenance schedules. Implementation and maintenance plans shall be developed in consultation with the Mosquito Abatement District."</p>	
<p><b>M4.10-6</b></p> <p>The development of the project may increase the potential for public exposure to explosives, fire, or the release of materials during railway accidents on the railway line crossing the northern portion of the project site.</p>	<p><b>M4.10-6</b></p> <p>(a) Policy a) under Objective 1 in Emergency Preparedness should be modified as follows:</p> <p>"a) Safety and protection services shall be provided to the community in the event of fire and natural disasters (including flooding and earthquakes), and emergencies resulting from accidents, including emergencies involving releases of hazardous materials."</p> <p>(b) Implementation b) under Objective 1 in Emergency Preparedness should be modified as follows:</p> <p>"b) Natural Disaster Response. Response shall be by Fire District staff with backup by OES staff. Earthquake preparedness and flood response training shall be an integral part of the Incident Action Plan."</p> <p>(c) The following should be added to Emergency Preparedness (Appendix C):</p> <p>"Objective: "To be prepared to respond to emergencies, including those involving releases of hazardous materials, associated with freight transport along railroads.</p> <p>"Policy: Emergency response shall be provided for the community for the protection of the public.</p> <p>"Implementation: "a) Specific plans shall establish buffer zones between structures proposed in areas adjacent to railroads and the track right-of-way to reduce potential public safety impacts from railway accidents. The specific plan for Neighborhood J shall include safety criteria for determining buffer zone widths north of Byron Road where residential uses are proposed.</p> <p>"b). Specific plans shall contain requirements for businesses and public institutions located adjacent to the railway buffer zones to maintain emergency contingency and evacuation plans in the event of a railway accident.</p> <p>"c) The Incident Action Plan for the project shall include a component on emergency response to railway accidents, including those involving releases of hazardous materials. This component shall be consistent with emergency response programs developed by owners of the railway right-of-way. The Incident Action Plan for the project shall be prepared in cooperation with the County Office of Emergency Services and completed prior to submittal of the first Development Permit for specific plan areas adjacent to railroad rights-of-way for all land uses."</p>	I
<p><b>M4.10-7</b></p> <p>Increased development along the natural gas pipelines traversing the site could increase the risk of pipeline rupture and fire or explosion which could result in death and injury or property damage.</p>	<p><b>M4.10-7</b></p> <p>(a) The following Objective, Policy, and Implementation are recommended to be added to Potential Site Hazards (Appendix C):</p> <p>"Objective: "To minimize the risk of human injury or property damage in the event of an explosion and/or fire at a natural gas pipeline.</p> <p>"Policy: "A Pipeline Safety Plan shall be part of the Incident Action Plan, developed to minimize risks associated with natural gas pipelines within the project site.</p>	I



Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Population, Housing, and Employment

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>"Implementation:</p> <p>"a) Building sites within 220 yards of high pressure gas pipelines shall be chosen to minimize the risk of human injury or property damage in the event of an explosion and/or fire at the pipeline. The project densities in the vicinity of the pipelines should be limited to those allowed for a Class I Location designation, which corresponds to a density of 10 or fewer buildings intended for occupancy within an area of 220 yards on either side of the centerline of any continuous one-mile length of natural gas pipeline. <b>Alternatively</b>, the Class Location designation should be revised by the PUC and alternative routes for future gas pipelines should be identified by the developer and approved by the PUC.</p> <p>"b) Vapor barriers and/or vents shall be included in designs for utility trenches that are not under the jurisdiction of the PUC crossing or within 100 feet of the high pressure gas pipelines to reduce the potential for the migration and accumulation of gas, leaked from a pipeline, in utility trenches. The design of the utility trenches shall be reviewed and evaluated by the Department of Public works prior to final map approval."</p>	
<p><b>M4.10-8</b> Improperly abandoned wells, wells without appropriate sanitary seals, and agricultural canals may act as conduits for agricultural chemical migration, potentially affecting surface and groundwater quality, or may represent a safety hazard.</p>	<p><b>M4.10-8</b> The following Implementations are recommended to be added to the Draft Master Plan under Objective 2 in Potential Site Hazards:</p> <p>"d) A component of the required site assessment for pesticide and herbicide residues shall include an investigation of the location and condition of currently used and abandoned water wells. Wells in use that do not have appropriate sanitary seals shall be retrofitted to protect groundwater quality. Wells that are no longer in use shall be properly abandoned by a licensed well driller. All necessary work shall be completed prior to construction.</p> <p>"e) On-site agricultural canals and ditches, used to convey water from BBID, as well as the Delta-Mendota Canal, will be properly fenced and screened by the developer, as may be required by BBID to eliminate site hazards and to prohibit interference with water flow to agricultural BBID customers."</p>	<p>I</p>
<p><b>■ BIOLOGICAL RESOURCES</b></p>		
<p><b>M4.11-1</b> Project implementation would result in the elimination of over 4,000 acres of agricultural land and associated wildlife habitat on the site.</p>	<p><b>M4.11-1</b> Specific measures recommended to mitigate potential adverse impacts on San Joaquin kit fox, Swainson's hawk, other special-status taxa, the Mountain House Creek corridor, wetland features, and habitat associated with Old River would serve to partially mitigate the loss of existing wildlife habitat. However, the loss of over 4,000 acres of wildlife habitat is an unavoidable adverse impact, which cannot be fully mitigated to a less-than-significant level.</p>	<p>SU</p>
<p><b>M4.11-2</b> Project implementation would result in elimination of suitable on-site foraging and dispersal habitat for San Joaquin kit fox.</p>	<p><b>M4.11-2</b> (a) The Draft Master Plan provisions related to San Joaquin kit fox should be revised and amended, based on the results of further negotiation with representatives of the USFWS and the CDFG. The revised Draft Master Plan should provide a coordinated approach to addressing the concerns of jurisdictional agencies. Adjacent agricultural lands in Alameda County may be considered as a suitable off-site mitigation area for San Joaquin kit fox, except for any wastewater storage ponds. <b>Alternatively</b>, mitigation lands within the "Core Conservation Area" identified in the County's draft HCP could be acquired by the applicant. Approval of the Draft Master Plan should be contingent on subsequent revisions necessary to comply with San Joaquin County General Plan 2010 policies regarding habitat protection and any possible requirements of jurisdictional agencies, pursuant to the provisions of the State and Federal Endangered Species Acts.</p>	<p>I</p>

If required by jurisdictional agencies, an incidental take permit and a Habitat Management Agreement for San Joaquin kit fox should be obtained by the project applicant, or by subsequent applicants for other specific plans within the project, or by subsequent applicants of individual Tentative Maps. A copy of any and all fully executed permits and/or management agreements should be submitted to the San Joaquin County Community Development Department prior to the issuance of any Development Permit, construction permits, or building permits, or initiation of any improvements such as construction of water or wastewater treatment plants, whichever occurs first.

(b) The Draft Master Plan provisions regarding kit fox should be revised to reflect the position of jurisdictional agencies and the likelihood that an incidental take permit would be required from the USFWS and a Habitat Management Agreement would be required from the CDFG before grading or other modifications to the site would be allowed. Revisions should be made to the relevant discussion, assumptions, policies, and implementation measures in section 7.3.3 of the Draft Master Plan and "The San Joaquin Kit Fox Report" contained in Appendix 7-D to reflect these likely requirements. These should include the following:

- Revise Assumption 7.3.3-1 b) of the Draft Master Plan, and Policy a) and Implementation a) for Objective 3 of Biological Resource Management section (Appendix C) to reflect that compensation for loss of suitable kit fox habitat could include off-site mitigation and/or other requirements to comply with the provisions of Section 10(a) of the Federal Endangered Species Act and Section 2081 of the State Fish and Game Code.
- Revise Implementation a) for Objective 3 of Biological Resource Management section (Appendix C) to indicate that the proposed "Kit Fox Pre-construction and Construction Protocol" contained in Appendix 7-F should be reviewed and meet with the approval of the USFWS and the CDFG, and that these protocol shall apply until jurisdictional agencies determine that their implementation is no longer required to prevent harm or injury to kit fox. A copy of the revised protocol should be submitted to the San Joaquin County Community Development Department, together with the written approval of jurisdictional agencies, prior to issuance of any construction permit or initiation of site improvements, whichever comes first.

(c) The proposed "Kit Fox Pre-construction and Construction Protocol" contained in Appendix 7-F of the Draft Master Plan should be revised to provide greater consistency with the preconstruction, construction, and operational recommendations specified in the survey report by BioSystems (1992), and at minimum should meet the "Standardized Recommendations of the Protection of the San Joaquin Kit Fox" (USFWS, 1989). This should include the following:

- Revise Pre-construction Protocol Measure 1 to adjust the pre-construction survey period from "six (6) months" to "within 60 days" prior to initiation of any construction activity, and to include the USFWS in the required notification of survey results within two weeks of completing a survey.
- Revise Pre-construction Protocol Measure 2 to include treatment of both known and "potential" kit fox dens encountered during pre-construction surveys. This should include provisions related to monitoring of den status (Measure 2a), den destruction (Measure 2b), and establishment of a protective exclusion zone if the potential den would not be destroyed by grading or other development activities (Measure 2e).
- Revise Pre-construction Protocol Measure 2d to read as follows:

"Prior to destruction of any known kit fox den, the USFWS shall be notified in writing of the intent to destroy the subject den(s), and disposition of the den shall be determined by the USFWS. Destruction of occupied known or suspected natal or pupping dens shall not be permitted during the breeding season (1 November through 31 July), until the den has been vacated or the kit fox pups have dispersed. Adequate measures, including restrictions or curtailment of construction activity and use of exclusion fencing, shall be developed in consultation with the USFWS and implemented to ensure protection of the natal or pupping dens while occupied by kit fox pups."

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<ul style="list-style-type: none"> <li>• Revise Pre-construction Protocol Measure 2c to delete all references to specific distances for the protective exclusion zone and to indicate that the size (radius) of the zone shall be established in consultation with representatives of the USFWS and CDFG.</li> <li>• Revise Construction Protocol Measure 1 to include the following provision at the end of the measure: "If live kit fox are encountered, ramps or structures should be installed immediately, if possible, to allow the animal(s) to escape."</li> <li>• Revise Construction Protocol Measure 6 to state that all construction pipes of 4-24 inches in diameter shall be stacked "at least 3.5 feet above ground" prior to use. The end of this measure should include the following provision:  "If during inspection, a kit fox is discovered inside a pipe, that section of pipe should not be moved, or if necessary should be moved only once to remove it from the path of construction activity, until the kit fox has escaped."</li> <li>• Revise Construction Protocol Measure 8 to include the following provisions at the end of the measure:  "The designated ecological monitor shall notify USFWS and CDFG in writing within three working days of the findings of any such animal. Notification must include the date, time, and location of the incident, and any other pertinent information. Any kit fox found dead or injured must be turned over immediately to the CDFG for care and analysis."</li> </ul> <p>(d) If off-site mitigation is required by jurisdictional agencies, the management practices and habitat enhancement recommendations specified in the survey report by BioSystems (1992) should be incorporated into the habitat management plan to ensure long-term viability of mitigation areas as kit fox habitat. Any deviation from the BioSystems recommendations should be negotiated with representatives of the USFWS and CDFG, with adequate explanation provided to justify them from a biological standpoint.</p>	
<p><b>M4.11-3</b> Project implementation would result in elimination of all existing and potential on-site foraging habitat for Swainson's hawk.</p>	<p><b>M4.11-3</b></p> <p>(a) Approval of the Draft Master Plan (which includes the HMP) should be contingent on subsequent revisions necessary to comply with San Joaquin County General Plan 2010 policies regarding habitat protection and with Section 2081 of the State Fish and Game Code and the Habitat Management Agreement required by the CDFG.</p> <p>The Draft Master Plan and proposed HMP provisions regarding compensation for conversion of suitable foraging habitat should be revised to provide greater consistency with the "Draft Mitigation Guidelines for Swainson's Hawks in the Central Valley of California" prepared by the CDFG. Depending on the extent of any on-site preservation and the enhancement associated with off-site mitigation, replacement habitat requirements could be as high as 4,560 acres (includes 300 acres for off-site wastewater storage ponds).</p> <p>Revisions should be made to the relevant assumptions, policies, implementations of the Draft Master Plan, and the "Mountain House Multi-Purpose Habitat Management Plan" (Zentner &amp; Zentner, 1994b). This should include the following:</p> <ul style="list-style-type: none"> <li>• Revise Assumptions 7.3.1 a) and b) of the Draft Master Plan, and Policy a) and Implementation c) for Objective 2 of Biological Resources Management section (Appendix C) to indicate that acreage requirements for the HMP would be determined through negotiation with CDFG in preparing a Habitat Management Agreement pursuant to Section 2081 of the State Fish and Game Code.</li> </ul>	<p>1</p>

- Delete specific references to a limited mitigation requirement of only 1,500 acres throughout the Draft Master Plan and revise the proposed HMP to indicate that an estimated 4,240 acres of on-site habitat could be converted to urban uses. Specific references that should be deleted or revised in the Draft Master Plan include: Assumptions 7.3.1 a) and b), Assumption 7.3.2 a), Table 7.3, and Figure 7.8 of the Draft Master Plan, as well as Policy a) for Objective 2 of Biological Resources Management section (Appendix C).
- Resolve acceptability of establishing mitigation credit prescription ratios for foraging habitat based on proximity of mitigation lands to an active nest rather than distance of lost habitat from an active nest with the CDFG, and revise the proposed Swainson's Hawk Mitigation Program (Table 7-3 of the Draft Master Plan) accordingly. If the proposed approach is considered acceptable by the CDFG, mitigation ratios indicated in the Swainson's Hawk Mitigation Program should be revised. The proposed establishment of mitigation land greater than 10 miles from an active nest should be eliminated from the Swainson's Hawk Mitigation Program and deleted from Table 7-3 of the Draft Master Plan as these lands would have highly limited value to nesting pairs due to their distance from an active nest.
- Resolve acceptability of establishing mitigation credit for nesting habitat, and as directed by the CDFG delete or revise the specified acreage ratios defined in the Swainson's Hawk Mitigation Program of the proposed HMP (Table 7.3 of the Draft Master Plan) for existing and potential nesting habitat.
- Revise the relevant text of the Draft Master Plan and the proposed HMP regarding Swainson's hawk nesting habitat to reflect more recent data on distribution of nesting locations in the project vicinity, including the active nests on the site during the 1994 breeding season, that nesting locations change to varying degrees over time as new breeding pairs enter an area or disturbance factors reduce the suitability of historic nest locations, and the fact that trees on the site could be used for nesting in the future.
- Revise the text of the Draft Master Plan and the proposed HMP to provide for preservation or adequate mitigation for loss of the active Swainson's hawk nests on the site. Adequate development setbacks should be provided around the active nest along Old River to ensure its long-term suitability for nesting, which may include establishment of permanent foraging habitat on the site. The land area of the proposed Regional Park along Old River should be expanded, as necessary, to provide for the protection of the nest and surrounding foraging habitat, with additional policies and implementations included in the Old River Regional Park section of the Draft Master Plan to prevent possible disturbance associated with recreational use of the parklands. This should also include provisions to prohibit or intensively monitor any disturbance, construction, or other project-related activities within 1/2 mile which may cause nest abandonment or forced fledging if the nest is in active use in future years. Details regarding appropriate setbacks, monitoring requirements, and development restrictions around an active nest, as well as appropriate mitigation if the active nest in the center of the site is lost, should be defined in consultation with the CDFG.
- Revise Implementation g) for Objective 1 of Biological Resources Management section (Appendix C) and the proposed HMP to indicate that unacceptable crop types would not be planted on mitigation lands and that a mechanism would be established to ensure a minimum level of high-quality foraging habitat (i.e., alfalfa). Unacceptable crop types to be specified in the HMP should include vineyard, orchard, cotton, and other crop types where prey are inaccessible to foraging hawks. A mechanism to ensure that minimum acreage requirements for suitable foraging crop types are met is particularly important if unsuitable crops such as silage corn are to be permitted as part of crop rotation in the mitigation lands. A minimum acreage requirement for alfalfa within the mitigation area should be coordinated with the CDFG. Acreage devoted to alfalfa on mitigation lands should at a minimum meet the average for the project site, estimated at 41 percent, based on cropping patterns for 1989, 1992, 1993, and 1994.
- Revise Implementation h) for Objective 1 of Biological Resources Management section (Appendix C) and the proposed HMP to indicate that use of rodenticide shall only be allowed when small mammal levels pose a serious threat to agricultural crops and populations levels reach a specified threshold. This threshold and procedures to determine and implement remedial action should be coordinated with the CDFG. A mean of 20 burrows per 100 feet were observed in alfalfa fields during the survey by BioSystems (1992) and would be a more acceptable threshold before use of rodenticides should be permitted.

Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Biological Resources

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<ul style="list-style-type: none"> <li>• Revise Assumption 7.3.2 c) of the Draft Master Plan to indicate that mitigated land dedicated as part of a specific Swainson's Hawk Mitigation Program needs to be at least 100 acres in size, consistent with the proposed HMP.</li> <li>• Revise the proposed HMP to include information on all mitigation options, overall phasing and monitoring of all mitigation lands established as part of each specific Swainson's Hawk Mitigation Program, and relationship of implementing the specific programs to phasing of improvements associated with wastewater reuse.</li> </ul> <p>A take permit or Habitat Management Agreement for loss of Swainson's hawk habitat should be obtained by the applicant, pursuant to Section 2081 of the State Fish and Game Code. A copy of the fully executed habitat management agreement with the CDFG should be submitted to the San Joaquin County Community Development Department prior to the issuance of any Development Permit, construction permit, or building permit, or initiation of any improvements such as construction of water or wastewater treatment plants, whichever occurs first.</p> <p>(h) The proposed HMP should be revised to include a combination of on-site habitat preservation and off-site replacement. Ideally, the entire area north of Byron Road, containing approximately 1,500 acres, should be set aside as an agricultural preserve to be enhanced and managed for Swainson's hawk and other protected wildlife species, with the required replacement habitat provided at a ratio negotiated and approved by the CDFG, and any additional compensation provided in the immediate vicinity off-site.</p> <p>As an <u>alternative</u> to a combination of on- and off-site habitat mitigation, Fabian Tract would be the preferred off-site mitigation area, due to its location within the Delta system, proximity to active nesting territories, and presence of existing and potential foraging habitat.</p> <p>With the possible exception of the area north of Byron Road, which is currently not within the boundary of the proposed secondary wastewater reuse area, the adjacent lands in Alameda County should not be used as mitigation lands for loss of Swainson's hawk foraging habitat on the site. The proposed alternative permanent reclamation area in Alameda County is unsuitable for Swainson's hawk mitigation due to its distance from Old River and the Delta system, lack of nesting habitat in close proximity to the area, potential conflicts with habitat requirements of other special-status taxa such as kit fox, and ultimate separation from other foraging habitat as the Mountain House project is implemented. Reference to use of adjacent lands in Alameda County as mitigation lands for loss of Swainson's hawk foraging habitat should be deleted from the Draft Master Plan and proposed HMP unless the mitigation area is restricted to north of Byron Road.</p>	
<p><b>M4.11-4</b> In addition to San Joaquin kit fox and Swainson's hawk, proposed development would affect a number of other special-status taxa.</p>	<p><b>M4.11-4</b></p> <p>(a) To provide for protection of any populations of special-status species along the Old River frontage of the site, the following should be included as part of the Parks and Open Space Master Plan as an additional Implementation for Objective 4 of Biological Resources Management section (Appendix C):</p> <p>"j) A habitat protection plan shall be prepared for the population of Mason's lilaeopsis in the northwestern portion of the site prior to approval of the first specific plan adjacent to Old River in this area. The habitat protection plan shall be prepared by a qualified plant ecologist in consultation with and which meets with the approval of representatives of the USFWS and CDFG. The plan shall provide for the protection of identified populations, addressing potential impacts associated with boating, marina development, water diversion, storm drainage runoff, levee modifications, and recreational use of levee habitat.</p>	<p>I</p>

	<p>"k) A habitat protection plan for Mason's litaeopsis and other special-status taxa which may be encountered during further detailed surveys, shall be prepared prior to approval of any specific plan along Old River. Other special-status taxa of concern include delta smelt, Sacramento splittail, winter-run chinook salmon, and California hibiscus.</p> <p>"l) A survey shall be conducted along the banks of Old River to confirm the presence or absence of the California hibiscus on the site, prior to approval of any specific plan which could affect Old River. The survey shall preferably be conducted by a qualified botanist during the blooming period of this species, in August and September. If populations of this species are encountered, a habitat protection plan shall be prepared by a qualified plant ecologist in consultation with representatives of the USFWS and CDFG. The plan shall provide for the protection of identified populations, addressing potential impacts associated with boating, marina development, water diversion, storm drainage runoff, levee modifications, and recreational use of levee habitat.</p> <p>"m) A survey shall be conducted to confirm the presence or absence of delta smelt, winter-run chinook salmon, and Sacramento splittail along the river segment bordering the site, prior to approval of any specific plan which could affect Old River. The survey shall be conducted by a qualified fishery biologist using an otter trawl at intervals along the river segment during the spring spawning season and during migration periods. If any of the species is detected, a habitat protection plan should be prepared by a qualified fisheries biologist in consultation with and which meets with the approval of representatives of the USFWS and CDFG. The plan shall provide for the protection and enhancement of existing habitat conditions, addressing potential impacts associated with boating, marina development, water diversion, storm drainage runoff, levee modifications, and recreational use of levee habitat."</p> <p>(b) Several aspects of the Draft Master Plan provisions regarding Other Special-Status Species should be revised to ensure protection of active nests and compliance with applicable State and Federal regulations, as follows:</p> <ul style="list-style-type: none"> <li>• Revise Implementation b) for Objective 4 of Biological Resources Management (Appendix C) to include pre-construction raptor surveys along the Old River frontage of the site as well.</li> <li>• Revise Implementation c) for Objective 4 of Biological Resources Management to indicate that any relocation of an active burrowing owl nest should be performed in accordance with CDFG guidelines and that a permit must be obtained prior to any disturbance to the nest.</li> <li>• Revise Implementation i) for Objective 4 of Biological Resources Management to indicate that pre-construction raptor and burrowing owl surveys would still be required to protect active nests until young birds have fledged even if an applicant participates in the HMP or other conservation plan.</li> </ul>	
<p><b>M4.11-5</b> The project would block the movement of most terrestrial species between the eastern base of the Altamont Hills and the Delta-farmland region to the east.</p>	<p><b>M4.11-5</b></p> <p>(a) The Mountain House Creek Planting and Restoration Measures contained in Appendix 7-A to the Draft Master Plan, referred to in Implementations l), n), dd), ee), and ff) for Objectives 3 and 4 of Parks and Recreation section (Appendix C), should be expanded to include provisions for monitoring, replacement plantings, and re-evaluation of the restoration plan, similar to the provisions contained on pages 27-33 of the "Mountain House Creek Phase One Habitat Restoration Plan" (Zentner &amp; Zentner, 1993c).</p> <p>Several aspects of Draft Master Plan provisions regarding Mountain House Creek should be revised to ensure successful implementation of proposed restoration and enhancement efforts, provide for establishment of protective cover prior to development of adjacent lands, and to limit disturbance to wildlife along the enhanced corridor. This should include the following:</p> <ul style="list-style-type: none"> <li>• Revise Implementation p) for Objectives 3 and 4 of Parks and Recreation (Appendix C) to read as follows:</li> </ul> <p>"p) The restored Mountain House Creek corridor shall accommodate a multi-purpose trail along one side of the creek, but other recreational uses such as picnic areas, playgrounds, and turf shall be restricted outside the corridor to minimize human activity within sensitive wildlife habitat. The location of the multi-use path can vary from either side of the Creek, but the opposite side of the Creek corridor shall remain without a paved path to limit disturbance to wildlife."</p>	1

Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Biological Resources

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<ul style="list-style-type: none"> <li>• Revise Implementation q) for Objectives 3 and 4 of Parks and Recreation (Appendix C) to read as follows:  "q) Active recreational uses may be located along the perimeter of the corridor, but shall require additional land area separate from the minimum corridor width of 200 feet. Trails shall meander on the outside edge of the corridor encroaching no closer than 50 feet from the creek channel or other surface water features, providing views of the creek and a sense of community participation without degrading the wildlife habitat value of the corridor."</li> <li>• Revise Implementation s) for Objectives 3 and 4 of Parks and Recreation (Appendix C) to read as follows:  "s) Recreational activities shall be buffered from wetlands and sensitive wildlife habitat along the Creek. These buffers may include vegetative screens or hedges composed of native plant materials which allow views but discourage access to sensitive areas."</li> <li>• Revise Implementation u) for Objectives 3 and 4 of Parks and Recreation (Appendix C) to read as follows:  "u) A post-and-cable or similar barrier shall be provided along all Creek corridor edges which front public spaces such as roads. 'Good neighbor' fencing (open fencing promoting views of the corridor) shall be used to minimize the potential for dumping of debris and yard clippings into the corridor where private residential and commercial uses border the Creek and no trail system is proposed."</li> <li>• Merge and revise Implementations w) and x) for Objectives 3 and 4 of Parks and Recreation (Appendix C) into a single measure to read as follows:  "w) A multi-use path shall be constructed along the Creek from Marina Boulevard to Old River. A minimum 16-foot right-of-way shall be reserved for the path. Within the right-of-way, a minimum eight-foot width shall be improved with asphalt, and painted with a center stripe. The path shall be grade-separated where it crosses the SP tracks."</li> <li>• Revise Policy e) for Objective 5 of Parks and Recreation (Appendix C) to read as follows:  "e) Passive recreational uses such as bird watching, nature trails, and observation areas are normally compatible with wetlands and may be permitted adjacent to wetlands. Active recreational uses such as ballfields, paved bike trails, or other such uses shall not be located within or immediately adjacent to wetlands areas."</li> </ul> <p>The Mountain House Creek Community Park section of the Draft Master Plan, including Implementation v) for Objectives 3 and 4 of Parks and Recreation (Appendix C), should be revised to define timing of the creek restoration component of the park plans during the specific plan phase. Implementation v) should indicate that:</p> <ul style="list-style-type: none"> <li>"v) All channel modifications, wetland enhancement, and revegetation associated with the Creek restoration component of the park plans shall be funded and implemented as backbone improvements during the specific plan phase and not deferred as a requirement of individual tentative map or phased flood control improvements along the Creek corridor."</li> </ul>	

	(b) All exhibits depicting the creek corridor in the Draft Master Plan should be modified to show a single multi-use path, possible alternating from one to the other side of the corridor as it follows the length of the creek (and should include provisions for access for maintenance vehicles). This should include Figures 7.4 and 7.5 referred to in Implementations b), g), and p) for Objectives 3 and 4 of Parks and Recreation (Appendix C).	
<b>M4.11-6</b> Development of the project site would eliminate seasonal wetlands and temporarily flooded areas such as irrigated pastures and drainage swales.	<p><b>M4.11-6</b></p> <p>The Draft Master Plan provisions regarding Wetlands Management should be revised to ensure adequate setbacks from wetlands and coordination with jurisdictional agencies. This should include the following:</p> <ul style="list-style-type: none"> <li>• Revise Policy d) for Objective 5 of Biological Resources Management (Appendix C) to read as follows:            "d) Wetlands shall be protected from damage caused by adjoining development. Buildings and structures shall be setback from the edge of wetlands a minimum of 50 feet. This setback distance should be increased where wetlands are of high value, or restoration and enhancement is proposed."</li> <li>• The following should be included as an additional Implementation for Objective 5 of Biological Resources (Appendix C):            "j) Any proposed modifications to wetlands or waters of the U.S. should be prepared in consultation with and meet, where required, with the approval of representatives of the Corps and the CDFG prior to approval of any specific plans encompassing these features."</li> </ul>	I
<b>M4.11-7</b> Construction and operation of the proposed 60-acre marina would impact the productive inshore zone and riparian edge habitat of Old River.	<p><b>M4.11-7</b></p> <p>(a) To ensure adequate protection of the aquatic habitat of Old River, the following should be included as an additional policy for Objective 9 of Parks and Recreation (Appendix C):</p> <p>"d) Unless detailed study demonstrates that the potential impacts of the proposed marina on biotic resources could be mitigated to a less-than-significant level, the proposed 60-acre marina shall be eliminated in favor of a boat launch ramp and day use parking lot for the private use of the residents of the new community. This facility could be fashioned along the lines of other San Joaquin County public use ramps and picnic areas such as those located off Manley Road in the Mossdale area and at the end of Dos Reis Road west of Lathrop. This mitigation would provide easy access to the Delta system for the residents of Mountain House New Town while at the same time eliminate many of the potential hazards to the Old River aquatic system caused by a marina operation. Recommended further study shall be conducted as part of the environmental review for the specific plan encompassing the marina area."</p> <p>(b) Implementation b) for Objective 9 of Parks and Recreation (Appendix C) should be expanded to include provisions to minimize disturbance to fish and wildlife habitat of Old River, prevent water quality degradation, and conduct further detailed surveys for special-status taxa as recommended in Mitigation Measures 4.11-4(a), (b), and (c).</p> <p>(c) To minimize disturbance to wildlife and riparian habitat along Old River, the following should be included at the end of Implementation f) for Objective 6 of Parks and Recreation section (Appendix C):</p> <p>". . . This shall include signage along the length of the site fronting Old River, limiting boat speeds to 5 mph to prevent disturbance to wildlife and riparian habitat."</p>	I



Table 2.1, continued

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
<p><b>M4.11-8</b> Off-site improvements, such as the raw water conveyance pipeline and pumping facilities, wastewater storage ponds, and application of wastewater irrigation could adversely affect sensitive biological resources.</p>	<p><b>M4.11-8</b></p> <p>(a) Detailed field surveys of any proposed off-site mitigation locations should be conducted by a qualified biological consultant to determine the presence of any special-status taxa, sensitive natural communities, or wetland resources. Surveys for special status taxa should focus on the presence of critical habitat features (i.e., nest and den locations of highly mobile species, and breeding habitat for amphibians and insect taxa of concern) which could be adversely affected by construction of the wastewater storage ponds, conveyance pipelines, and other improvements. If sensitive resources are encountered, proposed improvements should be modified, and as necessary, to provide compliance with the State and Federal Endangered Species Acts, a habitat protection plan should be prepared by a qualified biologist in consultation with representatives of the USFWS and CDFG. These provisions could include appropriate setbacks and construction restrictions from a nest or den during the breeding season for the taxa of concern, or relocation of proposed structural improvements such as storage ponds or pipeline alignments.</p> <p>(b) Also refer to mitigation measures in Section 4.4.2 of this DEIR, Wastewater, for additional provisions to adequately monitor and adjust the proposed effluent reuse plan to prevent excessive levels of salts and metals in wastewater irrigation.</p>	<p>I</p>
<p>■ <b>TRANSPORTATION</b></p>		
<p><b>M4.12-1</b> At buildout, the project would generate approximately 273,000 daily vehicle trips to, from, or within the site. The added vehicle trips would contribute significantly to projected traffic growth, increases in vehicle miles traveled, and LOS deficiencies on the road system, particularly in the vicinity of the site. Some of these associated impacts would be unavoidable. The project would also generate the need for public transit services to, from, and within the site. Since transit services are proposed in the Master Plan to accommodate the projected transit ridership, this trip generation impact is not significant or unavoidable.</p>	<p><b>M4.12-1</b></p> <p>(a) The County should prepare and implement a countywide Transportation Systems Management (TSM) program to promote and facilitate use of alternative modes to the single-occupant vehicle within the County. The program should include measures such as continuation and expansion of the County rideshare program, transportation coordinators at employment sites, provision of park-and-ride lots throughout the County, and development of a network of high occupancy vehicle (HOV) lanes on corridors of high travel demand.</p> <p>(b) The Transportation Management Association (TMA) should promote, with State and County assistance, lanes for priority HOV access to/from the project site (e.g., HOV bypass lanes at metered on-ramps to I-580 at Grant Line Road, and at on-ramps to I-205 at Patterson Pass Road). The TMA should promote the construction of HOV lanes when I-205 is widened. A policy stating this commitment should be added under Freeway Improvements and TDM Measures (Appendix C).</p> <p>(c) Local transit service (using clean fuel-transit buses, if feasible) proposed in the Draft Master Plan should be increased, with more frequent service during peak periods to facilitate non-vehicle travel on internal roads, and more direct routing to destinations and fewer transfers than proposed in the Draft Master Plan.</p> <p>(d) A new Policy should be added under Commercial Objective 2 (Appendix C):</p> <p>"f) Neighborhood commercial areas shall be located so as to optimize accessibility for local pedestrians and cyclists, and to reduce automobile trips."</p> <p>A new Implementation should be added under Commercial Objective 2 (Appendix C):</p> <p>"c) Neighborhood commercial areas shall be sited so that as many homes as possible are located within one-quarter mile walk of the closest neighborhood or community shopping area."</p>	<p>SU</p>

(e) To reduce peak hour vehicle trip generation, employers should be encouraged to provide flexible work hour programs and/or "9/80" and "4/40" week schedules. This mitigation measure should be added as an Implementation to the Transportation Demand Management section (Appendix C).

(f) The Draft Master Plan should be amended with a policy in the Transportation Demand Management section under Objective 1 (Appendix C), as follows:

"j) Transit Oriented Development (TOD) Guidelines shall be considered in the design of each neighborhood center. Review and approval of TOD provisions by the County Community Development Department shall be required prior to approval of the first Development Permit."

(g) Implementation c) under Objective 2 in Transit (Appendix C) should be amended as follows:

"c) The Community shall contribute on a "fair share" basis to any Altamont Station study. The Community shall contribute a fair share toward the capital costs of building an Altamont Station and to the operating and maintenance costs that are identified. The fair share contribution of the Community toward constructing the station shall be based on ridership projections. Bus Service between the community and the Altamont Station shall be included in the Community's transit commitment."

(h) Implementation c) under Objective 1 in Transportation Demand Management should be revised as follows:

"c) The applicant shall develop an annual Transportation Monitoring Program, which would be conducted at the same time as the annual monitoring for the Jobs/Housing and Affordable Housing Programs. The monitoring program would serve as a means of comparing the actual traffic generated by the project to the traffic projections, and would allow revisions to mitigation measures and trigger points for needed transportation improvements.

The annual reports should identify various data including land use occupancy information, traffic counts, and progress of planned transportation improvements and planning studies such as PSRs. Traffic monitoring should include traffic counts and level of service analysis on all community gateways and other impacted County roads. Adequacy of the near-term trigger points and progress toward implementation of the required transportation improvements should also be reviewed.

Should traffic impacts of the project be found during the annual monitoring to be different (i.e., higher than projected levels), then the County shall hold hearings, receive testimony, make findings, and take appropriate action. The County shall adopt findings related to whether the adopted trigger points for transportation improvements and the project's fair share of costs should be revised to ensure the timely construction of needed improvements, as a condition of further development approvals."

(i) The following Implementation should be added under Objectives 2 and 3 of Telecommunication Systems (Appendix C):

"b) One or more telecommuting centers furnished with satellite telecommunication devices and computer equipment shall be constructed within the project site to reduce commuting to off-site locations.

Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Transportation

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
<p><b>M4.12-2</b> Within 10 miles of the site, the project would typically increase traffic volumes on I-205, I-580 and I-5 by 10,000-23,000 daily vehicles over levels projected in 2010 without the project, representing increases of 8-20 percent. These traffic increases would exacerbate highly deficient levels of service already projected at some locations in 2010 without the project, and would increase the extent and duration of traffic congestion on these freeways. Most of the projected traffic impacts on I-205 could potentially be mitigated with regional improvements, but the impacts on I-580 west of I-205 and on I-5 north of I-205 are unavoidable.</p>	<p><b>M4.12-2</b> The following mitigation measures should be implemented to reduce impacts of the project on freeways; however, the impact would remain an unavoidable adverse impact.</p> <p>Three Implementations should be included under Objective 1 in Freeway Improvements (Appendix C), as follows:</p> <p>"d) The project shall fund its fair share of the cost of widening I-205 from four lanes to six lanes, and from six lanes to eight lanes between I-580 and I-5, either as HOV lanes or mixed flow lanes. As an alternative to widening the I-205 freeway beyond 6 lanes, the project sponsor shall contribute a fair share to development of a parallel east-west roadway system north of I-205, extending between Mountain House and the City of Lathrop's Gold Rush City development, including the necessary multi-jurisdictional alternative/feasibility studies.</p> <p>"e) As an alternative to widening the I-580 freeway, the project sponsor shall contribute a fair share to safety and operational improvements and/or to the widening of Altamont Pass Road west of Grant Line Road to four lanes (as HOV or truck lanes), if determined to be consistent with Alameda County policy.</p> <p>"f) The Public Financing Plan shall reflect the most current cost estimates and agreed upon fair share contributions, based on refined San Joaquin County Travel Model estimates."</p>	<p>SU</p>
<p><b>M4.12-3</b> The project would increase traffic volumes on freeway interchanges near the site and would require interchange improvements at Grant Line Road/I-580, Patterson Pass Road/I-205 and Patterson Pass Road/I-580.</p>	<p><b>M4.12-3</b></p> <p>(a) Table 9.1 in the Draft Master Plan, Schedule of Freeway Interchange Improvements, should be expanded to add "Upgrade interchange, PPR/I580" with a footnote indicating that "Extent and phasing of improvements to be determined prior to approval of second Specific Plan."</p> <p>(b) Table 9.1 in the Draft Master Plan should be expanded to include a PSR for Grant Line/I-580 interchange improvements and a trigger point for its completion. The PSR should explicitly consider other planned projects affecting the interchange such as truck climbing lanes.</p> <p>(c) Two Implementations should be added under Freeway Improvements (Appendix C) as follows:</p> <p>"Interchange improvements on I-205 and on I-580 (west of I-205 junction) shall provide for ramp metering with HOV bypass lanes."</p> <p>"Prior to approval of the first Development Permit in Specific Plan I and prior to approval of each subsequent Specific Plan, the County shall review and, if appropriate, revise the trigger points listed in Table 9.1 of the Draft Master Plan. These reviews shall use the latest version of the COG Travel Model and most current projections of growth, and shall be funded by the applicant."</p>	<p>I</p>

2-40

**M4.12-4**

The project would contribute to the need for improvements on several County and other roads in the project vicinity, including portions of Grant Line Road, Patterson Pass Road, Byron Highway, Altamont Pass Road, 11th Street, State Route 4, and Tracy Boulevard leading to SR 4. Most of these impacts could be mitigated by widening or upgrading the roadways to increase their capacities.

**M4.12-4**

(a) Policy f) under Objective 1 in County Arterials should be amended to specifically call out 11th Street, Grant Line Road (east), Altamont Pass Road, and Byron Highway, as follows:

"f) The community shall, to the extent of its fair share, participate in appropriate traffic studies and improvement measures with other counties or cities whose roadways are impacted by the community. The specific roadway improvements that should be studied include 11th Street and Grant Line Road (east of Patterson) (City of Tracy), Altamont Pass Road (Alameda County), and Byron Highway (Alameda and Contra Costa counties). Where roadway widening for additional capacity is not feasible or acceptable, safety and operational improvements should be considered in order to better accommodate increased traffic."

(b) Implementation a) under Objective 1 in Transit (Appendix C) should be amended as follows:

"a) . . . No later than occupancy of the twenty-fifth dwelling unit, a service agreement shall be executed to establish bus service between Mountain House and Tracy."

(c) Table 9.2 of the Draft Master Plan should be revised to include the realignment of Grant Line Road to form a continuous segment where it meets Byron Road. A trigger point should be established for this improvement. Also, a new Implementation should be added under Objective 1 in County Arterials (Appendix C):

"g) The community shall, to the extent of its fair share, participate in study and implementation of a grade-separated crossing of the existing Southern Pacific railroad tracks at Grant Line Road to accommodate traffic associated with the proposed project and the proposed Tracy regional mall."

(d) Table 9.2 of the Draft Master Plan should be revised to include the road segment of Grant Line Road, Patterson Pass Road to the Tracy regional mall. The "Lanes" column should read "To 4", and a trigger point should be established for this improvement. A footnote to Table 9.2, referring to the new segments, should state: "The Master Developer shall provide fair share funding for the widening of Grant Line Road, based on more detailed studies that identify both Mountain House and City of Tracy fair share contributions to the widening."

(e) Table 9.2 of the Draft Master Plan should be revised to include Byron Road, east of Lammers Road with a footnote to indicate this improvement would be required if the County does not accept LOS D on this route. The "lane" column should read "To 4" and a trigger point should be established.

(f) Table 9.2 of the Draft Master Plan should be revised to include the road segment of Altamont Pass Road, Greenville Road to Grant Line Road. Under the "Lanes" and "Trigger DU's" columns, the notation "n.a." (not applicable) should be entered. A footnote to Table 9.2, referring to the new segment, should state: "Safety and operational improvements may include passing lanes, realignments, and shoulder widening. No additional capacity improvements may be constructed on Altamont Pass Road if it is determined that such improvements would violate Alameda County policy."

(g) Three new Implementations should be added under Objective 1 in County Arterials (Appendix C), as follows:

"h) The community shall, to the extent of its fair share, participate in upgrading of existing pavement sections and/or safety improvements (e.g., standard pavement widths and paved shoulders) on rural roads (such as Bethany, Kelso, Hansen, Von Sosten, Reeve, Middle, and Tracy Boulevard), where necessary to accommodate additional traffic caused by the project.

"i) Prior to initial occupancy of any specific plan, the County shall review and, if appropriate, revise the trigger points listed in Table 9.2 of the Draft Master Plan. These revisions shall use the latest version of the COG Travel Model and most current projections of growth, and shall be funded by the applicant. Revisions shall be incorporated into subsequent specific plans. Improvements shall be constructed at or before issuance of building permits for the number of units specified in the applicable trigger point."

Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Transportation

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	<p>"j) The community shall submit a Construction Truck Traffic Management Plan to the County prior to the issuance of the first Development Permit. The plan shall identify the preferred routes for trucks bringing construction materials to the site, and shall include measures to ensure compliance by general contractors."</p> <p>(h) The existing footnote to Table 9.2 of the Draft Master Plan should be revised to delete the reference to "the Mountain House EIR traffic model," because it was not used to determine the "trigger DU's." The footnote should also explain that the "Trigger DU's" column refers to when during project buildout the improvements would be completed.</p>	
<p><b>M4.12-5</b> Project-generated trips would result in significant traffic levels on roadways internal to the site, requiring construction of adequately sized internal roadways and intersections to maintain acceptable LOS at buildout of the project.</p>	<p><b>M4.12-5</b> The following revisions should be made under Objective 1 in Arterial Intersections (Appendix C):</p> <p>(a) Implementation c) and the accompanying Figure 9.3 in the Draft Master Plan should be revised to include possible signalization when warranted at the following three intersections:</p> <ul style="list-style-type: none"> <li>• De Anza Boulevard/Von Sostem</li> <li>• C Street/Mountain House Boulevard</li> <li>• D Street/Mountain House Boulevard</li> </ul> <p>(b) Implementation d) should be revised to provide channelization at 18 intersections. Figure 9.3 of the Draft Master Plan should be revised to include channelization at the intersection of Central Parkway and Patterson Pass Road North, where an exclusive westbound left-turn lane should be added.</p> <p>(c) A Policy should be added under Objective 1 in On-Site Roadway Circulation and Design (Appendix C) as follows:</p> <p>"p) Unnecessary cul-de-sacs shall be avoided to ensure that access between adjacent neighborhoods is not restricted."</p> <p>(d) Figure 9.4 of the Draft Master Plan (Roadway Classification Diagram) should be revised to indicate Mascot Boulevard as a minor arterial (4 lanes) from Marina Boulevard to Patterson Pass Road. Figure 9.19 (Mascot Boulevard-Collector) should likewise be revised to reflect the minor arterial designation.</p> <p>(e) For consistency with the Draft Master Plan, and to promote transit/HOV usage and efficient land use, the County should amend its General Plan policy that requires LOS C on all county road segments in the Tracy planning area, as follows: "Permit LOS D on new community gateways that are used as major commute routes, subject to the approval of the county."</p> <p>(f) Amend Table IV-8 (page IV-102) of the General Plan to indicate that major arterials may be up to 8 lanes wide in some segments if needed for capacity and if operationally feasible. Also amend this table to indicate that the daily capacities are approximate only, and may be superseded by more detailed level of service analysis based on peak hour volumes and controlling intersections and will be higher on roadway segments where LOS D is approved by the county.</p> <p>(g) Mitigation Measures M4.2-1 (e) and (f) in the General Plan and Development Title Consistency section of this DEIR call for the conflicting language and standards in the Master Plan transportation chapter to be revised or, <u>alternatively</u>, a General Plan Text Amendment should be submitted that would allow new communities, or projects that have an adopted Master and/or Specific plan, to deviate from the General Plan standards.</p>	<p>I</p>

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<p><b>M4.12-6</b> The project would generate a significant demand for parking.</p>	<p><b>M4.12-6</b> (a) Policy a) under Objective 1 in Vehicular Parking (Appendix C) should be amended as follows: "Within mixed-use districts, including community commercial areas, the shared parking guidelines published by the Urban Land Institute shall be used wherever feasible to reduce total parking supply." (b) A new policy should be added under Objective 1 in Vehicular Parking as follows: 1) "For non-residential uses, use of the minimum parking space requirements shall be encouraged where possible in order to promote use of alternatives to the automobile, subject to completion of a Parking Demand Study for the site use(s)."</p>	I
<p><b>M4.12-7</b> The project would increase the demand for bicycle travel within the project site as well as between the site and adjacent developed areas.</p>	<p><b>M4.12-7</b> Implementation i) under Objective 1 in Bicycle and Pedestrian Circulation (Appendix C) should be revised: "The community shall participate on a fair share basis in the planning and implementation of off-site bicycle facilities on and connecting with regional bike routes designated on the County Regional Bicycle Plan within five miles of the project, including those along Grant Line Road, Patterson Pass Road, Byron Road, Schulte Road, and the Edmund G. Brown Aqueduct."</p>	I
<p><b>M4.12-8</b> The project would increase the number of vehicles crossing the existing Southern Pacific railroad track that runs through the site.</p>	<p><b>M4.12-8</b> Implementation a) under Objective 3 in Transit (Appendix C) should be revised to include: "...Any proposed new vehicular, pedestrian, or bicycle railroad crossing..."</p>	I
<p><b>AIR QUALITY</b></p>		
<p><b>M4.13-1</b> The project would increase regional emissions of criteria pollutants through new vehicle travel and area-source emissions associated with residential and industrial uses in excess of threshold levels established by the San Joaquin Valley Unified Air Pollution Control District. These emissions would add to the regional emission burdens within the San Joaquin Valley Air Basin and the adjacent San Francisco Bay Air Basin, and delay eventual attainment of air quality standards for ozone and suspended particulate matter (PM-10).</p>	<p><b>M4.13-1</b> (a) The County should incorporate a Countywide requirement for an air quality mitigation fee as part of the Development Title. Such a fee could be imposed when new projects generating more than 200 trips per day are not able to reduce trip generation by at least 25 percent. This fee could be used for air quality mitigation improvements, such as park and ride facilities, transit, vehicle inspection, or old car buy-back programs. (b) Industrial or commercial operations at the project site with equipment that causes or has a potential for air pollution or that controls such air pollution may need to apply for an Authority to Construct and Permit to Operate according to regulations of the San Joaquin Valley Unified Air Pollution Control District. (c) The Implementation under Objective 1 of Houses and Buildings, Air Quality and Transportation Demand Management (Appendix C) shall be revised as follows:  "The following items shall be required as conditions of approval of tentative subdivision maps for residential development:  "a) Gas Outlets. Natural gas lines outlets shall be provided to backyards to encourage use of natural gas or electric barbecues.  "b) Electrical Outlets. 220 volt electrical outlets for recharging electric automobiles shall be provided in each garage. Electrical outlets shall be located on the outside of single family homes to accommodate electric lawn maintenance equipment and electric barbecues.  "c) Water Heaters. Low nitrogen oxide (NOx) emitting and/or high efficiency water heaters shall be required for all dwelling units.</p>	SU

Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Air Quality

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
	"d) Fireplaces. Each single family residence shall have no more than one zero clearance fireplace or free-standing wood stove. Only EPA certified fireplaces and wood stoves shall be installed."	
<b>M4.13-2</b> The project would increase the potential for nuisance complaints due to adjacent agricultural activities.	<b>M4.13-2</b> Refer to Mitigation Measure M4.1-2.	I
<b>M4.13-3</b> The project would increase the potential for odor-related land use conflicts.	<b>M4.13-3</b> None required.	I
<b>M4.13-4</b> The project would increase carbon monoxide concentrations along streets and intersections providing access to the project site.	<b>M4.13-4</b> None required.	I
<b>M4.13-5</b> Construction activities would generate dust and particulate matter that could exceed the PM-10 threshold of significance.	<b>M4.13-5</b> The Implementation under Objective 1 in Construction Program for Air Quality (Appendix C) should be amended to include the following:  "a) Transport of Materials. All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.  "b) Equipment Maintenance. All internal combustion engine driven equipment shall be properly maintained and well tuned according to the manufacturer's specifications."	I
<b>■ NOISE</b>		
<b>M4.14-1</b> Residential development, schools, and other noise sensitive land uses on the project site would be exposed to excessive traffic noise levels.	<b>M4.14-1</b> (a) The following Policies should be added under Objective 1, Mobile Source Noise Control:  "d) Noise levels in primary outdoor use areas of new residential development, schools, and other noise-sensitive land uses shall not exceed an $L_{dn}$ of 60 dB unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas to an $L_{dn}$ of 60 dB. Noise-sensitive land uses include, but are not limited to, schools, group care facilities, hospitals, and park facilities.  "e) Interior noise levels for housing proposed to be located in areas exposed to an exterior noise level of an $L_{dn}$ above 60 dB shall be maintained below an $L_{dn}$ of 45 dB. Compliance with this recommended mitigation measure shall be verified prior to issuance of building permits."	I

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	<p>(b) The following Implementation should be added under Objective 2 in Mobile Source Noise Control (Noise) (Appendix C):</p> <p>"b) Residential development shall be set back 500 to 600 feet from the centerline of I-205 to ensure that the <math>L_{dn}</math> would be below 60 dB. The exact setback distance shall be determined by additional noise analysis, revising the distances in Table 11.1 in the Draft Master Plan, by assuming six lanes on I-205, not eight. <u>Alternatively</u>, earth berms or soundwalls shall be built between the noise source and the noise-impacted area. <u>Alternatively</u>, noise level reductions to an <math>L_{dn}</math> of 60 dB shall be achieved through site planning and building orientation, construction of earth berms or soundwalls, or a combination of more than one of these methods. Site-specific noise reduction measures shall be determined prior to Development Permit approval."</p> <p>(c) Implementation a) under Objective 2 in Noise (Appendix C) should be replaced with:</p> <p>"Specific Plan and Development Permit Application Requirements. Applications for a specific plan or a Development Permit shall include acoustical studies for noise-sensitive land uses proposed to be located in areas exposed to noise levels above an <math>L_{dn}</math> of 60 dB. These studies shall be submitted to the County with each specific plan. Appropriate mitigation measures shall be recommended in these studies and implemented by the appropriate party to ensure that the <math>L_{dn}</math> of 60 dB is maintained."</p> <p>(d) The following Implementation should be added under Objective 1 in Mobile Sources Noise Control (Noise) (Appendix C):</p> <p>"d) Noise studies for specific residential projects proposed in noise impacted areas (exposed to an <math>L_{dn}</math> above 60 dB) shall address how noise levels in outdoor use areas, such as backyards, patios, decks, and other noise-sensitive land uses could be maintained below an <math>L_{dn}</math> of 60 dB. Noise studies and recommendations shall be submitted with each Tentative Map application."</p> <p>(e) Table 11.1 in the Draft Master Plan should be revised to reflect the most recent average daily traffic projections for I-205 (assuming six lanes in the future, not eight lanes) and for all other roadways.</p>	
<p><b>M4.14-2</b> Existing residences located adjacent to existing roads in and around the project site would be significantly impacted by project-generated traffic.</p>	<p><b>M4.14-2</b> A new Objective, Policy, and Implementation under Mobile Source Noise Control (Noise) (Appendix C) should be added:</p> <p>"Objective: "To minimize impacts on existing residences located along the roads to the Mountain House community.</p> <p>"Policy: "Outdoor use areas of existing residences that are projected to be impacted (i.e., would experience an increase of five dB in the <math>L_{dn}</math>) by project-generated traffic noise at buildout shall be protected from excessive noise. Individual residences could take the form of constructing soundwalls along the roadways, soundproofing homes, or building barriers around specific portions of yards to provide shielded outdoor spaces. Because of the nature of the development in the area, solutions will have to be tailored to each specific situation, based on individual noise studies.</p> <p>"Implementation: "A plan for mitigating noise levels at existing residences shall be submitted with each specific plan application. The plan shall identify the mitigation necessary to reduce exterior noise levels to an <math>L_{dn}</math> of 60 dB and interior noise levels to an <math>L_{dn}</math> of 45 dB or less."</p>	1



Table 2.1, continued

2.1 MASTER PLAN SUMMARY TABLE  
Noise

Impact	Mitigation Measure	Level of Significance After Mitigation <sup>1</sup>
<p><b>M4.14-3</b> Proposed noise-sensitive land uses adjacent to agricultural lands could be significantly impacted by agricultural machinery and equipment noise.</p>	<p><b>M4.14-3</b> The following should be added to Implementation a) under Objective 6 under Mobile Source Noise Control (Noise) (Appendix C).  "A 500-foot wide on-site or off-site buffer would reduce noise levels generated by agricultural machinery and helicopters by approximately 20 dB and would significantly reduce the potential for noise impacts." <u>Alternatively</u>, "Helicopter use shall not be permitted within 500 feet of the nearest residential dwelling along the western site boundary."</p>	<p>I</p>
<p><b>M.14-4</b> Noise levels generated by the noisiest of individual aircraft flyovers would reach 76 dBA on portions of the site. The <math>L_{dn}</math> due to aircraft flyovers would be less than 60 dB.</p>	<p><b>M4.14-4</b> The following Implementation should be added under Objective 5, Mobile Source Noise Control (Noise) (Appendix C):  "b) In the airport overflight zone, the applicant shall provide a disclosure to potential home buyers that property offered for sale is located in an area subject to aircraft flyover noise.</p>	<p>I</p>

Types of Impacts

SU = Significant Unavoidable Impact

I = Insignificant impact after mitigation. When more than one mitigation measure is identified the combination of measures would be required to result in insignificant impacts.

NA = Impacts related to "Population, Housing, and Employment" are not normally considered significant under CEQA.

TABLE 2.2

SUMMARY TABLE OF SPECIFIC PLAN I IMPACTS AND MITIGATION MEASURES AND MITIGATION MONITORING PROGRAM

Impact	Mitigation Measure	Specific Plan I Subarea <sup>1</sup>			Level of Significance After Mitigation <sup>2</sup>
		C	O	M	
<b>■ LAND USE AND AGRICULTURAL ISSUES</b>					
<p><b>S4.1-1 (O,M)</b> The proposed phasing of growth during Specific Plan I may not be possible if Williamson Act contracts have not expired. This could decrease the number of jobs projected for the initial years and could affect the land use balance.</p>	<p><b>S4.1-1 (O,M)</b> (a) The following policy should be added to Specific Plan I, Section 4.4.1: "b) If the jobs/housing goals are not being met, as determined during annual monitoring, the Old River Industrial Park Expansion Areas should be amended into Specific Plan I, in order to maximize industrial land opportunities within Specific Plan I."  (b) The Draft Specific Plan I should be amended to include the following Objective and Policy in the Land Use section to ensure that enough non-contracted industrial lands are available for development in the early years of the project.  "Objective: To ensure that an adequate amount of industrial land is available, not subject to Williamson Act contracts or conflicting non-renewal schedules, for development in the early years of Specific Plan I.  "Policy: "a) Lands zoned I-P and C-O on Patterson Pass Road, adjacent to Neighborhood F, shall be provided with on-site infrastructure during the early years of Specific Plan I.</p>		•	•	I
<p><b>S4.1-2 (C,O,M)</b> Inclusion of lands within the Community Services District that are not proposed for development in Specific Plan I could result in premature curtailment of agricultural operations.</p>	<p><b>S4.1-2 (C,O,M)</b> Agricultural properties outside the Specific Plan I boundaries that are not proposed for development within five years should be deleted from the initial CSD boundaries, <u>unless</u> policies are added to the Draft Specific Plan I, Development Agreement, and Public Financing Plan that indicate existing agricultural landowners or operator lessees will not be subject to the same high level of benefit assessment fees as properties that will be developed as part of Specific Plan I.</p>	•	•	•	I

2.2 SPECIFIC PLAN I SUMMARY TABLE  
Land Use and Agricultural Issues

Table 2.2, continued

Impact	Mitigation Measure	Specific Plan I Subarea <sup>1</sup>			Level of Significance After Mitigation <sup>2</sup>
		C	O	M	
<p><b>S4.1-3 (C,O,M)</b> Conflicts between urban/rural land uses could occur within Specific Plan I, particularly where ongoing agricultural operations abut planned residential and industrial development. Such conflicts could result in adverse impacts on the existing Byron-Bethany Irrigation District facilities, and on the existing access routes used by farm workers and equipment to reach agricultural fields. These impacts could in turn lead to the curtailment of agricultural operations, an increase in applications to cancel existing Williamson Act contracts, and the premature conversion of agricultural lands within the project site boundaries to non-agricultural uses.</p>	<p><b>S4.1-3 (C,O,M)</b> (a) Specific Plan I should be amended to provide interim buffers, setbacks, and/or appropriate landscaping treatment along the boundaries of the three Specific Plan subareas, to reduce land use conflicts between planned urban uses and the existing agricultural operations. Any interim buffer areas or larger than normal setbacks should remain in place until the adjacent agricultural operations cease and/or a specific plan is adopted for the adjacent properties. (C,O,M)  (b) Agricultural lessees who farm lands owned by the applicant which are within 1,000 feet and upwind of neighborhoods under construction in the Central Mountain House subarea shall be prohibited from cultivating sugar beets. (C)  (c) To mitigate the potential for significant temporary agricultural/urban land use conflicts along the western side of the Mountain House Business Park, where no roadway forms a boundary, the Specific Plan I should be amended to require a landscaped area incorporating a combination of windrows, hedges, and evergreens to reduce the impacts of aerial spray and dust from the adjacent agricultural operations. The intent of this mitigation measure is to provide a buffer strip that would ultimately be a part of the final landscaping design for the Business Park buildout. (M)  (d) Specific Plan I contains no policies requiring notification to all buyers (not just properties located within 1,000 feet of the western and eastern boundaries) that all properties are surrounded by agricultural operations. The following policy should be inserted in Chapter Three of Specific Plan I:  "The deed of each newly created parcel within Specific Plan I shall include a clear statement to inform new buyers that they are purchasing land or homes in a predominantly agricultural area and that the County has adopted a Right-to-Farm ordinance to protect farmers from nuisance suits as a result of normal farming practices." (C,O,M)</p>	•	•	•	1
<p>■ <b>GENERAL PLAN AND DEVELOPMENT TITLE CONSISTENCY</b></p>					
No Specific Plan I impacts identified.					--
<p>■ <b>PUBLIC SERVICES/Parks and Recreation</b></p>					
<p><b>S4.3.1-1 (C)</b> Specific Plan I does not provide regional park land in accordance with the requirements of the San Joaquin County General Plan 2010.</p>	<p><b>S4.3.1-1 (C)</b> Refer to Mitigation Measure M4.3.1-1(a) for alternate methods of mitigation for the regional park land deficiency.</p>	•			1
<p><b>S4.3.1-2 (C)</b> Community parks may not be available to the first site residents.</p>	<p><b>S4.3.1-2 (C)</b> Habitat restoration and community park development along Mountain House Creek shall be implemented concurrently.</p>	•			1

■ PUBLIC SERVICES/Schools				
S4.3.2-1 (C) Specific Plan I is not in conformance with the requirements of the Draft Master Plan. A School Facilities Plan is proposed to be prepared prior to submittal of the first Tentative Map.	S4.3.2-1 (C) Specific Plan I should be amended to ensure that a School Facilities Plan be prepared and approved by the State and the school districts prior to submittal of the first Development Permit.	.		I
■ PUBLIC SERVICES/Fire Protection				
S4.3.3-1 (C,O,M) Specific Plan I is inconsistent with requirements for providing institutional arrangements for fire protection services.	S4.3.3-1 (C,O,M) (a) Documentation pertaining to finalized institutional arrangements, fire flow data, and funding and ownership of stations from construction through buildout should be provided prior to the first Development Permit.  (b) The Fire Protection sections in the Draft Master Plan and Draft Specific Plan I should be amended to state that the first permanent fire station shall be provided when 1,800 dwelling units have been constructed and occupied <u>or</u> as determined by the Fire Protection District.	.	.	I
■ PUBLIC SERVICES/Police Protection				
S4.3.4-1 (C,O,M) The proposed project would increase the demand for police services from the County Sheriff's Department.	S4.3.4-1 (C,O,M) Deputy officers should be added to the Sheriff's Department when the first residence in the Specific Plan I area has been constructed. Sworn officers should be provided in the Mountain House community as the population grows at a ratio of 1.5 officers per 1,000 residents.	.	.	I
■ PUBLIC SERVICES/Solid and Hazardous Waste				
S4.3.5-1 (C,O,M) The Draft Specific Plan I does not comply with the waste reduction and recycling objectives of the Draft Master Plan.	S4.3.5-1 (C,O,M) Specific Plan I should be revised to comply with Master Plan implementation measure "i," as recommended in Mitigation Measure M4.3.5-1 above, regarding alternative on-site waste management sites.	.	.	I
S4.3.5-2 (C,O,M) The Draft Specific Plan I does not allocate land for a proposed waste transfer station and/or compost facility in the Old River Industrial Park as specified by the Draft Master Plan.	S4.3.5-2 (C,O,M) Alternative site locations for the transfer/compost facilities shall be identified in the Specific Plan I Land Use Map, and shall be located in the southern portion(s) of the area.	.	.	I
■ PUBLIC SERVICES/Libraries				
No impacts identified.				--
■ PUBLIC UTILITIES/Water Supply				
No Specific Plan I impacts identified.				--
■ PUBLIC UTILITIES/Wastewater				
No Specific Plan I impacts identified.				--
■ PUBLIC UTILITIES/Storm Drainage				
No Specific Plan I impacts identified.				--

Table 2.2, continued

2.2 SPECIFIC PLAN I SUMMARY TABLE  
Public Utilities

Impact	Mitigation Measure	Specific Plan I Subarea <sup>1</sup>			Level of Significance After Mitigation <sup>2</sup>
		C	O	M	
<b>■ PUBLIC UTILITIES/Gas and Electricity</b>					
S4.4.4-1 (C.O.M) The Draft Specific Plan I does not include specifications for complying with the Draft Master Plan's objective to minimize the consumption of nonrenewable energy and encourage the development and use of alternative energy sources at the site.	S4.4.4-1 (C.O.M) Refer to Mitigation Measure M4.4.4.-2.	.	.	.	I
<b>■ PUBLIC UTILITIES/Telephone</b>					
None identified					--
<b>■ CULTURAL RESOURCES</b>					
S4.5-1 (C.O.M) Historic and prehistoric resources may be impacted by Specific Plan I development.	S4.5-1 (C.O.M) Specific Plan I should include a section on cultural resources, containing the following Objectives, Policies, and Implementations, at a minimum:  Objective: To preserve and enhance significant cultural resources.  Policy: Significant historic and prehistoric resources shall be located and either integrated into new development, recorded, or relocated.  Implementation: a) Areas proposed for development, wastewater treatment and reuse, water treatment, and the alternative raw water pipeline alignments not previously subject to intensive archaeological surveys shall be surveyed and the results shall be submitted with the first Development Permit, including those required for the water and wastewater treatment plants and related facilities. The recommendations of the archaeologist regarding preservation, recordation, or relocation shall be implemented to the greatest extent possible, and shall, at a minimum, contain the measures in Appendix K of the CEQA Guidelines.  b) Potential historic structures shall be evaluated for the entire Specific Plan I area by an architectural historian and recommendations regarding incorporation into the project development, recordation, or relocation shall be implemented prior to submittal of the first Development Permit.  c) If, during construction activities, buried prehistoric cultural resources and/or human remains were found, excavation shall cease and an archaeologist shall be contacted immediately to evaluate these resources.	.	.	.	I
<b>■ GEOLOGY, SOILS, AND SEISMICITY</b>					
No Specific Plan I impacts identified.					--

2-50

■ HYDROLOGY AND WATER QUALITY					
<p><b>S4.7-1 (C)</b> Specific Plan I is inconsistent with the Master Plan regarding timing of development of streambed modification plans.</p>	<p><b>S4.7-1 (C)</b> The Draft Master Plan should be revised to require streambed modification proposals to be submitted to the County prior to submittal of the first Development Permit.</p>	•			I
■ VISUAL QUALITY					
<p><b>S4.8-1 (M)</b> Potentially adverse visual impacts could occur along the I-205 corridor if signage in the Freeway Service Area, and the design of the entrance monument, is not controlled.</p>	<p><b>S4.8-1 (M)</b> The Specific Plan and Special Purpose Plan for Mountain House Business Park should include a comprehensive sign program for the Freeway Service Commercial district which would limit pole signs identifying the Freeway Service area to no more than two locations; height and size restrictions shall be imposed where feasible to lessen the visual impact. The height limits of the one or two pole signs shall not exceed the heights specified in the Development Title for C-FS areas.</p>			•	I
<p><b>S4.8-2 (C,O,M)</b> Roadways and other development in Specific Plan I could remove significant mature trees, which frame views along public roads.</p>	<p><b>S4.8-2 (C,O,M)</b> The Parks and Open Space Plan should include a detailed tree survey, as required by Draft Master Plan policy. The specific trees that are proposed for protection and the criteria to be used should be identified. Prior to approval of any tentative map or any construction plans for major roadways with existing mature trees, especially Grant Line and Patterson Pass roads, the map or plans shall identify the specific mature trees that would be preserved. Other significant trees that are to be protected in open space, residential, commercial, or industrial areas should be identified in the detailed figures that are included in the Specific Plan.</p>	•	•	•	I
■ POPULATION, HOUSING, AND EMPLOYMENT					
<p><b>S4.9-1 (O,M)</b> Specific Plan I may not attain an adequate balance between jobs and housing, especially during the initial phases of the project. Job creation on the site, particularly the creation of non-local-serving jobs, may substantially lag housing construction due to lack of available industrial sites that are serviced by available infrastructure, competition, and other market forces.</p>	<p><b>S4.9-1</b> (a) To maximize the availability of industrial sites for job creation in the early years of Specific Plan I, the Draft Specific Plan I boundaries should be amended to incorporate the Old River Industrial Park expansion areas that are not subject to Williamson Act Contracts (see also Mitigation Measure S4.1-1(a)). <u>Alternatively</u>, or in addition, the Draft Specific Plan I should be amended to include a policy that states the County and the CSD will support applications to expand the Specific Plan I boundaries to maximize job creation efforts. (O)  (b) Policies and implementations that specifically encourage the extension of infrastructure to the Mountain House Business Park in the early years of development should be added to Specific Plan I. (M)</p>		•		NA
<p><b>S4.9-2 (C,O,M)</b> Specific Plan I may not have a sufficient supply of housing that is affordable to Very Low and Low Income workers employed in the community.</p>	<p><b>S4.9-2 (C,O,M)</b> (a) To increase the number of affordable housing opportunities in Specific Plan I and attain the Affordable Housing goals, four to five acres of land should be redesignated from Low and Medium Density Residential to High Density housing to create 72 to 90 additional affordable units (see also Mitigation Measure M4.9-2(a)). <u>Alternatively</u>, or in addition to the redesignation of lands for more High Density housing, the Affordable Housing goals for Specific Plan I should be lowered to more accurately reflect the portion of total Very Low and Low Income housing that is expected to be completed during Specific Plan I. The Affordable Housing Program should be amended to comply with the other provisions of Mitigation Measure M4.9-2(a), e.g., establish income controls on the affordable housing units or assume that only one-quarter of the Senior Housing units will be available for Very Low and Low Income households. <u>Alternatively</u>, or in addition to the above measures, the number of High Density Residential units in each project or building could be increased, if affordable housing goals are not being achieved.</p>	•	•	•	NA

Table 2.2, continued

2.2 SPECIFIC PLAN I SUMMARY TABLE  
Population, Housing, and Employment

Impact	Mitigation Measure	Specific Plan I Subareas <sup>1</sup>			Level of Significance After Mitigation <sup>2</sup>
		C	O	M	
	(b) If annual monitoring of the Affordable Housing Program after year four of Specific Plan I indicates that the number of affordable units marketed and occupied in the High Density, Second Units, and/or Medium High Density categories has not reached a level that indicates the Affordable Housing indices will be achieved by the end of the Specific Plan, the County shall hold hearings, receive testimony, make findings, and take action as indicated in Mitigation Measure M4.9-2(f).	.	.	.	
<b>■ PUBLIC HEALTH AND SAFETY</b>					
<b>S4.10-1 (C.O.M)</b> Proposed landscaping within utility line easements may not conform to PG&E requirements.	<b>S4.10-1 (C.O.M)</b> Specific Plan I should limit proposed landscaping within utility line easements to trees and shrubs that would not exceed 15 feet in height at maturity.	.	.	.	I
<b>S4.10-2 (C.O.M)</b> Mosquito abatement is likely to be required within Specific Plan I areas. An implementation and maintenance schedule for mosquito abatement was not included as part of the storm drainage and flood protection system in Specific Plan I, as required by the Draft Master Plan.	<b>S4.10-2 (C.O.M)</b> Refer to Mitigation Measure M4.10-5.	.	.	.	I
<b>■ BIOLOGICAL RESOURCES</b>					
<b>S4.11-1 (C.O.M)</b> Specific Plan I would result in elimination of suitable foraging and dispersal habitat for San Joaquin kit fox on over 700 acres of the site.	<b>S4.11-1 (C.O.M)</b> (a) Specific Plan I section 7.2.2 should be revised to include appropriate discussion, policies, and implementation measures regarding San Joaquin kit fox, consistent with the recommendations in Mitigation Measures 4.11-2(a), (b), (c), and (d). Approval of Development Permits should be contingent on subsequent revisions necessary to comply with the State and Federal Endangered Species Acts.  (b) The Kit Fox Pre-construction and Construction Protocol contained in Appendix 7-B of the Draft Master Plan should be revised as recommended in Mitigation Measure M4.11-2(c), and section 7.2.2 of the Draft Specific Plan I should be expanded to include an implementation measure which requires that these protocol shall apply until jurisdictional agencies determine that their implementation is no longer required to prevent harm or injury to kit fox.	.	.	.	I
<b>S4.11-2 (C.O.M)</b> Specific Plan I would result in elimination of over 1,000 acres of suitable foraging habitat for Swainson's hawk on the site.	<b>S4.11-2 (C.O.M)</b> The Draft Specific Plan I section 7.2.1 should be revised to include appropriate discussion, policies, and implementation measures regarding Swainson's hawk and the proposed Habitat Management Plan, consistent with the recommendations in Mitigation Measures 4.11-3(a) and (b). This should include deleting the reference to loss of only 175 acres of Swainson's hawk foraging habitat on the site, and providing a clear description of the timing and relationship of required mitigation to wastewater reuse if the proposed HMP is to be implemented during Specific Plan I. Approval of the Draft Specific Plan I should be contingent on subsequent revisions necessary to comply with the required habitat management agreement with the CDFG.	.	.	.	I

	A take permit for loss of Swainson's hawk habitat shall be required, pursuant to Section 2081 of the State Fish and Game Code. If required, a copy of the fully executed habitat management agreement with the CDFG should be submitted to the San Joaquin Community Development Department prior to the issuance of any Development Permit, construction permit, or building permit, or initiation of any improvements, such as construction of the water or wastewater treatment plants, whichever occurs first.	•	•	•	
S4.11-3 (C) The proposed Mountain House Creek Linear Park includes trail and landscape improvements which would contribute to intensive human activity along the Creek and would limit the potential wildlife habitat value of the corridor.	S4.11-3 (C) The Draft Specific Plan I section 7.1.3 should be revised to include appropriate discussion, policies, and implementation measures regarding treatment of the Mountain House Creek corridor, consistent with the recommendations in Mitigation Measure 4.11-5(a).	•			I
S4.11-4 (C,O,M) Off-site improvements, such as the raw water conveyance pipeline and pumping facilities, wastewater storage ponds, and application of wastewater irrigation could adversely affect sensitive biological resources.	S4.11-4 (C,O,M) Additional detailed field surveys, necessary modifications to all proposed off-site improvements to be used during any phase of implementation of Specific Plan I, and appropriate monitoring provisions recommended in Mitigation Measures M4.11-8(a), (b), and (c) should be implemented prior to approval of any Development Permit within the Specific Plan I area, or initiation of any improvements such as construction of water or wastewater treatment plants, whichever occurs first.	•	•	•	I
<b>■ TRANSPORTATION</b>					
S4.12-1 (C,O,M) The project, under the Full Employment scenario, would generate approximately 71,500 daily vehicle trips to, from, or within the site. With the Expected Employment scenario, the project would generate about 55,300 daily vehicle trips, or 23 percent fewer than the Full Employment scenario in year 2000. The added vehicle trips would cause associated impacts such as traffic growth and LOS deficiencies on the road system, particularly in the vicinity of the site, and increases in vehicle miles of travel. Some of these associated impacts would be significant and unavoidable. The project would also generate the need and demand for transit services to, from, and within the site. Since transit services are proposed in the Draft Specific Plan I to accommodate the projected transit ridership, this trip generation impact is not significant.	S4.12-1 (C,O,M) In addition to mitigation measures proposed for the Master Plan (Mitigation Measure M4.12-1), the following mitigation measures are recommended to reduce vehicle trips generated by the Specific Plan I project:  (a) Local bus service should extend from the interim central transfer facility on Patterson Pass Road into Neighborhoods E, F, and G, providing no-transfer service within one-quarter mile walking distance to a majority of the residents, and providing convenient connections to regional commute period bus routes at the interim transfer facility. For example, this could be a one-way loop along westbound Mountain House Boulevard, northbound Central Parkway, westbound Main Street, southbound Marina Boulevard, and eastbound Mascot Boulevard.  (b) The Specific Plan I land use map should be revised so that as many homes as possible are within one-quarter mile walk of the closest neighborhood or community shopping area.  (c) A park and ride lot should be established in the Mountain House Business Park.	•	•	•	SU
S4.12-2 (C,O,M) The project would contribute to cumulative traffic growth and resulting Level of Service deficiencies on I-205, I-580 and I-5 freeways, with projected year 2000 peak hour traffic demand in the peak direction exceeding capacity. Due to the lead time required for freeway widening and, in the case of I-580, current policy limitations on widening, these impacts are considered significant and unavoidable.	S4.12-2 (C,O,M) Refer to Mitigation Measure M4.12-2. This is an unavoidable adverse impact.	•	•	•	SU



Table 2.2, continued

Impact	Mitigation Measure	Specific Plan I Subarea <sup>1</sup>			Level of Significance After Mitigation <sup>1</sup>
		C	O	M	
<p><b>S4.12-3 (C.O.M)</b> The project would increase traffic volumes at nearby freeway interchanges, requiring improvements to the Patterson Pass Road/I-205 interchange.</p>	<p><b>S4.12-3</b> (a) As a part of a Land Use/Traffic Monitoring program (Mitigation Measure M4.12-1(j)), traffic growth trends and levels of service at the Grant Line Road/I-580 interchange shall be monitored and reported to the County. Should the review indicate the need for interchange improvements at I-580/Grant Line at or before buildout of Specific Plan I, the required interchange improvements should be added to Table 9.1 of Draft Specific Plan I accordingly. (C)  (b) The I-205 Interchange section of Table 9.1 should be amended to specifically provide for future ramp metering with HOV bypass lane. This may involve widening and lengthening of the westbound on-ramp. (C,O,M)</p>	.			1
<p><b>S4.12-4 (C.O.M)</b> The project would contribute to the need for improvements on several County and other roads in the project vicinity, including portions of Grant Line Road, Patterson Pass Road, Byron Road, and Altamont Pass Road.</p>	<p><b>S4.12-4 (C.O.M)</b> Table 9.1 in Section 9.4 of Specific Plan I should be amended to include the following arterial improvements, and to add trigger points for each:  a) Byron Road widening east of Patterson Pass road to four lanes, concurrently with the beginning of construction of the Old River Industrial Park (unless the General Plan is amended to accept LOS D as the gateway standard).  b) North-South arterial or widening of Patterson Pass Road north of Grant Line Road. A traffic analysis shall be carried out prior to beginning construction of housing over the 3,200 unit level to determine the need and feasibility of extending Central Parkway or De Anza Boulevard southerly to at least Grant Line Road, and/or widening of Patterson Pass Road beyond four lanes. Subject to findings of this study and review by the County, Figures 9.3 and 9.4 will be revised accordingly.  c) Grant Line Road widening between I-580 and Mountain House Road to four lanes. Widening shall proceed concurrently with the beginning of construction of the Mountain House Business Park.  d) Grant Line Road safety and operational improvements between Mountain House Road and Byron Road. These improvements shall begin concurrently with approval of the first discretionary permit.  e) Initiation of discussions with Contra Costa and Alameda county representatives regarding mutually agreeable measures to address traffic increases on Byron Highway in accordance with the Draft Master Plan (Policy g) under Objective 1 in County Arterials (Appendix C). Interim improvements to accommodate traffic growth to year 2000 may consist of safety/operational improvements.  f) Initiation of discussions with Alameda County representatives regarding mutually agreeable measures to address traffic increases on Altamont Pass Road and all Alameda County roads, in accordance with the Draft Master Plan (Policy g) under Objective 1 in County Arterials (Appendix C)), and Alameda County Policy 164(a).</p>	.	.	.	1

	g) Initiation of discussions and improvement plans with City of Tracy regarding improvements to Grant Line Road east of Byron Road (widening to 4 lanes) to accommodate traffic between Mountain House and Tracy Regional Mall. The Master Developer shall provide fair share funding for the widening of Grant Line Road, based upon more detailed studies that identify both Mountain House and City of Tracy fair shares.	•	•	•	
<b>S4.12-5 (C,M)</b> Project-generated trips would result in significant traffic levels on roadways internal to the site, requiring construction of adequately sized internal roadways and intersections in order to maintain acceptable LOS at buildout of the project.	<b>S4.12-5 (C,M)</b> (a) Figure 9.4 of Specific Plan I should be revised to include the following intersections: <ul style="list-style-type: none"> <li>• De Anza Boulevard/Mascot Boulevard</li> <li>• D Street/Mountain House Boulevard</li> </ul> Both intersections would operate acceptably (LOS D or better) in both peak hours when signalized. Note that no additional lanes were assumed for the mitigation analysis. Additional turning lanes may be needed to accommodate left-turning vehicles. (C) (b) Figure 9.7 of Specific Plan I should be revised to include the following intersection: <ul style="list-style-type: none"> <li>• Patterson Pass Road/Von Sosten Road</li> </ul> This intersection would operate acceptably (LOS D or better) in both peak hours when signalized. Note that no additional lanes were assumed for the mitigation analysis. Additional turning lanes may be needed to accommodate left-turning vehicles. (M) (c) Figure 9.3 of Specific Plan I (Road Classification Diagram) should be revised to designate Mascot Boulevard as a minor arterial from Marina Boulevard to Patterson Pass Road, with four lanes to be provided between Central Parkway and Patterson Pass Road at a minimum. (C) (d) Figure 9.4 of Specific Plan I (Central Mountain House Street System) should be revised to designate an interim width of two lanes on Marina Boulevard while retaining the ultimate four-lane width. (C)	•			I
<b>S4.12-6 (C)</b> The project would generate a significant demand for parking.	<b>S4.12-6 (C)</b> Policy a) of Section 9.7 of the Draft Master Plan should be amended to state "Within mixed-use districts, including community commercial areas, the shared parking guidelines published by the Urban Land Institute shall be used wherever feasible to reduce total parking supply."	•			I
<b>S4.12-7 (C)</b> The project would increase the demand for bicycle and pedestrian travel within the project site as well as between the site and adjacent developed areas.	<b>S4.12-7 (C)</b> Should Central Parkway or another north-south arterial be extended south to or beyond Grant Line Road as described in Mitigation Measure S4.12-4 b), bicycle provisions should be included as prescribed in the Master Plan.	•			I
<b>S4.12-8 (O)</b> The project would increase the number of vehicles crossing the existing Southern Pacific railroad track that runs through the site.	<b>S4.12-8 (O)</b> Implementation c) under Rail Crossings in the Draft Master Plan should be revised to add: "Improvements to the rail crossing shall include provisions for bicyclists."		•		I
<b>■ AIR QUALITY</b>					
<b>S4.13-1 (C)</b> Specific Plan I does not include a 500-foot buffer along the western site boundary.	<b>S4.13-1 (C)</b> Refer to Mitigation Measure M4.13-2.	•			I

Table 2.2, continued

2.2 SPECIFIC PLAN I SUMMARY TABLE  
Air Quality

Impact	Mitigation Measure	Specific Plan I Subarea <sup>1</sup>			Level of Significance After Mitigation <sup>2</sup>
		C	O	M	
<p><b>S4.13-2 (C,O,M)</b> The project would increase regional emissions of criteria pollutants through new vehicle travel and area-source emissions associated with residential and industrial uses in excess of threshold levels established by the San Joaquin Valley Unified Air Pollution Control District. These emissions would add to the regional emission burdens within the San Joaquin Valley Air Basin and the adjacent San Francisco Bay Air Basin, and delay eventual attainment of air quality standards for ozone and suspended particulate matter (PM-10).</p>	<p><b>S4.13-2 (C,O,M)</b> Refer to Mitigation Measure M4.13-1.</p>	.	.	.	SU
<p><b>S4.13-3 (C,O,M)</b> Construction activities associated with Specific Plan I would generate dust and particulate matter that could exceed the PM-10 threshold of significance.</p>	<p><b>S4.13-3 (C,O,M)</b> Refer to Mitigation Measures M4.13-5.</p>				I
<p>■ <b>NOISE</b></p>					
<p><b>S4.14-1 (C,O,M)</b> The Specific Plan does not define how an L<sub>50</sub> of 60 dB will be achieved at noise sensitive areas.</p>	<p><b>S4.14-1 (C,O,M)</b> Refer to Mitigation Measures M4.14-1(a) and M4.14-2.</p>	.	.	.	I
<p><b>S4.14-2 (M)</b> Specific Plan I does not include a 500-foot buffer along the western site boundary or a restriction on helicopter use.</p>	<p><b>S4.14-2 (M)</b> Refer to Mitigation Measure M4.14-3.</p>			.	I
<p><b>S4.14-3 (C,O,M)</b> The Draft Specific Plan I does not mitigate noise impacts at existing residences along Grant Line Road, Patterson Pass Road, Von Sosten Road, Hansen Road, and Byron Road.</p>	<p><b>S4.14-3 (C,O,M)</b> Refer to Mitigation Measure M4.14-2.</p>	.	.	.	I

2-56

**Mountain House Subareas**

- C = Mitigation Pertaining to Central Mountain House
- O = Mitigation pertaining to Old River Industrial Park
- M = Mitigation pertaining to Mountain House Business Park

<sup>2</sup> **Types of Impacts**

- SU = Significant Unavoidable Impact
- I = Insignificant impact after mitigation. When more than one mitigation measure is identified, the combination of measures would be required to result in insignificant impacts.
- NA = Impacts related to "Population, Housing, and Employment" are not normally considered significant under CEQA.

## **CHAPTER 3**

# **PROJECT DESCRIPTION**

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This chapter describes the project evaluated in this Draft Environmental Impact Report (DEIR). The project must go through five distinct process steps, discussed separately below. The first component is the Mountain House New Community Draft Master Plan; the second component is the Mountain House Draft Specific Plan I for development of portions of the proposed new town; the third component is a series of General Plan Amendments to the San Joaquin County General Plan 2010; the fourth component is a series of zone reclassifications; and the fifth component is a series of text amendments to the San Joaquin County Development Title.

A preliminary Development Agreement is currently being prepared. A Development Agreement is a contract between the County and the developer defining the rights and obligations of each party in carrying out the provisions of the Master Plan and specific plans. The Development Agreement would be consistent with the County's General Plan and the Master Plan.

## **PROJECT LOCATION**

The Mountain House New Community is located in San Joaquin County along the Alameda County-San Joaquin County border (Figure 3.1), approximately three miles northwest of the City of Tracy. Regional access to the site is from Interstate 205 (I-205), along the southern site boundary, and local access is from Grant Line Road and Byron Road, traversing the site, and Patterson Pass Road along the eastern site boundary (Figure 3.2).

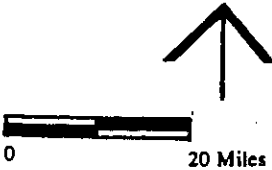
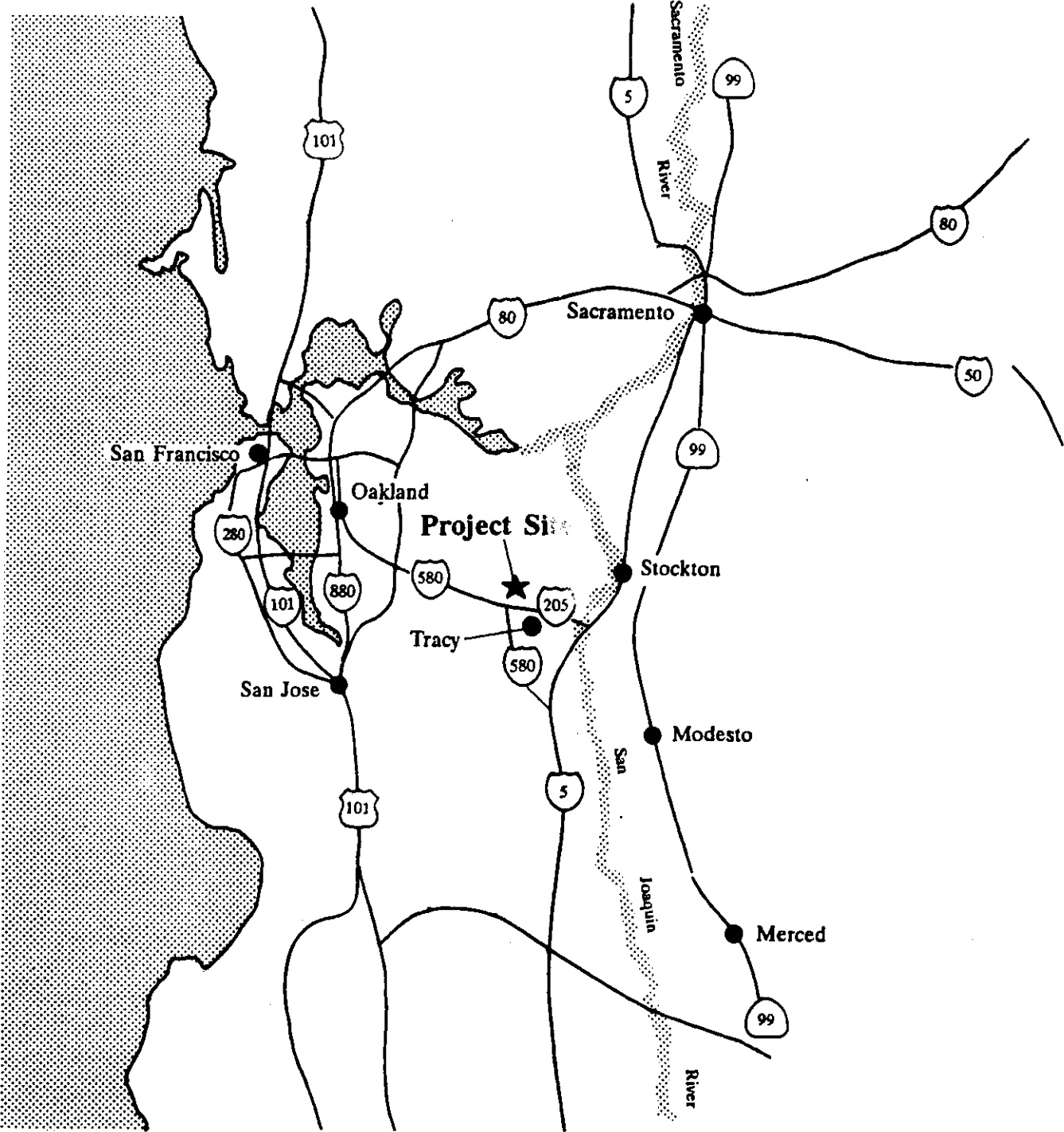
## **APPLICANT GOALS**

The applicant, Trimark Communities, has developed overall goals for the development of the project site. The goals pertain both to the Draft Master Plan and Draft Specific Plan I. The general goals for each plan are listed below:

- Create a high quality environment where people of all economic levels can live and work.
- Develop a distinct and unique new community that is separate from existing communities.
- Develop Mountain House as a full service community that will accommodate a portion of the growth projected by the County's General Plan 2010 in an orderly, well-organized development pattern.

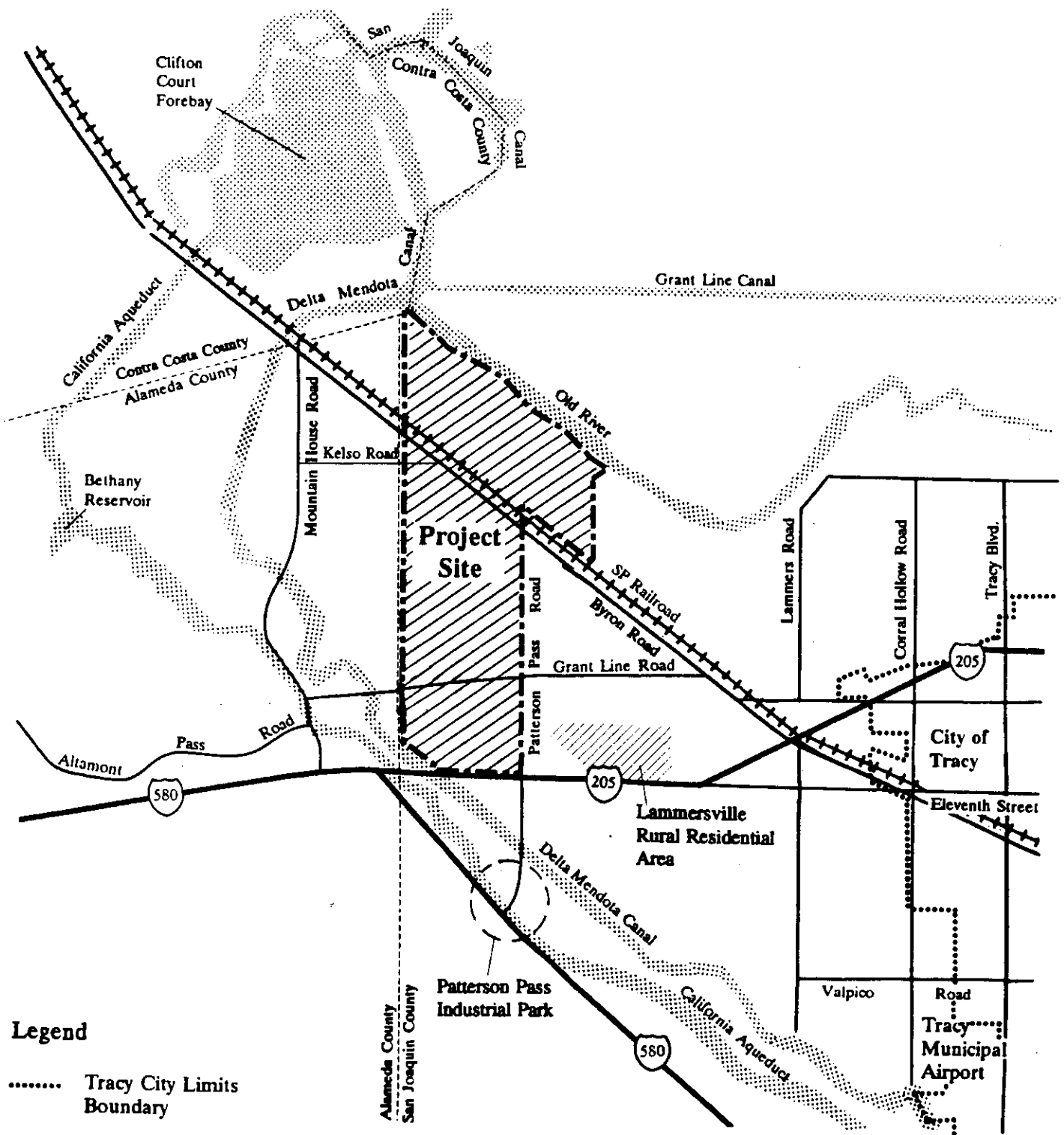
REGIONAL LOCATION

Figure 3.1



# PROJECT LOCATION

Figure 3.2



### Legend

..... Tracy City Limits Boundary

 Project Site



**BASELINE**

### 3.0 PROJECT DESCRIPTION

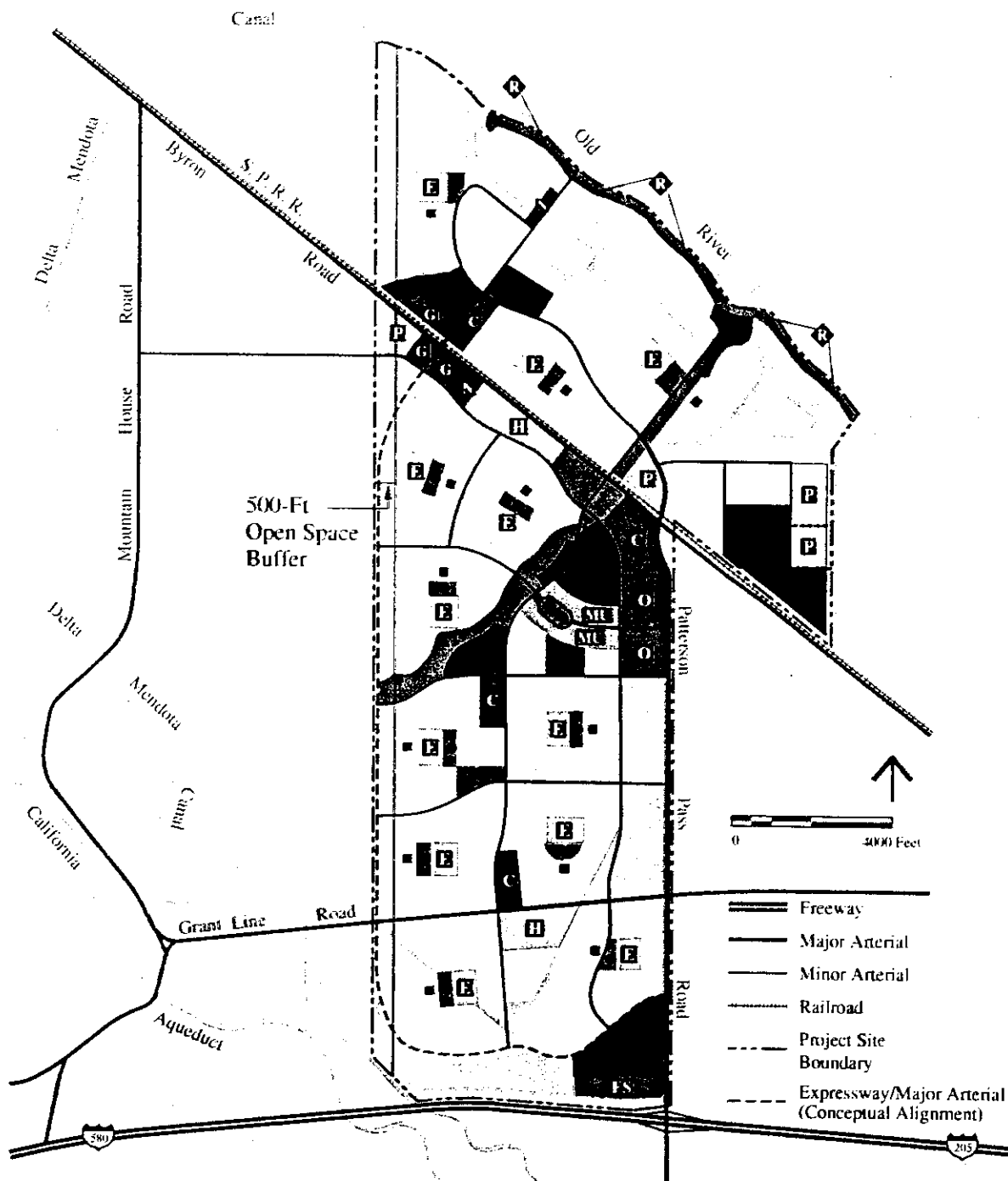
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- Provide for a lifestyle that is less reliant on the automobile, more involved with activities within the local community and neighborhoods, and more oriented to use of transit, bicycle, and pedestrian transport.
- Establish a balance of housing, employment, and a full range of services and infrastructure within the community, while encouraging interaction between land uses.
- Minimize impacts on the County's agricultural resources.
- Create attractive and diverse environments for living, working, and playing.
- Provide for a pedestrian-oriented character within and between residential neighborhoods, village commercial centers, and the Town Center.
- Provide an adequate supply of housing for all income groups in the community.
- Create a financially and fiscally viable community resulting in positive economic impact on the County.
- Establish a safe and efficient circulation system to accommodate the movement of people and goods, reduce environmental impacts, and advance the quality of life in the community.
- Provide adequate public services and facilities to serve the new community.
- Minimize impact on sensitive environmental resources.

## **GENERAL PLAN AMENDMENTS, ZONE RECLASSIFICATIONS, AND TEXT AMENDMENTS**

In February 1993, the San Joaquin County Board of Supervisors approved a General Plan Amendment for the Mountain House New Community and an associated Land Use map (Figure 3.3). The proposed project seeks to revise the February 1993 approved Land Use map (Figure 3.4). Some adjustments in land measurements and the inclusion of Grant Line Village (along the western site boundary immediately south of Grant Line Road) in the site have resulted in minor corrections to total acreages (Table 3.1). The total acreage for the site is now measured at 4,784 instead of 4,667 acres. The most significant land use designation changes from the original plan are an increase in residential areas from 2,335 to 2,524 acres, and a decrease in open space areas from 814 to 759.5 acres.

As a result of the changes in acreages, the estimated number of residential units has increased from 15,994 to 16,105 (Table 3.2) and the population estimate has increased from 43,309 to 43,522 (Table 3.2) at full buildout of the project site. On the basis of specific job generation estimates for various land use categories, it is estimated that 21,925 jobs would be created at the time of project buildout,



### RESIDENTIAL

- Low Density
- Medium Density
- Medium High Density
- High Density

### COMMERCIAL

- Neighborhood
- Community
- General
- Freeway Service
- Office
- Mixed Use

### PUBLIC

- Public or Institutional
- Elementary School
- High School

### INDUSTRIAL

- Limited
- General

### PARKS / OPEN SPACE

- Neighborhood
- Regional
- Community
- Resource Conservation
- Other Open Space
- Neighborhood Center



# PROPOSED GENERAL PLAN MAP

Figure 3.4

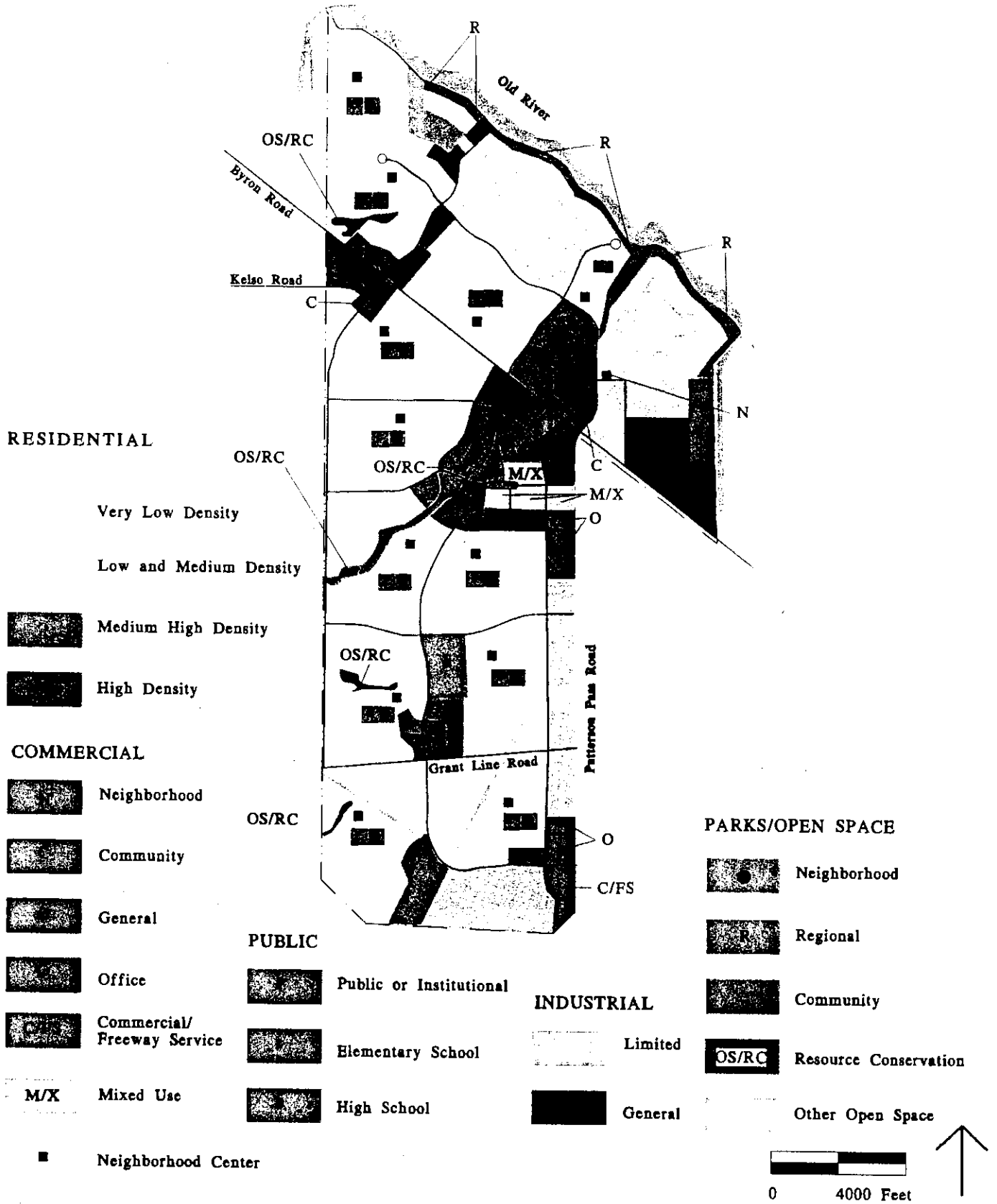


TABLE 3.1  
EXISTING AND PROPOSED GENERAL PLAN LAND USE DESIGNATIONS

Land Use	Acres	
	Existing GP	Proposed GPA
<b>Residential:</b>		
Very low density R/VL	--	76 <sup>1</sup>
Low density R/L	1,075	1,088.5
Medium density R/M	1,054	1,153.5
Medium-high density R/MH	164	164 <sup>2</sup>
High density R/H	42	42 <sup>3</sup>
Mixed-use/Town Center	42	-- <sup>4</sup>
<b>Total</b>	<b>2,335</b>	<b>2,524.0</b>
<b>Commercial:</b>		
Neighborhood commercial C/N	25	25
Community commercial C/C	88	88
General commercial C/G	36	36
Freeway service commercial C/FS	27	27
Office commercial C/O	56	56
Mixed-use/Town Center (M/X)	43	43
<b>Total</b>	<b>275</b>	<b>275</b>
<b>Industrial:</b>		
Limited industrial (north of Byron Road) I/L	317	73
Limited industrial (south of Byron Road) I/L	--	258
General industrial I/G	110	110
<b>Total</b>	<b>427</b>	<b>441</b>
<b>Institutional:</b>		
Elementary and middle schools	180	192
High schools	80	93
Churches/civic	--	8
Wastewater treatment plant	50	50
Water treatment plant	23	18.5
Transit station	15	9
<b>Total</b>	<b>348</b>	<b>370.5</b>
<b>Open Space and Recreation:</b>		
Neighborhood parks	60	60
Community parks	129	179.5
Regional parks	70	70
Resource conservation (wetlands)	40	23 <sup>5</sup>
Other open space (golf course, marina, landscape easements, and buffers)	515	427
<b>Total</b>	<b>814</b>	<b>759.5</b>
<b>Infrastructure (Roads and Railroads):</b>		
Existing streets	40	--
Major streets right-of-way	411	378
Existing railroad right-of-way	17	36
<b>Total</b>	<b>468</b>	<b>414</b>
<b>TOTAL ACRES</b>	<b>4,667</b>	<b>4,784.0</b>

Source: The SWA Group, 1994a.

**Notes:** GP = General Plan  
GPA = General Plan Amendment  
-- = no designation

The acreages for the current General Plan do not include reductions due to the 500-foot buffer along the Alameda County line that was adopted as part of the General Plan 2010 map.

- <sup>1</sup> This acreage includes existing rural residences on-site (Grant Line Village and others).
- <sup>2</sup> Includes 4.5 acres for senior housing.
- <sup>3</sup> Includes 11.5 acres for senior housing.
- <sup>4</sup> Approximately 200 units of housing are planned for the Mixed-use/Town Center commercial area.
- <sup>5</sup> Does not include 1.76 acres within the Mountain House Creek Corridor/Community Park.

TABLE 3.2  
RESIDENTIAL ACREAGES, DENSITIES, AND UNITS

Residential Category	Acres		Average Units/Acre		Number of Units		Population <sup>1</sup>	
	Existing GP	Proposed GPA	Existing GP	Proposed GPA	Existing GP	Proposed GPA	Existing GP	Proposed GPA
Very low density <sup>2,3</sup>	--	76	--	0.93	--	82	--	256
Low density <sup>4</sup>	1,075	1,088.5	4.5	4.5	4,838	4,882	15,095	15,232
Medium density <sup>5</sup>	1,054	1,153.5	8	7.1	8,432	8,217	22,766	22,186
Medium-high density <sup>6</sup>	164	164	12	12	1,968	1,968 <sup>8</sup>	3,936	3,936
High density <sup>7</sup>	42	42	18	18	756	756 <sup>8</sup>	1,512	1,512
Mixed-use/ Town Center	--	-- <sup>9</sup>	--	--	--	200	--	400
<b>Total</b>	<b>2,335</b>	<b>2,524</b>			<b>15,994</b>	<b>16,105</b>	<b>43,309</b>	<b>43,522</b>

Source: The SWA Group, 1994a.

Notes: GP= General Plan  
GPA= General Plan Amendment  
-- = no designation

<sup>1</sup> Assumes an average density of 3.12 persons per household for very low and low density residential areas, 2.7 persons per household for medium density residential areas, and 2.0 persons per household for medium-high density, high density, Mixed-use/Town Center, and senior housing.

<sup>2</sup> This acreage includes existing rural residences on-site. The unit count assumes some in-fill development of the rural residential area.

<sup>3</sup> Assumes a range of 0.5 to 2.0 units per acre.

<sup>4</sup> Assumes a range of 2.0 to 6.0 units per acre.

<sup>5</sup> Assumes a range of 5.5 to 10.0 units per acre.

<sup>6</sup> Assumes a range of 10.0 to 15.0 units per acre.

<sup>7</sup> Assumes a range of 15.0 to 40.0 units per acre.

<sup>8</sup> These totals include 207 units of senior housing for high density and 54 units for medium-high density.

<sup>9</sup> Approximately 200 units of housing are planned for the mixed-use/Town Center commercial area.

compared to 19,919 for the existing General Plan land use plan (Table 3.3).

## APPLICATIONS

Several specific applications will be required for the project being analyzed in this EIR. In addition to the Draft Master Plan and Draft Specific Plan I, the applications will include:

- A General Plan Amendment to adjust the land use designations and map that were previously approved for the site and General Plan Text Amendments to ensure consistency among existing General Plan policies and specific provisions of the Mountain House Draft Master Plan and Draft Specific Plan I;
- A Zone Reclassification to change the zoning of the site from the current agricultural zoning to a variety of urban uses (for the areas to be developed in the first specific plan) or to an Interim Agriculture zone (AU-20) for areas to be developed in the future;

### 3.0 PROJECT DESCRIPTION

- Development Title Text Amendments to ensure consistency between existing zoning and other regulations in the Development Title and specific provisions of the Draft Master Plan and Draft Specific Plan I; and
- A draft Development Agreement.

#### General Plan Map Amendment

The land use plan for the proposed new community is generally similar to the County General Plan 2010 map when the project received General Plan approval in February 1993. However, the relatively minor changes in the locations or general configurations of the specific land uses for the site will require a General Plan Amendment. A notable proposed land use change is the deletion of a 500-foot open space buffer along the western edge of the site.

#### Zone Reclassification

The project site is currently zoned General Agriculture (AG-40), an agricultural zone with a minimum lot size of 40 acres. The applicant proposes to rezone the portion of the site that is not part of Specific Plan I (see discussion below) to Agriculture-Urban Reserve (AU-20) with a minimum lot size of 20 acres. The AU-20 zone is intended to retain those areas, planned for urban use, in agriculture until development occurs. The land area included within the Specific Plan I boundaries is proposed for a range of urban zone classifications to correspond with the proposed Specific Plan for the area (Figure 3.5).

#### General Plan Text Amendments

A series of Text Amendments to existing General Plan policies would be required to ensure consistency between the County General Plan 2010 and some of the specific proposals in

TABLE 3.3

#### EMPLOYMENT BY LAND USE TYPE

Land Use	Jobs	
	Existing GP	Proposed GPA
<b>Commercial:</b>		
Neighborhood commercial <sup>1</sup>	602	600
Community commercial <sup>1</sup>	2,129	2,112
General commercial <sup>1</sup>	871	864
Office commercial <sup>2</sup>	2,146	2,464
Freeway service commercial <sup>1</sup>	650	648
Mixed use <sup>3</sup>	--	<u>2,193</u>
<b>Total Commercial</b>	<b>8,882</b>	<b>8,881</b>
<b>Industrial:</b>		
Limited industrial <sup>4</sup>	8,285	10,231
General industrial <sup>5</sup>	<u>1,497</u>	<u>1,540</u>
<b>Total Industrial</b>	<b>9,782</b>	<b>11,771</b>
<b>Total Schools<sup>6</sup></b>	<b>686</b>	<b>713</b>
<b>Total Recreation<sup>7</sup></b>	<b>97</b>	<b>132</b>
<b>Total Public Facilities<sup>8</sup></b>	<b>472</b>	<b>428</b>
<b>Total Jobs</b>	<b>19,919</b>	<b>21,925</b>

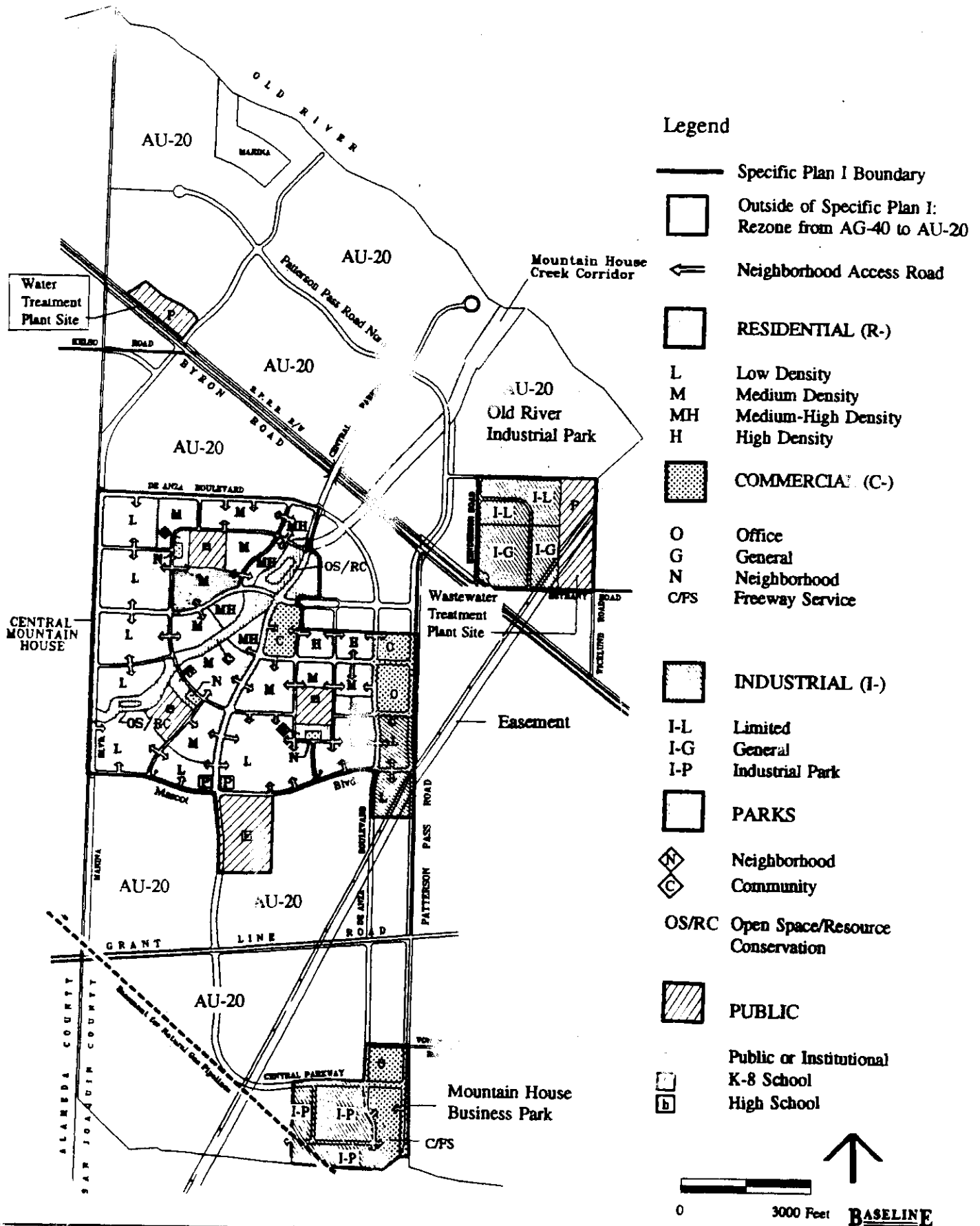
Source: The SWA Group, 1994a.

**Notes:** GP = General Plan  
 GPA = General Plan Amendment  
 -- = no designation  
 Does not include construction-related employment or residents working out of their homes, such as telecommuters, agents, brokers, sales representatives, child care providers, and writers.

- <sup>1</sup> Assumes 24 jobs per acre.
- <sup>2</sup> Assumes 44 jobs per acre.
- <sup>3</sup> Assumes 51 jobs per acre.
- <sup>4</sup> Assumes 26 jobs per acre for 73 acres north of Byron Road and 32.3 jobs per acre for 258 acres south of Byron Road.
- <sup>5</sup> Assumes 14 jobs per acre.
- <sup>6</sup> Assumes 2.5 jobs per acre.
- <sup>7</sup> Assumes 1 job per 5 acres of park, 30 jobs for the golf course, and 10 jobs for the marina.
- <sup>8</sup> Assumes 5 jobs per acre for the wastewater and water treatment plants, and 5 jobs per acre for the transit center.

# PROPOSED ZONE RECLASSIFICATION

## Figure 3.5



### 3.0 PROJECT DESCRIPTION

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the Mountain House Draft Master Plan and Draft Specific Plan I. A complete description and analysis of the specific General Plan Text Amendments that would be required to ensure consistency with the project is included in Section 4.2, General Plan and Development Title Consistency (see Table 4.2-1). Some of the more minor inconsistencies between the developer's proposals and existing County policies may not require a General Plan Amendment, depending on the discretion of County staff in interpreting the plan.

#### **Development Title Text Amendments**

Several Text Amendments to the County Development Title would also be required to ensure consistency between existing zoning and other regulations in the Development Title, and specific provisions of the Draft Master Plan and Draft Specific Plan I. The Mountain House project contains certain features that do not conform to existing Development Title regulations, or that are not specifically allowed under the Development Title. A complete description and analysis of the specific Development Title Text Amendments that would be required to ensure consistency with the project is included in Section 4.2, General Plan and Development title Consistency (see Table 4.2-2).

#### **Draft Development Agreement**

Trimark Communities has requested that a Development Agreement be reviewed and adopted by the County as a part of the overall approval of the Draft Master Plan and Specific Plan I. The Development Agreement is a legally binding contract between a developer and the County that sets forth the legal responsibilities and obligations of both parties. The Development Agreement would incorporate the specific infrastructure improvements and other mitigation programs that the applicant would be required to construct or establish as the conditions of approval for the project. The Development Agreement would also outline the obligations that the County must adhere to in the granting of further approvals.

## **MASTER PLAN**

The purpose of the Draft Master Plan for the Mountain House New Community is to provide overall guidance for future development of the entire site. The Draft Master Plan is divided into three sections:

- Goals and Development
- Public Services
- Public Works Infrastructure

Each of these sections describes in detail the goals and policies for each subject and the associated implementation measures to ensure that development occurs in accordance with the goals for the community. The goals and policies for the new community are included in Appendix C of this DEIR.

## GOALS AND DEVELOPMENT

The Goals and Development section of the Draft Master Plan consists of 1) a Community Vision, 2) Land Use, and 3) Jobs/Housing and Affordable Housing Programs. The goals and policies for the project site are described below and specific goals and policies are included in Appendix C of this DEIR.

### Community Vision

The Mountain House New Community is proposed as a self-sufficient community containing all necessary services for more than 43,000 people. The proposed project consists of 12 distinct neighborhoods (referred to as Neighborhoods A through K). Each neighborhood is approximately the same size, centered around a K-8 school and neighborhood park (Figure 3.6). The neighborhoods are sized to coincide with attendance boundaries for each school.

The project would contain three separate village centers, approximately 15 to 20 acres each, serving four neighborhoods each. The village centers would provide weekly shopping and other services for the neighborhoods and would also provide transit connections and facilities. Each of the three village centers would be connected by a central north-south parkway providing access to commercial centers, parks, golf courses, the Town Center, and Old River.

The Town Center would be located in the center of the project site along the eastern site boundary and adjacent to Mountain House Creek. The Town Center would include a community-serving shopping center, high-density residential and commercial land uses, civic center, and community park facilities. Development in the Town Center would be implemented in accordance with one specific plan to be prepared by the County, the Community Service District (CSD), or the property owner.

A Community Employment District would be located near the eastern site boundary (Figure 3.6). This district would include industrial and commercial land uses, including business parks.

A community edge would surround the community on all sides (Figure 3.6). An open space system would be developed along the Old River front and along Mountain House Creek. Neighborhood parks would be located within each neighborhood; additional community parks would be located around the Town Center and in Neighborhoods A and I. A regional park would be located in the northern portion of the site near Old River, adjacent to two proposed golf courses.

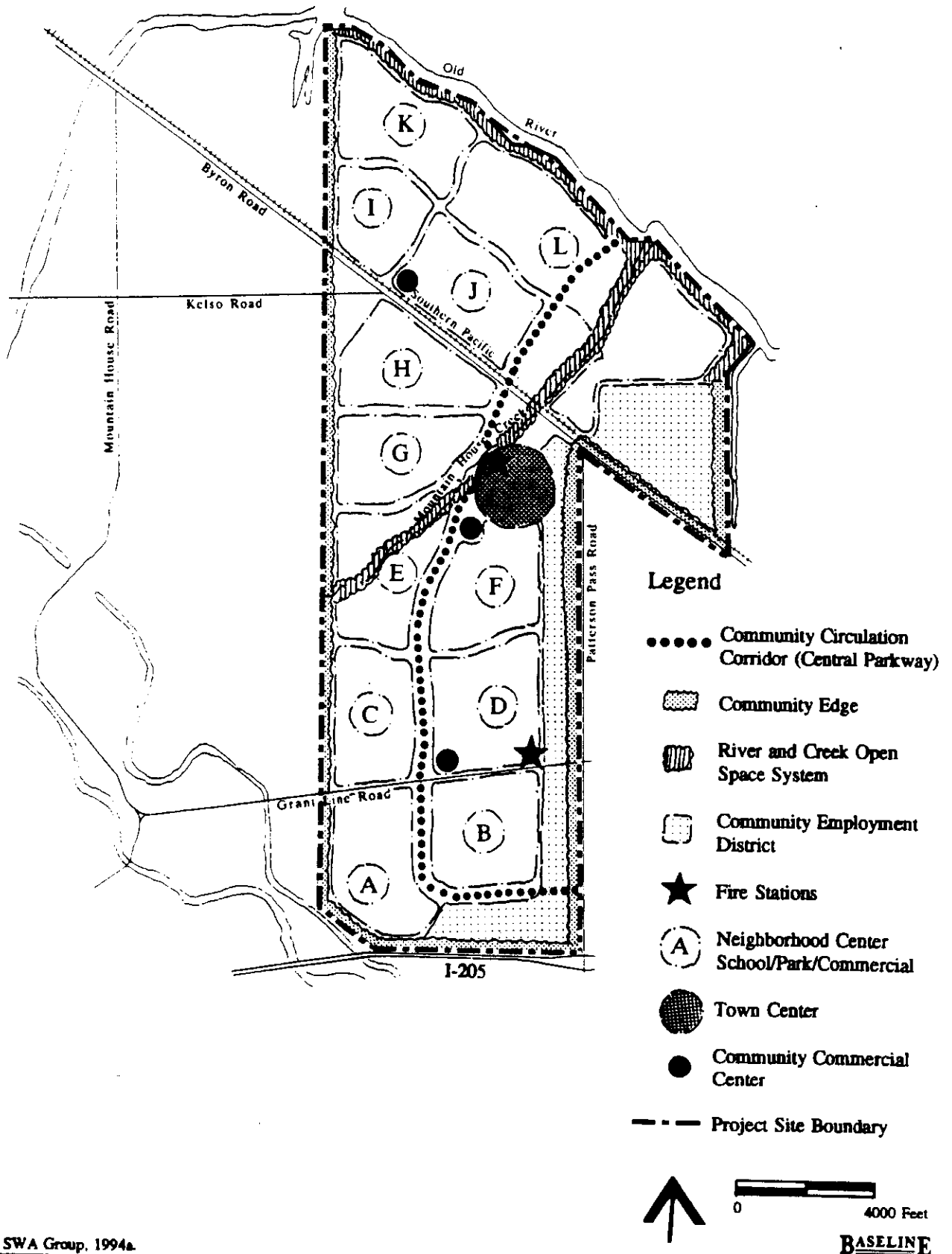
### Land Use

The Draft Master Plan land use program establishes the general locations and categories for land uses for the entire project site, as well as on a neighborhood-by-neighborhood basis. The land use program also provides the primary circulation system and intersections with the future collector streets (Figure 3.4).

About 52 percent of the project site is proposed for residential development of varying densities. The commercial and industrial land uses would occupy about 15 percent of the site, open space,

# COMMUNITY CONCEPT DIAGRAM

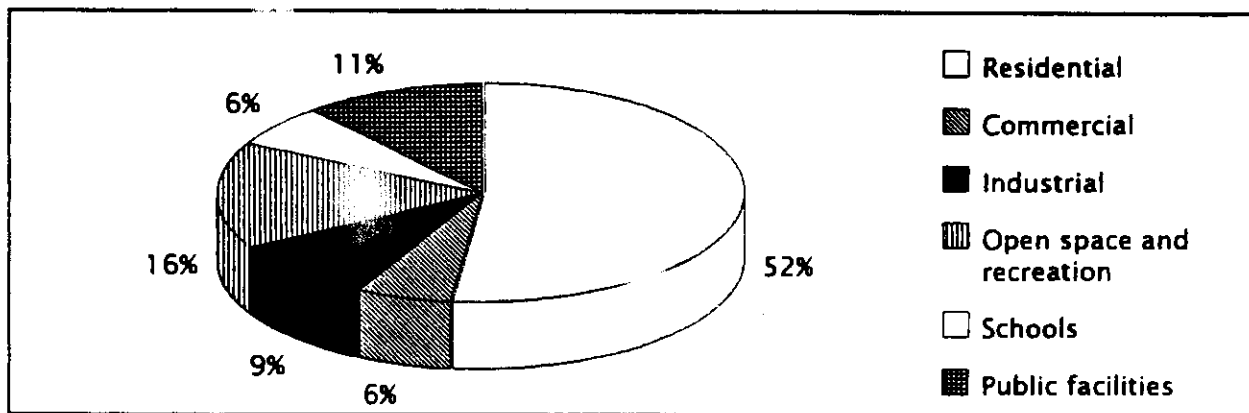
Figure 3.6





recreation and resource conservation areas would occupy about 16 percent of the site, while the remainder would be used by schools and public facilities (Tables 3.4 and 3.5). The objectives, policies, and implementation measures for site development within each land use category are included in Appendix C of this DEIR and are summarized below.

TABLE 3.4  
LAND USE CATEGORIES



Note: See Table 3.5 for acreages and specific land uses within each category.

#### *Residential*

Residential land uses would vary in density from Very Low Density, with an average of 0.9 dwelling unit per acre, to High Density (18.0 units per acre) (Table 3.5). The Very Low Density category would include the existing on-site residential areas (Figure 3.4). About 81.3 percent of the residential units would be within the Low to Medium Density categories (average densities of 4.5 and 7.12 units per acre, respectively). The High Density residential development would be around and near the Town Center and would include senior housing. Second units would be provided within all Very Low, Low, and Medium Density residential areas. A total of 6.5 percent of units in the residential areas would be second units, to be identified on Tentative Map submittals.

#### *Commercial*

Four types of commercial uses are proposed for the site, ranging from Neighborhood Commercial areas to Community Commercial shopping centers and offices. Each of the twelve neighborhoods (Figure 3.6) would contain an easily accessible neighborhood commercial area consisting of 1.5 acres. An interim commercial facility would be constructed before or at the issuance of the 500th building permit, and a permanent neighborhood commercial facility would be constructed before or at the issuance of the 1,000th building permit.

Three Community Commercial centers (15 to 20 acres each) would serve groups of four neighborhoods (up to about 5,000 homes) and would include relatively large shopping centers. In

TABLE 3.5

## LAND USE PROGRAM

Land Use	Person/ du	Jobs/ Acre	Acres (%)	du (%)	Population	Jobs
<b>Residential<sup>1</sup></b>						
Very low density	3.12		76.0 (3.1)	82 (0.5)	256	
Low density	3.12		1,088.5 (43.1)	4,882 (30.3)	15,232	
Medium density	2.70		1,153.5 (45.7)	8,217 (51.0)	22,186	
Medium-high density	2.00		159.5 (6.3)	1,914 (11.9)	3,828	
Senior housing (medium)	2.00		4.5 (0.2)	54 (0.3)	108	
High density	2.00		30.5 (1.2)	549 (3.4)	1,098	
Senior housing (high)	2.00		11.5 (0.5)	207 (1.3)	414	
Town Center residential	2.00		-- --	200 (1.3)	400	
<b>Total Residential</b>			<b>2,524.0 (100)</b>	<b>16,105 (100)</b>	<b>43,522</b>	
<b>Commercial</b>						
Neighborhood commercial		24.0	25.0 (9.1)			600
Community commercial		24.0	88.0 (32.0)			2,112
General commercial		24.0	36.0 (13.1)			864
Freeway Service commercial		24.0	27.0 (9.8)			648
Office commercial		44.0	56.0 (20.4)			2,464
Town Center		51.0	43.0 (15.6)			2,193
<b>Total Commercial</b>			<b>275.0 (100)</b>			<b>8,881</b>
<b>Industrial</b>						
Limited industrial north of Byron Road		26.0	73.0 (16.6)			1,898
Limited industrial south of Byron Road		32.3	258.0 (58.5)			8,333
General industrial		14.0	110.0 (24.9)			1,540
<b>Total Industrial</b>			<b>441.0 (100)</b>			<b>11,771</b>
<b>Open Space</b>						
Neighborhood parks		0.2	60.0 (7.9)			12
Community parks		0.2	179.5 (23.6)			36
Regional parks		0.2	70.0 (9.2)			14
Golf courses (2)		30 ea	298.0 (39.2)			60
Marina/Other open space		10 ea	62.0 (8.2)			10
Wetlands			23.0 (3.0)			
Landscape buffers			3.0 (0.4)			
Easements			64.0 (8.4)			
<b>Total Open Space</b>			<b>759.5 (100)</b>			<b>132</b>
<b>Schools</b>						
K-8 (12 @ 16 acres each)		2.5	192.0 (67.4)			480
High school (2 @ 40 acres each)		2.6	93.0 (32.6)			233
<b>Total Schools</b>			<b>285.0 (100)</b>			<b>713</b>
<b>Public Facilities</b>						
Sewer/Waste utility area/Maintenance		5.0	50.0 (10.1)			250
Water treatment plant		5.0	18.5 (3.7)			93
Transit center and public		5.0	9.0 (1.8)			45
Churches/Institutional		5.0	8.0 (1.6)			40
Major street R.O.W.			378.0 (75.4)			
Railroad R.O.W.			36.0 (7.3)			
<b>Total Public Facilities</b>			<b>499.5 (100)</b>			<b>428</b>
<b>TOTAL MOUNTAIN HOUSE</b>			<b>4,784</b>		<b>16,105</b>	<b>43,522</b>
						<b>21,925</b>

Source: The SWA Group, 1994a.

Notes: -- = High density residential in Town Center

Mixed Use area

du = Dwelling units

R.O.W. = Right-of-way

The range of dwelling units per acre within each category is listed in Table 3.2

addition, the Town Center would accommodate about 33 acres of major shopping center facilities serving the entire community. Freeway Commercial areas would be destinations for freeway-oriented trips near the Patterson Pass Road/I-205 interchange and along the western site boundary between Kelso and Byron roads (Figure 3.4). Development of Freeway Commercial areas would be subject to the preparation of a Special Purpose Plan, as would Neighborhood Centers and Village Centers.

General Commercial areas would provide specialized commercial establishments for the entire community and would be located on arterial roads near major intersections; if located near the Alameda County line, they would have buffer zones or be compatible with adjacent agricultural operations.

#### *Industrial*

Industrial land uses are proposed to be separated into heavy industrial uses (General Industrial) and light industrial uses with limited nuisance and associated land use conflicts (Limited Industrial). The Limited Industrial areas would be zoned to accommodate business parks for high tech uses and/or light manufacturing. The General Industrial uses might include manufacturing, distribution, storage, and wholesale trade.

#### *Site Boundaries*

The Draft Master Plan also provides standards for development along the site boundaries. The "edge treatment" standards are specific to land uses proposed adjacent to the site boundary and vary in width and landscaping (for details refer to the Land Use section in this DEIR).

#### **Jobs/Housing Program and Affordable Housing Program**

The project proposes a jobs/housing ratio of 0.99 as a target at project buildout. This ratio is defined as the number of jobs to the number of employed residents. Job creation is proposed through a Passive Jobs Attraction Program and a Job Development Program. The effectiveness of the jobs/housing program would be evaluated prior to approval of each specific plan, as well as upon completion of 4,000, 8,000, 12,000, and 16,000 units (unless annual reviews have occurred).

The project includes an Affordable Housing Plan to ensure that the project would provide affordable housing for Mountain House employees. The Program includes using higher density residential development and smaller lot size housing for affordable housing; employer incentives for assisting workers with down payments; provisions for second units (up to 6.5 percent of total units) in the Very Low, Low, and Medium Density residential areas; and creation of the Mountain House Housing Trust Fund, which would make funds available to provide housing for low-income households.

## **PUBLIC SERVICES**

### **Education and Child Care**

The project would include twelve kindergarten through eighth grade (K-8) schools, to service each neighborhood, and two high schools. Each of the neighborhood K-8 schools would be located on about 16 acres of land adjacent to a neighborhood park, which would double as an athletic field. The two high schools (Figure 3.4) would each occupy about 46.5 acres of land. A stadium, shared by the two high schools, is proposed in a centrally-located community park. Lammersville Elementary School District and Tracy Joint Union High School District would serve the site. The project would include three dedicated child care sites either near the K-8 schools or within the Village Centers' commercial areas.

### **Public Health and Safety**

The project includes policies for the protection of the public health and safety through various programs, such as police and fire services, medical services, emergency preparedness, animal control, waste management, hazardous materials management, protection from electric and magnetic fields, and mosquito abatement. The specific objectives, policies, and implementation measures are included in Appendix C of this DEIR, and the proposed programs are summarized below.

#### *Police Protection*

Police services would be provided to an urban level through a contract with the San Joaquin County Sheriff's Department supplemented by private contracts for certain duties. A police facility of 4,800 square feet will serve the community; the first phase of this facility would be provided when the community population would reach 7,500 people. The specific contracts with the Sheriff's Department would be finalized prior to submittal of the first Development Permit.

#### *Fire Protection and Emergency Response*

The project would provide two on-site fire houses (Figure 3.6) with a goal of a fire response time of three minutes or 1.5 miles. Urban fire protection services would be provided either by a direct provider or by contracting for services. Professional fire fighters and paramedics, augmented by cross-trained employees, would staff the fire houses at project buildout. Initially, the project would be served by the Tracy Rural Fire Protection District, on contract with the CSD if approval of detachment from the Tracy Rural Fire Protection District were approved by LAFCO at the time of the CSD formation. The CSD could later provide its own fire protection. Fire protection standards would be developed between the Tracy Rural Fire Protection District and the CSD and approved prior to the first Development Permit.

#### *Medical Services and Emergency Preparedness*

It is expected that a hospital would be constructed at 50 percent buildout of the community. Hospital, urgent care centers, emergency care facilities, and other medical facilities would be permitted land uses within several areas of the community.

It is expected by the applicant that the community may experience some form of natural disasters, such as earthquakes. An ~~Emergency Preparedness Incident Action Plan~~ would be prepared prior to submittal of the first Development Permit and would include annual training programs and drills.

#### *Animal Control*

Animal control would be provided by the County animal control facility when demand arose. The service would be from either an on-site facility or an expanded County facility. Wildlife management would be provided through a Wildlife Management Plan to be approved prior to submittal of the first Development Permit.

#### *Waste Management*

Solid and hazardous wastes would be generated by the occupants of the site. An objective of the project is to reduce wastes and encourage recycling in accordance with State and County requirements. Solid waste at the site would be brought to the Tracy Materials Recovery and Transfer Facility south of the City of Tracy. This facility may reach capacity in 2010. If the facility were not expanded, a 10-acre site would be reserved within the area designated for public lands in Old River Business Park for a transfer station to accommodate those portions of the project's waste stream that were not recycled. Household hazardous wastes at the site would be managed in accordance with County plans.

A Hazardous Materials Management Plan would be prepared for hazardous materials used at the proposed water and wastewater treatment plants; this Plan would be prepared prior to the submittal of the first Development Permit for either of the plants.

#### **Potential Site Hazards**

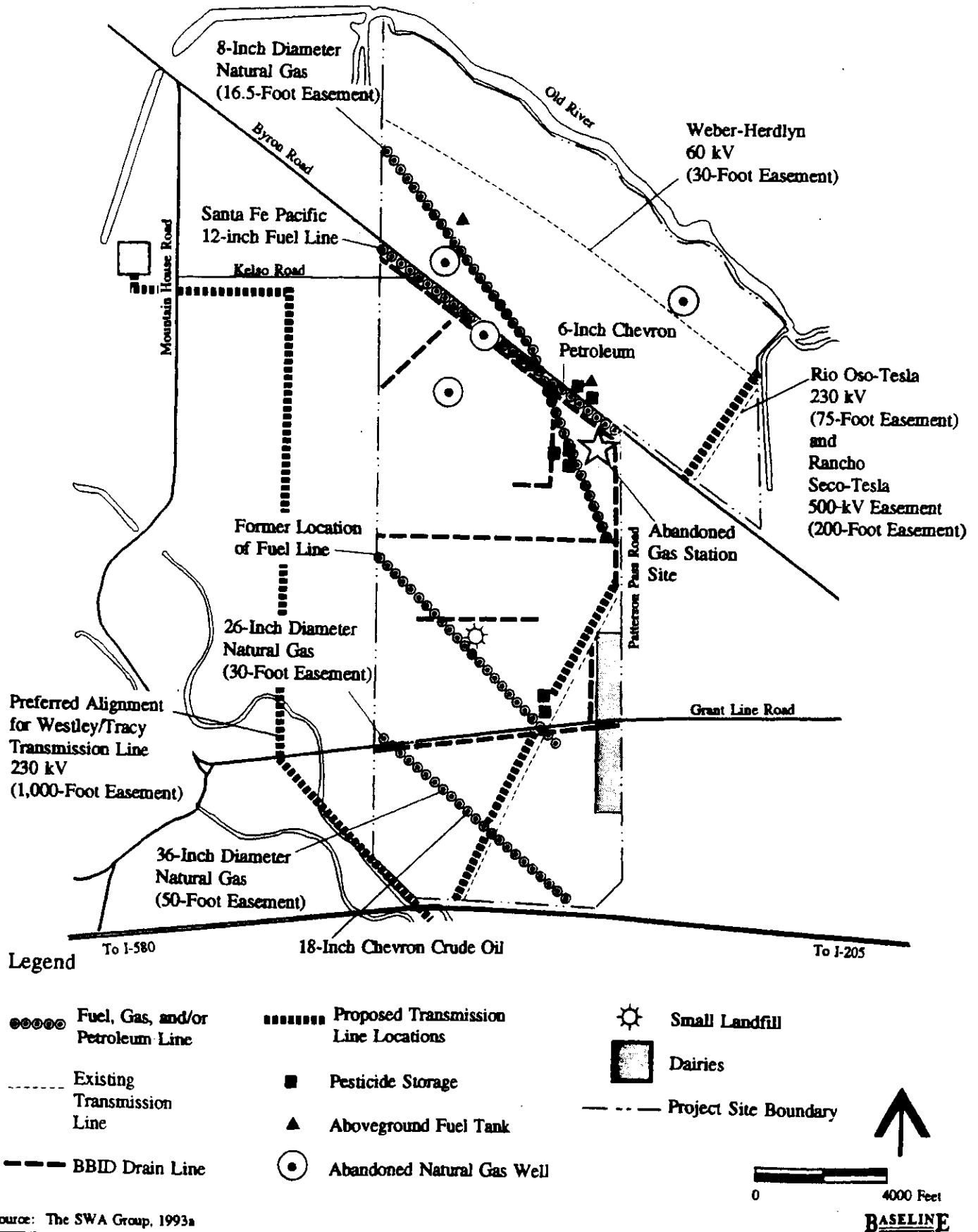
Site development would be constrained by various hazards associated with the operation of fuel lines, pipelines, and pesticides that may be present from past land uses, livestock wastes, geological conditions, and electromagnetic fields. Policies have been proposed for each of these hazards to ensure the health and safety of future occupants of the site and to protect the environment, as summarized below and included in Appendix C.

#### *Fuel Lines and Pipelines*

A number of active and abandoned fuel and natural gas subsurface lines traverse the site (Figure 3.7). The Draft Master Plan proposes that, prior to submittal of the first Development Permit for development within 500 feet of areas underlain by these active or abandoned lines, a site assessment be conducted to evaluate the potential for past releases near the lines. In addition, the Public Utility Commission (PUC) and line operators would be notified of the proposed development plans and the operators must assume responsibility for operating the lines in accordance with the requirements of the PUC and the State Fire Marshal's regulations.

# POTENTIAL SITE HAZARDS

Figure 3.7



Source: The SWA Group, 1993a

*Historic Pesticide/Herbicide Uses*

The project site has been actively farmed and pesticide or herbicide residues could be present in the subsurface. It is proposed that, prior to submittal of any Development Permits, a site assessment be conducted to ascertain whether significant levels of chemical residues remain in the soil and that, if necessary, remediation occurs as determined by local and State agencies.

Abandoned oil, gas, and water wells, drainage canals, as well as sources of contamination from past land uses may be present on the site. The project proposes that, prior to submittal of any Tentative Maps, drainage canals would be identified and provisions made for abandonment, incorporation into the storm drainage network at the site, or identified as usable for the control of site drainage. Each Tentative Map would include evaluation of safety of open canals. A site assessment would be conducted to determine the presence of chemicals in the site surface from past land uses. Clean-up of chemicals or abandonment of old water, gas, and oil wells is proposed prior to recordation of the Final Map.

*Livestock Waste Management*

Two dairies are currently located within the project site (Figure 3.7); it is expected that these dairies would be phased out as the community develops. To protect the public health and the environment from dairy wastes, it is proposed that, when residential development is proposed within 1,000 feet of the dairies, a preliminary site assessment would be prepared to ascertain whether any development associated with the new community would be affected by dairy operations; this assessment would be addressed in each specific plan. The assessment would address surface water and groundwater quality that could be affected by the runoff of dairy wastes.

*Geologic, Seismic, and Other Hazards*

The site may be underlain by soils that would present significant constraints to foundations or are highly erodible. The site may also be subject to ground shaking from active or potentially active regional faults. To minimize these hazards, the project includes provisions for a soil investigation to be submitted to San Joaquin County as a condition of each Tentative Map approval. If the soils prove unsuitable for foundations, only non-building uses could occur in those areas. All future site residents would receive information on seismic hazards and hazard reduction activities as part of an Earthquake Preparedness Plan to be prepared when required by the San Joaquin Office of Emergency Services. All public facilities would be constructed to withstand a maximum credible earthquake.

Prior to construction activities, the owner of a particular parcel/area would submit a Notice of Intent to the State Water Resources Control Board, indicating an intent to comply with the General Construction Permit under the non-point source National Pollution Discharge Elimination System (NPDES) and Storm Water Pollution Prevention Plans (SWPPs) would be prepared prior to construction.

### 3.0 PROJECT DESCRIPTION

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#### *Electric and Magnetic Fields*

A number of overhead electrical transmission lines are present or are planned within the project site. These lines are a source of electromagnetic fields (EMF) that could affect users of the site. To minimize this potential public health hazard, residents adjacent to existing or proposed transmission lines would be informed on an annual basis of potential EMF health problems. In addition, schools would be located at a minimum distance away from transmission lines, to be determined by the California Department of Education. If other setback standards were developed in the future by the California Department of Health Services, these would be incorporated into the project. Most of the land uses adjacent to transmission lines are proposed for recreation or open space uses. It is proposed that all specific plans (except Specific Plan I) shall evaluate the latest studies regarding EMFs, and that setbacks shall be established for residential uses if credible studies indicate that it is necessary.

#### *Mosquito Abatement*

Mosquito infestation could occur from wetlands or along Mountain House Creek. To eliminate the generation of mosquitoes, the water levels in the wetlands would be controlled and the shoreline configuration would be constructed to eliminate areas of ponding. In addition, wetlands would be stocked with mosquitofish (e.g., *Gambusia affinis*).

#### **Recreation and Open Space**

The community would contain about 310 acres of parks and trails for recreational opportunities. In addition, the project would incorporate about 454.5 acres of other open spaces, consisting of wetlands, two golf courses, a marina, easements, and landscape buffers (Table 3.6 and Figure 3.4). Parks and open spaces would be developed at the site in accordance with a Parks and Open Space Plan to be approved prior to submittal of the first Development Permit.<sup>1</sup> The allocation of recreational facilities would be determined following evaluation of recommended standards from the National Recreation and Park Association and at least two other new communities of similar size to the proposed project.

Park lands within the project site would consist of neighborhood, community, and regional parks. A five-acre neighborhood park would be located within each of the twelve neighborhoods, adjacent to the elementary schools. The parks would be constructed within each neighborhood after issuance of 50 percent of the dwelling unit permits and would be completed following issuance of 80 percent of the permits.

About 180 acres of community parks are proposed within the project site. Community parks would range in size from about 3 to 80 acres (Figure 3.4). About 50 percent of this park acreage would be located along Mountain House Creek to constitute a continuous linear park bisecting the site. It

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<sup>1</sup> A development permit may be either discretionary or ministerial. Discretionary permits include tentative subdivision maps, use permits, and variances. Ministerial permits include final subdivision maps, encroachment permits, grading permits, and building permits. The first Development Permit to be submitted for development of any area within the community would not be approved until the various required plans and programs had been submitted.



is proposed that the existing Mountain House Creek channel and adjacent marshes be maintained for the project. The corridor would be managed by a single multi-use program integrating and coordinating opportunities for flood control, riparian values, wildlife habitat, and recreation. Enhancement plans include a 200-foot corridor with a meandering creek and increased flows (including treated storm water runoff) to maintain riparian habitat. All buildings and structures would be set back at least 50 feet from the edge of the 200-foot wide corridor. Specific plans would include the restoration plan for the corridor pertaining to each specific plan in accordance with the goals of the Park and Open Space Plan. A community park adjacent to the linear park may include a 5,000- to 6,000-person sports stadium near the Town Center. Parks would also be located in the southern portion of the site (Figure 3.4) and near the northern high school. The first community park would begin construction prior to the 2,000th residential unit.

TABLE 3.6  
PROPOSED PARKS

Parks	Number of Parks	Acres/ Park	Total Acreage	Acres/ 1,000 Residents <sup>1</sup>
Neighborhood	12 <sup>2</sup>	5	60	1.4
Community	1	80.5		
	1	42		
	1	20		
	1	35		
	1	3		
			180.5 <sup>3</sup>	4.1
Regional	1	70	70	1.6
Other open space <sup>4</sup>	--	--	453.5	--

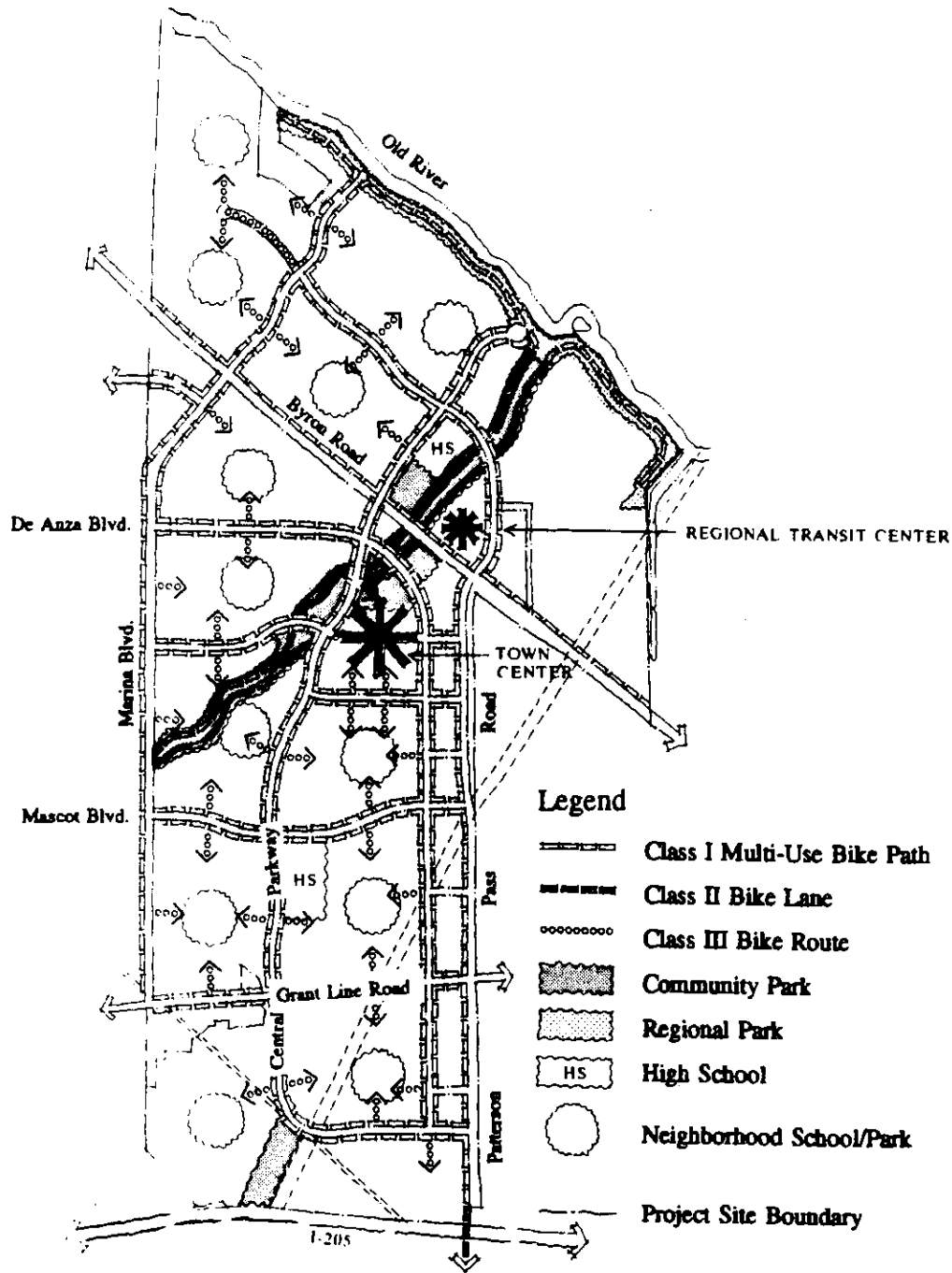
Source: The SWA Group, 1994a.

- <sup>1</sup> Assumes a total population of 43,522.
- <sup>2</sup> These parks would include baseball fields, hard courts, swimming pools, and passive recreation areas.
- <sup>3</sup> Portions of this acreage would be wildlife habitat and storm water control. Therefore, the entire acreage would not be available for recreation.
- <sup>4</sup> Includes golf courses (301.5 acres), marina (62 acres), wetland (23 acres), easements (64 acres), and buffers (3 acres).

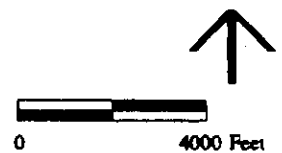
A 70-acre regional park would be located adjacent to Old River along the northern boundary of the new community (Figure 3.4). Regional park development may be tied to the residential development associated with future specific plan(s) adjacent to Old River. The existing levees along Old River would remain as habitat and be developed into a regional park. Additional flood protection would be provided by the construction of a second levee system behind the existing levees. The first specific plan prepared for the residential neighborhood areas north of Byron Road would provide plans for maintenance of the habitat value of the existing levee and riparian area along Old River. It is proposed that development of the regional park would start at about 50 percent of the community's residential development.

**Trails/Pedestrian Paths**

Trails would be located along the roadways of the community and within the park areas (Figure 3.8). The trails would connect residential neighborhoods to commercial and open space areas. In addition, the on-site trails would be connected to regional trails and to the De Anza Trail planned by the National Park Service, should this proposed trail system pass through the site. Trail planning for the



Note: Networks within each neighborhood connect to schools and parks, as will be detailed in each Specific Plan.



entire site would be part of the Parks and Open Space Plan, which would be prepared prior to submittal of the first Development Permit.

#### *Private Recreation*

The project includes two proposed golf courses (Figure 3.4) to be constructed with the northern neighborhoods in which the golf courses are proposed. Additional private recreation would include a proposed 40-acre marina and 20 acres of associated water support facilities in the northwestern portion of the site.

#### **Biological Resources Management**

The project site consists of almost 4,800 acres of land, most of which would be converted from agriculture and/or other wildlife habitat to an urban environment. The change in land use would require provisions for mitigation of loss of habitat. The mitigation for habitat loss is provided in a Habitat Management Plan (HMP) prepared by the developer. The HMP addresses loss of foraging habitat for raptors, including Swainson's hawk, northern harrier, black-shouldered kite, and tricolored blackbird; conversion of agricultural lands to nonagricultural uses; and land disposal of treated wastewater.

Off-site mitigation land for the loss of Swainson's hawk foraging habitat is proposed for 1,500 acres of project land north of Byron Road and an additional 300 acres for loss of habitat on Fabian Tract, if that site were used for wastewater storage. The proposed project contains no provisions for Swainson's Hawk mitigation for lands south of Byron Road. About 90 percent of the off-site wildlife mitigation lands are proposed to be irrigated with treated wastewater; crops on about 35 percent of the agricultural mitigation lands would be alfalfa at all times in rotation with other crop types currently being grown on the project site. The remaining ten percent of the lands would be riparian forest and natural vegetation. The off-site mitigation areas would provide habitat for Swainson's hawks, black-shouldered kites, and northern harriers.

Enhancement of on-site habitat value is proposed following a detailed special-status species survey. Current proposals include preservation of existing mature trees for nesting and roosting and relocation of any on-site burrowing owl nests; tree surveys are also proposed prior to submittal of the first Development Permits for specific areas of development.

#### *Wetlands Management*

About 25 acres of wetlands are located on the project site. The project proposes to preserve and enhance these wetlands, where possible. If wetlands were affected by development, disturbed acreages should be replaced contiguous to existing wetlands. Each specific plan that includes wetlands would contain a Wetlands Management Plan.

## **PUBLIC WORKS INFRASTRUCTURE**

The infrastructure at the project site includes public utilities; local and regional transportation improvements; water supply, wastewater treatment, storm drainage facilities, and flood protection. Each of these subjects is discussed in detail below.

### **Energy and Communication**

Electricity and natural gas for the site would be provided by Pacific Gas and Electric Company. It is estimated that an additional substation would be required on-site after 25 percent of community buildout. The substation would require approximately five acres and would be located either near the intersection of the future Mascot Drive and Industrial Parkway or south of the proposed wastewater treatment plant (Figure 3.4). Utilities would either be located below ground or concealed so that they would have minimum visual impacts. The existing 60-kV electrical power transmission line north of Byron Road is proposed to be relocated above ground to Byron Road.

Energy conservation (up to 25 percent) would be promoted on the project site by encouraging solar heating and evaluation of landscape plans for appropriate use of vegetation for shading, reduced water demand, and wind buffering.

The project would include a state-of-the-art communication system, including fiber optic and other cables. One of the purposes of an advanced telecommunications transport system would be to encourage telecommuting.

### **Transportation and Circulation**

The proposed project would generate significant additional traffic on regional and local streets. To minimize these impacts, transportation improvements have been proposed along numerous roads and intersections (Table 3.7).

The improvements have been sized to achieve a Level of Service (LOS) C<sup>2</sup> during the morning and evening peak periods on County roads and LOS D on State roads, in accordance with the requirements of the San Joaquin County General Plan. The project also proposes LOS D at certain gateway locations during commute hours (such as along Patterson Pass, Grant Line, and Byron roads). This exception would require an amendment to the text of General Plan 2010.

A public transportation system is proposed for transit service within the community and to regional transit facilities (Figure 3.9). Development of the transit system would be phased in during development of the project site (Table 3.8) and would consist of buses and rail access. The land use plan for the project includes a multimodal transit site and envisions bus service connecting all neighborhoods to future passenger rail services in the Mococo and/or Altamont rail corridor.

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<sup>2</sup> A description of Levels of Service is included in Appendix D.

TABLE  
PROPOSED REGIONAL TRANSPORTATION IMPROVEMENTS

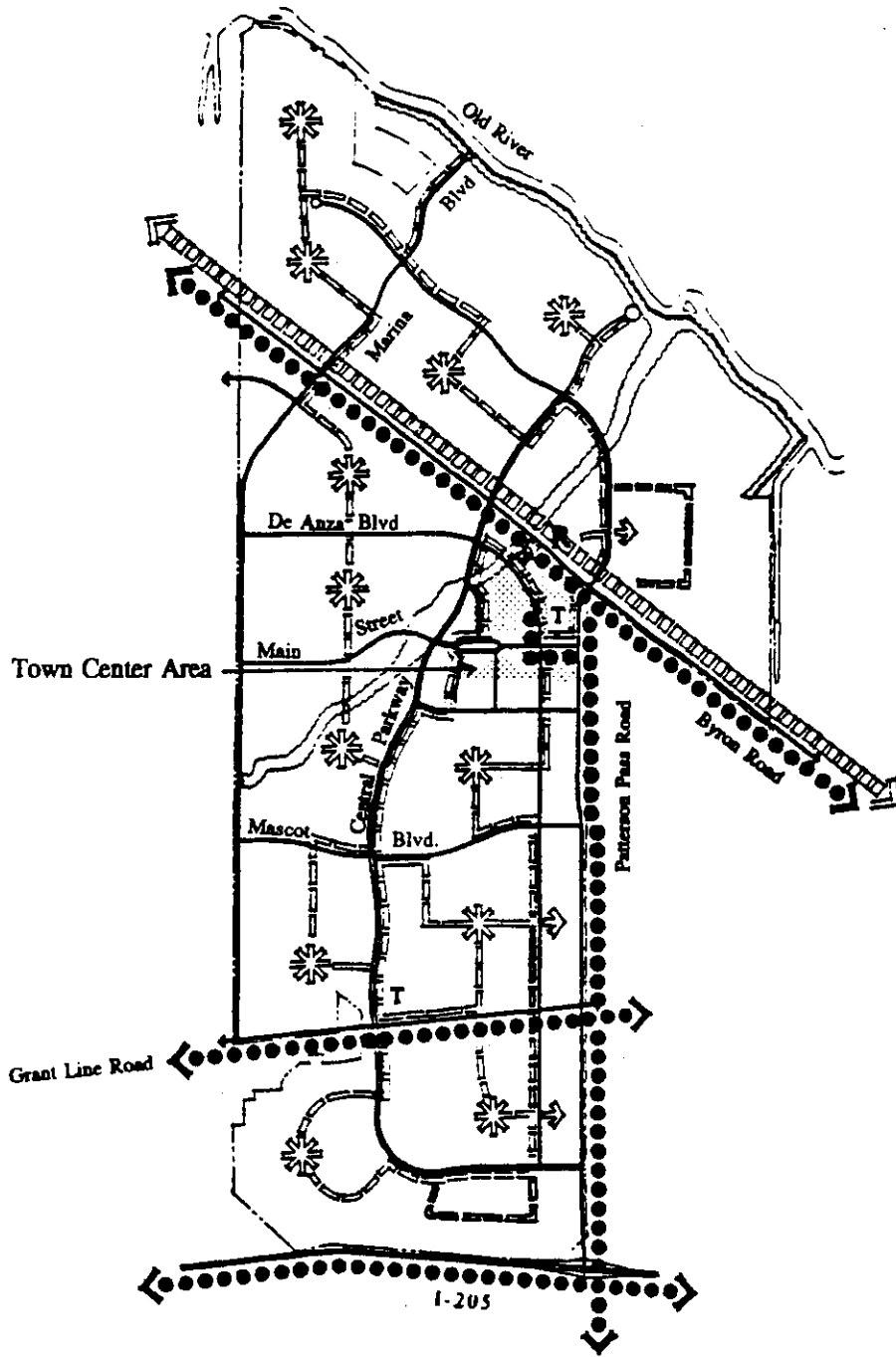
Location	Participation in an Improvement/Study	Time of Improvement/Study	Mountain House "Fair Share" Contributions <sup>1</sup>
I-205 and I-580 freeway corridor	Altamont Corridor Regional Transportation Plan with County, State, City of Tracy.	Depends on Caltrans initiation.	Fair share participation.
Project Study Report (PSR) for I-205/Patterson Pass Road interchange	Participation in PSR.	At occupancy of one housing unit.	Fair share participation.
Project Study Report for I-580/Grant Line Road intersection	Participation in PSR.	None specified.	Fair share participation.
I-205 between I-580 and Grant Line Road interchange	Construction of HOV lanes.	When and if HOV lanes are added.	Fair share participation.
I-580 between I-205 and Greenville Road (Livermore)	Construction of truck-climbing lanes.	At time of construction.	Fair share participation.
I-205/Patterson Pass Road interchange	Install traffic signals at ramp interchanges.	At occupancy of 1,600 housing units.	Fair share participation.
I-205/Patterson Pass Road interchange	Construction of a second two-lane bridge adjacent to existing bridge and two loop ramps for eastbound traffic, and ramp realignment.	At occupancy of 3,500 housing units.	Fair share participation.
I-205/Patterson Pass Road interchange	Add third two-lane bridge at the interchange overpass and interchange modifications.	At occupancy of 9,660 housing units.	Fair share participation.
I-205/Patterson Pass Road interchange	Add loop ramp for westbound on-ramp; widen on-ramps.	At occupancy of 12,880 housing units.	Fair share participation.
I-580/Grant Line Road interchange	Install traffic signals at ramp intersections.	At occupancy of 4,830 housing units.	Fair share participation.
I-580/West Grant Line Road interchange	Underpass widened to four lanes.	At occupancy of 8,050 housing units.	Fair share participation.
I-580/Grant Line Road interchange	Widen ramps to two lanes and signalize.	At occupancy of 8,050 housing units.	Fair share participation.
I-580/West Grant Line Road interchange	Realign ramps to ultimate configuration.	At occupancy of 12,880 housing units.	Fair share participation.

Table 3.7 Proposed Regional Transportation Improvements - *continued*

Location	Participation in an Improvement/Study	Time of Improvement/Study	Mountain House "Fair Share" Contributions <sup>1</sup>
Patterson Pass Road between I-205 and Byron Road	Widen to four lanes.	At occupancy of 4,100 housing units.	Fair share participation.
Patterson Pass Road between I-205 and Central Parkway	Widen to six lanes.	At occupancy of 9,660 housing units.	Fair share participation.
Patterson Pass Road between I-205 and Central Parkway	Widen to eight lanes.	At occupancy of 12,080 housing units.	Fair share participation.
Patterson Pass Road between I-205 and I-580	Widen to four lanes.	At occupancy of 12,080 housing units.	Fair share participation.
Patterson Pass Road from Main to Byron Road	Widen to six lanes.	At occupancy of 12,080 housing units.	Fair share participation.
Grant Line Road from Patterson Pass Road to Alameda County	Widen to four lanes.	At occupancy of 8,050 housing units.	Fair share participation.
Grant Line Road from Alameda County to I-580	Widen to four lanes.	At occupancy of 9,660 housing units.	Fair share participation.
Grant Line Road from Patterson Pass Road to Byron road	Widen to four lanes.	At occupancy of 11,260 housing units.	Fair share participation.
Byron Road from Patterson Pass to Marina Boulevard	Widen to four lanes.	At occupancy of 8,050 housing units.	Fair share participation.
Byron Road between Marina Boulevard and Alameda County	Widen to four lanes.	At occupancy of 12,080 housing units.	Fair share participation.
Byron Road between Patterson Pass and Grant Line roads	Widen to four lanes.	At occupancy of 9,660 housing units.	Fair share participation.
Byron Road between Patterson Pass and Wicklund roads	Widen to six lanes.	At occupancy of 12,080 housing units.	Fair share participation.

Source: The SWA Group, 1994a.

<sup>1</sup> According to the Draft Master Plan, the fair share contribution to transportation improvements would be determined in the Public Financing Plan and be based on estimates provided in the most recent EIR for the purpose of establishing and collecting fees only. The final determination of fair share for a given project would be made during the design stage of the individual improvements.



**Legend**



Neighborhood Transit Center/  
Park and Ride Lot



Transfer Center



Intermodal Station



Local Bus Transit Service



Commuter Rail Service



Regional Bus Transit Service



Project Site Boundary



TABLE 3.8

PROPOSED PUBLIC TRANSIT PLANS

Type of Transit Service	Time of Service	Funding of Service
Demand-response (dial-a-ride) service between the existing neighborhood, Tracy, and major employment destinations	Upon occupancy of the 25th housing unit.	Fair share contribution in cooperation with major employers and County transit agency. <sup>1</sup>
Demand-response service between existing neighborhood centers and existing employment and retail areas within the community.	Upon occupancy of 700 housing units.	Fair share contribution in cooperation with major employers and County transit agency.
Fixed route bus service between individual neighborhoods, <sup>2</sup> regional service transfer points, and Tracy, Stockton, LLL, and BART East Dublin/Pleasanton station (when open).	Prior to the occupancy of 4,100 housing units.	Fair share contribution in cooperation with major employers and County transit agency.
Expansion of local and regional transit to more frequent service.	Prior to the occupancy of 8,200 housing units.	Fair share contribution in cooperation with major employers and County transit agency.
Bus and/or shuttle service between the Town Center (or other central location) and the nearest rail station.	Upon implementation of passenger rail service on the UP or SP lines.	Fair share contribution.
Construction of a passenger platform and multi-modal station on the Mococo line near Byron Road.	Upon implementation of passenger rail service on the Mococo line.	Fair share contribution.
Construction of a new Altamont passenger platform near I-580.	At the time rail service is implemented and at least 4,100 housing units have been occupied.	Proportionate fair share based on project ridership.

Source: The SWA Group, 1994a.

- <sup>1</sup> Transit service would be free of charge for residents for the first three months of occupancy at the site.
- <sup>2</sup> Each specific plan would also provide for neighborhood transit centers near the neighborhood parks. A central transit facility would be located in the Town Center.

The timing of transportation improvements would be evaluated for need at various "trigger points," based on the completion of a specific portion of the proposed housing units. Once a trigger point is reached, a project trip analysis and financing plan would be prepared, based on travel demand estimates, using the San Joaquin County travel demand model.



### **Air Quality and Transportation Management**

To minimize air quality impacts to the San Joaquin Valley air basin, the project design incorporates several programs aimed primarily at reducing the dependency on cars, specifically single-occupancy vehicles, as well as a land use program goal of achieving a balance between on-site jobs and housing.

Transportation Demand Management (TDM) is one of the tools to be implemented at the site, with the objective of achieving a 1.5 Average Vehicle Ratio by 1999 for employers with more than 100 employees. The TDM plan would be submitted prior to the first Development Permit and provide programs in compliance with the requirements of the County's Trip Reduction Ordinance and Congestion Management Plan. The TDM Plan would include a volunteer rideshare matching program; a vanpool program; distribution of transit and rideshare information to all households; reduced fee transit passes for employees; special ridesharing and transit promotions; and construction of bicycle facilities. The effectiveness of the TDM program would be monitored on an annual basis.

Additional programs for the protection of air quality include encouragement of the use of clean fuel transit vehicles; provision for gas lines or electrical outlets in all back yards to encourage gas or electric barbecues; outlets in garages for recharging battery-driven cars; low nitrogen oxide emitting and/or high efficiency water heaters; installation of no more than one EPA-certified fireplace in homes; and electrical outlets on the outside of residences to promote the use of electrical lawn maintenance equipment.

### **Noise**

The proposed project includes exterior noise level performance standards for noise sensitive uses affected by transportation and non-transportation noise sources. These performance standards are hourly  $Leq^3$  of 55 dB during the daytime and an hourly 50 dB for the nighttime. These standards are different from the County standards (which are measured cumulatively for 0-, 5-, 15-, and 30-minute intervals) and would result in slightly higher permissible noise levels. It is proposed that site specific noise analyses be conducted at the time of Development Permit submittal if specific plans indicate that Master Plan noise studies need to be updated; noise studies would always be required for sensitive land use developments within 2,000 feet of I-205 and within 1,000 feet of rail lines.

### **Potable Water Systems**

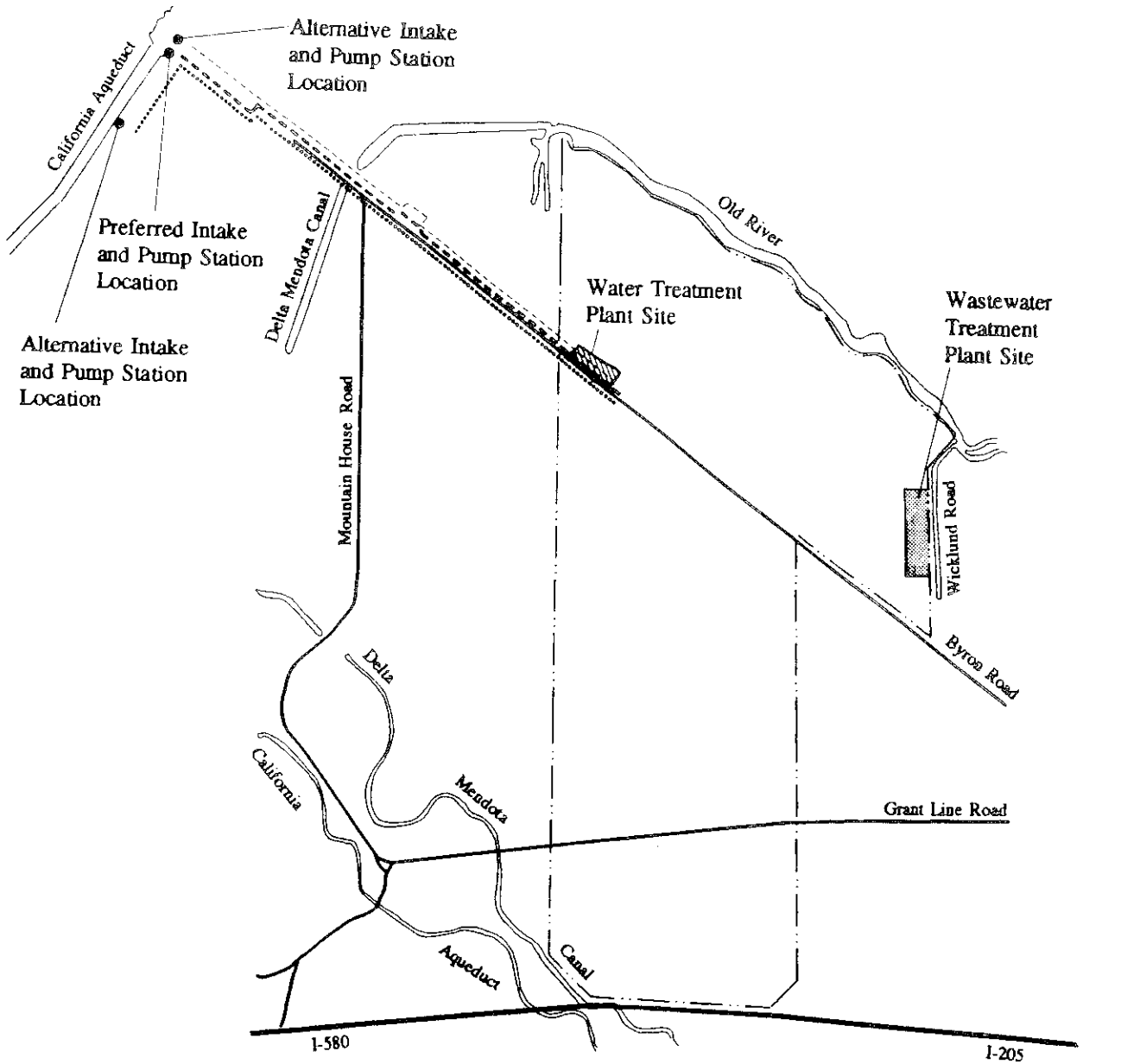
Water for the project would be supplied by Byron-Bethany Irrigation District (BBID) and possibly from existing riparian water rights from Old River. It is estimated that 9,849 acre-feet of water per year would be demanded by the project at full buildout, assuming water conservation measures, such as low-flow plumbing fixtures, water conserving appliances, and low-water using landscaping (xeriscape).

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

<sup>3</sup> Definitions of  $Leq$  and dB are included in Appendix E.

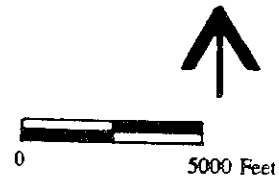
# WATER AND WASTEWATER TREATMENT FACILITIES

Figure 3.10



## Legend

- Preferred Raw Water Pipeline Route
- ..... Alternative Raw Water Pipeline Route
- Alternative Raw Water Pipeline Routes
-  Wastewater Treatment Plant Site
-  Water Treatment Plant Site
- Project Site Boundary



BASELINE

Source: The SWA Group, 1994a.

The raw water would be transported to the site through one of three alternative alignments for a raw water pipeline (Figure 3.10), originating at the California Aqueduct northwest of the project site. The pump station at the aqueduct would be either adjacent to the existing BBID pump station, north of the Byron Road Crossing, or south of the Byron Road Crossing. The raw water would be conveyed to a water treatment plant on-site. The plant would be located north of Byron Road adjacent to the wetlands restoration area (Figure 3.10). At the water treatment plant, the water would be treated by filtration and disinfectant (using ozone and chlorine).

About 24 million gallons of on-site water storage would be required for emergencies (storage for two times the average daily demand), shut-downs (30 percent of maximum daily demand), and fire protection (8,000 gallons per minute for two hours) at project buildout. A subsurface reservoir with a capacity of 10 million gallons would be located at the treatment plant site and, as the need arises during site development, additional storage facilities (providing an additional 14 million gallons of water storage) would be provided at various locations in the community. The exact locations of the reservoirs would be identified in applicable specific plans. The siting criteria for the storage facilities include: a preferable location in a non-residential neighborhood; visual screening to be compatible with surrounding land uses; and that the facility be painted in neutral colors and built subsurface.

Sludge would be generated from the water treatment plant. A sludge management program would be included in the Development Permit for the water treatment plant.

#### **Wastewater Treatment and Collection System**

At full buildout, it is estimated that the project would generate about 6.6 million gallons of wastewater per day. This would be reduced to about 5.68 million gallons per day (mgd) with conservation measures. The wastewater would be conveyed to a wastewater treatment plant, proposed on about 30 acres at the eastern site boundary (Figure 3.10). The treatment plant would have a buildout treatment capacity of 5.68 mgd, to be constructed in four increments of 1.42 mgd each. The wastewater from the initial 25 percent of project buildout (4,100 residential units and non-residential uses in Specific Plan 1) would receive secondary treatment in facultative lagoons and supplemental aeration. Subsequent wastewater treatment would be by conventional activated sludge treatment.

One of the objectives of the treatment plant operation would be to eliminate odors at the boundary line of the parcel on which the plant would be located. To achieve this objective, the plant would have a setback from nearby on- or off-site residences in accordance with County requirements for I-G zoning, and would conduct odor studies if odors were present at adjacent properties.

The treatment activities would result in the generation of up to 11,300 pounds of sludge per day at project buildout; the sludge would be stored on-site until storage capacity had been reached and off-site disposal would be required. Depending on the quality of the generated sludge, it would be landfilled off-site, used for dedicated land disposal on non-food agricultural crops, composting, or by land disposal for food or feed crops (depending on quality).

### 3.0 PROJECT DESCRIPTION

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Siting criteria for the proposed wastewater treatment plant include: a location in an industrial area; not to be visible from a major arterial street; the outside appearance of an industrial building; and the surroundings to be landscaped to minimize visual impacts.

#### **Wastewater Reclamation**

It is estimated that about 6,350 acre-feet of wastewater would be generated per year by the project at full buildout. The treated effluent would be 100 percent reclaimed. There are currently three alternative sites being considered by the applicant for wastewater reclamation (Figure 3.11); other sites may be evaluated and selected in the future:

- A primary permanent reclamation site at Fabian Tract, north of the project site. If this site were used, wastewater would be conveyed by a transmission line across Old River to Fabian Tract. The water would be used for irrigation of non-food crops. At project buildout, about 1,590 acres would be irrigated and 200 to 300 acres would contain storage ponds, built up to about 20 feet above the existing ground surfaces. A study area for these activities has been delineated, consisting of 4,550 acres; the exact locations of the irrigation and storage ponds within the study area are not defined.
- A secondary permanent reclamation site along the western site boundary in Alameda County. The wastewater would be conveyed by a transmission line along Byron Road to the site. The site would support non-food crops on about 1,360 acres; water storage ponds would occupy about 480 acres.
- An interim alternative site is located on the undeveloped portion of the project site between Byron Road and Old River. This site could be used during development of the first specific plan area. The water would be pumped to 120 acres of storage ponds and used to irrigate alfalfa and sudan grass on 290 acres. The site would be abandoned for wastewater disposal at the completion of Specific Plan I.

Prior to submittal of the first Tentative Map for Specific Plan I and subsequently prior to approval of any specific plan, lands for wastewater reclamation would be under the control of the applicant or the community.

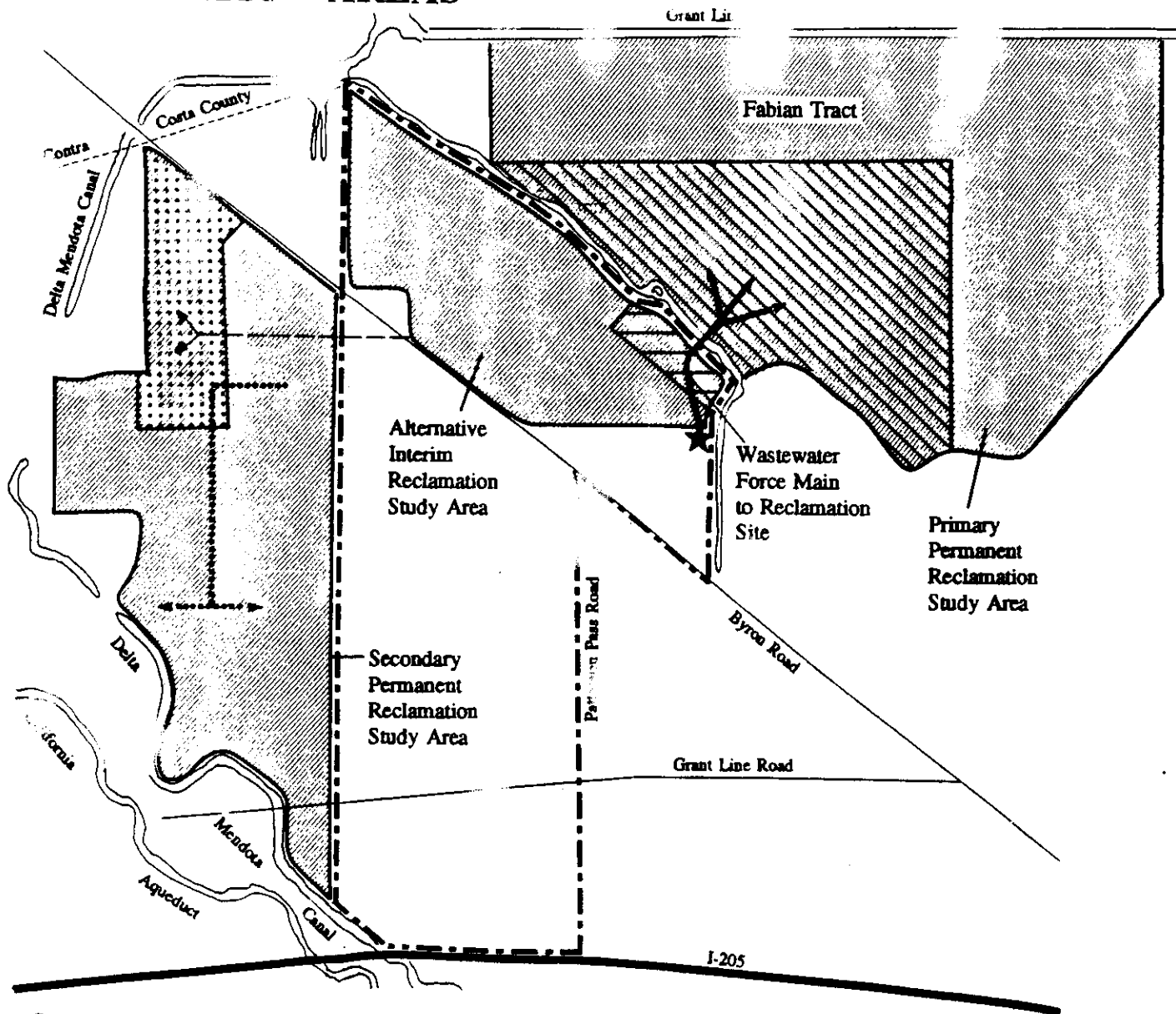
#### **Storm Drainage and Flood Protection**

Storm drainage from the project site would be conveyed in open channels or pipes, designed to convey the 100-year 24-hour storm event. Mountain House Creek channel would be the primary conveyor of runoff from the site. Structural bank stabilization measures may be implemented for portions of the creek channel. Stream bed alterations and riparian vegetation proposals would be prepared for each specific plan area. The terminal discharge point for all site runoff would be Old River; the terminal discharge would be controlled to pre-development rates..










The project site would include detention basins at various locations to store runoff. The design and performance criteria for the detention ponds would be provided in the first Development Permit in

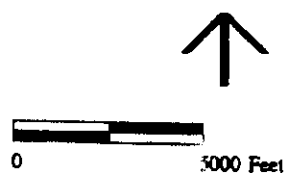
# ALTERNATIVE WASTEWATER RECLAMATION AREAS

Figure 3.11



## Legend

-  Effluent Storage Pond Study Area for Fabian Tract
-  Effluent Storage Pond Study Area in Alameda County
-  Study Area for Effluent Storage Pond North of Byron Road
-  Wastewater Treatment Plant Site
-  Study Areas for Effluent Disposal Areas
-  Effluent Force Main to Primary Reclamation Site
-  Effluent Force Main to Secondary Reclamation Site
-  Land Disposal Force Main
-  Project Site Boundary



Source: Century West Engineering, 1993.

### 3.0 PROJECT DESCRIPTION

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the first specific plan area. After that, performance criteria would be included in each subsequent specific plan.

To protect the storm water conveyance facilities from erosion, sedimentation, and disposal of improper wastes, the following Best Management Plans would be prepared for the first Development Permit for each specific plan:

- Materials Management Plan for each business with potential pollutants prior to building permit issuance
- Spill Prevention and Cleanup Plan
- Implementation of an Illegal Dumping Ordinance
- Implementation of an Illicit Connection Ordinance
- Preparation of a Street/Storm Sewer Maintenance Program

The project proposes to protect future residents from 100-year flooding through construction of a set of levees behind the existing Old River levee. The existing levees are in disrepair and do not provide adequate protection.

### **SCHEDULE**

The developer, Trimark Communities, estimates buildout of the project site to be between 20 and 40 years. Development of utilities, services, and infrastructure for the project is proposed to be dependent on occupancy/construction of residences at the site or other measurement of service levels. The proposed phasing of improvements and services is shown in Table 3.9.

### **REQUIRED PERMITS/PROGRAMS**

Implementation of the proposed project would require numerous permits from Federal, State, and local agencies (Table 3.10). The permits would need to be obtained at various stages of project implementation, depending on developments in specific areas of the project site.

Development of the project site would be subject to the submittal of various plans and programs. These plans and programs would be subject to environmental review by the County. The additional plans and programs are listed in Table 3.11.

## **SPECIFIC PLAN I**

Implementation of the proposed Master Plan would occur in increments in accordance with specific plans prepared for successive portions of the site. The first specific plan for the project, Specific Plan I, includes three distinct areas within the Master Plan area (Figure 3.12 and Table 3.12): Central Mountain House in the central portion of the site, Old River Industrial Park in the northeastern portion of the site, and Mountain House Business Park in the southeastern portion of the site. Old River Industrial Park and Mountain House Business Park have designated expansion areas identified

TABLE 3.9

PHASING OF MAJOR PUBLIC SERVICES AND INFRASTRUCTURE

Improvement		Timing
Fire Protection and Emergency Response	First permanent fire station	To be added when required to meet the maximum run time of three minutes.
Police Protection	First phase police substation	When population reaches 7,500 residents.
Medical Services	Medical facilities and ambulance service	First response by fire department with trained paramedics. Medical facilities and ambulance service to be provided by private vendors or existing County contracts.
Animal Control	Animal control facility	Provided on-site when demand requires.
Recreational Facilities	Neighborhood parks	After 50 percent of residential building permits have been issued, and completed by 80 percent of residential building permits issued for each neighborhood.
	Mountain House Creek Community Park	Construction as adjoining lands develop.
	Other community parks	First park to be started prior to the 2,000th housing unit.
	Old River Regional Park	To be started at 50 percent residential development.
Potable Water	Golf courses and marina	When specific plans for the areas are approved.
	Water treatment plant and storage	Initial 25 percent in or prior to first year of construction. Incrementally as demand arises.
Wastewater	Treatment plant	Initially sized for Specific Plan I; subsequent enlargement to be based on demand.
Wastewater Reuse	Irrigation land and storage ponds in conjunction with Swainson's hawk habitat mitigation	As the community develops.
Storm Drainage and Flood Protection	East side of upper Mountain House Creek flood improvements from Main Street to Alameda County line	Prior to construction of Neighborhoods F and E.
	West side upper Mountain House Creek (De Anza to Alameda)	Prior to structures constructed west of the Creek.
	Undercrossing of Byron Road and tracks and both sides of creek (De Anza to tracks)	Prior to Town Center and Neighborhood H north of Main Street.
	Realignment of Mountain House Creek and western portion of Mountain House Creek's flood plain to Dredger Cut	Prior to construction west of Creek, north of Byron Road, except Old River Industrial Park.
	Levees along Old River	Following flood control improvements on Mountain House and Dry creeks; then improvements from east to west.

Note: Transportation improvement phasing is identified in Table 3.7.

TABLE 3.10

**MOUNTAIN HOUSE COMMUNITY  
PERMIT REQUIREMENTS**

Agency	Approval	Timing
<b>FEDERAL AGENCIES</b>		
Federal Emergency Management Agency (FEMA)	Letter of map revision to remove flood hazard designation from property near Old River	Prior to recordation of any Final Maps for urban development adjacent to or within the historic flood hazard area
U.S. Army Corps of Engineers	Section 404 Permit (Clean Water Act) for discharge of dredged material into waters of the U.S.  Section 10 Permit (Rivers and Harbors Act) for work in navigable waterways  Nationwide Permit No. 12 for construction of raw water conveyance pipeline	Development Permit Condition of Approval  Prior to initiation of work  Use Permit for water treatment plant
U.S. Fish and Wildlife Service	Incidental take permit/habitat conservation plan regarding endangered or threatened species	Prior to any grading or building permit
Federal Highway Administration	Improvements to interstate highways, I-205 and I-580	As determined in the County Regional Transportation Plan and the Altamont Strategic Transportation Plan
U.S. Coast Guard	Aids to Navigation (signage) for marina on Old River	Prior to operation of marina
National Park Service	Cooperative Agreement for extension of the De Anza Trail across site	Specific alignment to be included in the Parks and Open Space Plan; construction to occur as defined in specific plans
<b>STATE AGENCIES</b>		
Caltrans, Districts 4 and 10	Project Study Reports  Encroachment Permits  Improvements to State highways and interchanges	As determined in Master Plan  Prior to construction or as Development Permit Condition of Approval  As determined in County Regional Transportation Plan and Altamont Strategic Plan
California Department of Real Estate	Public Reports	Prior to sale of lots



Table 3.10 Permit Requirements (continued)

Agency	Applicable	Timing
California Integrated Waste Management Board	Solid waste transfer facilities	
California State Reclamation Board	Encroachment permit for Old River levee work	Prior to construction of levee modifications
Regional Water Quality Control Board, Central Valley Region	National Pollutant Discharge Elimination System (NPDES) permit Remediation for pesticide and other underground contamination Discharge to Old River Water quality certification (Section 404 permit)	Development Permit Condition of Approval Development Permit Condition of Approval Development Permit Condition of Approval Development Permit Condition of Approval
Department of Health Services, Office of Drinking Water	Water system	Use Permit for wastewater treatment plant
Department of Fish & Game, Region 2	Compliance with Endangered Species Act Streambed Alteration of Old River and Mountain House Creek	Mitigation specified in each specific plan; Compliance prior to Development Permit Development Permit Condition of Approval
California State Lands Commission	Dredging within State-owned lands or beds of navigable rivers Leases to use State-owned lands for purposes other than dredging	Development Permit Condition of Approval for land adjacent to Old River Development Permit Condition of Approval for land adjacent to Old River
Department of Toxic Substances Control	Remediation of pesticide and other underground contamination	Prior to approval of Development Permit
Department of Water Resources	Raw water intake pump and transmission pipe	Use Permit for water treatment plant
California Public Utilities Commission/Southern Pacific Transportation Company	Rail crossings	Timing specified in each specific plan; Compliance prior to Final Map
<b>LOCAL AGENCIES AND SPECIAL DISTRICTS:</b>		
Tracy Rural Fire Protection District	Fire protection system	Prior to first Development Permit
Lammersville Elementary and Tracy Joint Union High School Districts	School Facilities Plans	Prior to first Development Permit
Byron-Bethany Irrigation District	Water service agreement	Master Plan

Table 3.10 Permit Requirements (continued)

Agency	Approval	Timing
San Joaquin County Local Agency Formation Commission (LAFCO)	Formation of CSD	Master Plan
San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD)	Authority to Construct	Prior to construction
San Joaquin County Mosquito Abatement District	Mosquito management plan	Prior to first Development Permit

Source: The SWA Group, 1994a.

- <sup>1</sup> Prior to approval of Master and Specific plans, as required.
- <sup>2</sup> Prior to approval of tentative maps, as required.

TABLE 3.11

## FUTURE PLANS AND PROGRAMS

Plan/Program	Time of Submittal
Special Purpose Plans	Prior to development of Freeway Service Area. Prior to development of Neighborhood Centers. Prior to development of Village Centers or Central Commercial Area.
Mountain House Design Manual	Prior to submittal of any Development Permits.
School Facilities Plan	Prior to submittal of the first Development Permit.
K-8 School Plans	Component of the Special Purpose Plan for each Neighborhood Center.
Community Energy Conservation Plan	Prior to submittal of the first Development Permit.
Emergency Preparedness Incident Action Plan	Prior to submittal of the first Development Permit.
Wildlife Management Program	Prior to submittal of the first Development Permit.
Hazardous Materials Management Plan	With submittal of Development Permits for water and wastewater plants.
Site assessments for hazardous materials	Prior to submittal of first Development Permit within any specific plan area.
Fuel pipeline mapping	Prior to submittal of first Development Permit within 500 feet of existing pipelines.
Parks and Open Space Plan	Prior to submittal of the first Development Permit.
Surveys for special-status species, raptor nests, and trees	Prior to submittal of the first Development Permit for applicable areas
Wetlands Management Plan	To be included in each specific plan that includes wetlands areas.
Community Energy Conservation Plan	Prior to submittal of the first Development Permit.
Transportation Demand Management Plan	Prior to submittal of the first Development Permit.
Noise Studies	Prior to submittal of Development Permits if specific plans indicate need for Master Plan noise analysis update, and for all sensitive land use developments within 2,000 feet of I-205 and within 1,000 feet of rail lines.
Sludge Disposal Program	To be submitted in conjunction with Development Permit for water treatment plant.
Hazardous Materials Management Plan	Prior to operation of wastewater treatment plant.
Best Management Practices (BMPs)	To be submitted with first Development Permit in each specific plan area.

**Notes:** Development Permits are either discretionary or ministerial; only discretionary permits are subject to CEQA review by the County. Ministerial permits include final subdivision maps; encroachment, grading, and building permits. Discretionary permits include tentative subdivision maps, use permits, and variances.



TABLE 3.12

## SPECIFIC PLAN I PROPOSED LAND USE PROGRAM

Land Use	Neighborhood	E		G		Other areas	
		Gross Acres	du	Gross Acres	du	Gross Acres	Gross Acres
<b>Residential<sup>1</sup></b>							
Very low density	(1.00 du/acre)						
Low density	(4.50 du/acre)	123.5	580	112.0	527	82.5	388
Medium density	(6.90 du/acre)	78.0	570	61.5	440	90.0	692
Medium-high density	(12.00 du/acre)	19.0	228			21.0	282
Senior housing (medium)	(12.00 du/acre)						
High density	(18.00 du/acre)			24.0	432		
Senior housing (high)	(18.00 du/acre)						
Town Center residential							
<b>Total Residential<sup>1</sup></b>		<b>220.5</b>	<b>1,378</b>	<b>197.5</b>	<b>1,399</b>	<b>193.5</b>	<b>1,362</b>
<b>Commercial</b>							
Neighborhood commercial		1.5		1.5		1.5	
Community commercial				19.0			
Freeway Service commercial							27.0
Office commercial							44.0
Town Center							
<b>Total Commercial</b>		<b>1.5</b>		<b>20.5</b>		<b>1.5</b>	<b>71.0</b>
<b>Industrial</b>							
Industrial park							110.0
Limited industrial							47.5
General industrial							56.5
<b>Total Industrial</b>							<b>214.0</b>
<b>Open Space</b>							
Neighborhood parks		5.0		5.0		5.0	
Community parks		32.0		11.0		11.0	
Wetlands		2.5				5.0	
Elements							8.0
<b>Total Open Space</b>		<b>39.5</b>		<b>16.0</b>		<b>21.0</b>	<b>8.0</b>
<b>Schools</b>							
K-8 (12 @ 16 acres each)		16.0		16.0		16.0	
High School (2 @ 40 acres each)							46.5
<b>Total Schools</b>		<b>16.0</b>		<b>16.0</b>		<b>16.0</b>	<b>46.5</b>
<b>Public Facilities</b>							
Wastewater/service area							50.0
Civic/Institutional		3.0		3.0			
Collector street R.O.W.							54.5
Arterial Street R.O.W.							138.5
<b>Total Public Facilities</b>		<b>3.0</b>		<b>3.0</b>			<b>243.0</b>
<b>TOTAL SPECIFIC PLAN I</b>		<b>280.5</b>	<b>1,378</b>	<b>253.0</b>	<b>1,399</b>	<b>132.0</b>	<b>1,362</b>
							<b>582.5</b>

Source: The SWA Group, 1994a

Notes: du = Dwelling units

R.O.W. = Right-of-way

For neighborhood locations, see Figure 3.7.

FAR refers to "floor area ratio." A FAR of 1.0 would mean that the building square footage was equal to the parcel square footage.

<sup>1</sup> The numbers of dwelling units per acre are averages. The ranges within each category are listed in Table 3.2.

### 3.0 PROJECT DESCRIPTION

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on Figure 3.12; development of those areas would be subject to separate environmental review and amendments to Specific Plan I.

A total of 7,306 jobs is estimated by the applicant to be generated with buildout of the residential component of Specific Plan I. Specific Plan I includes the construction of a water treatment plant in the northwestern portion of the site near Kelso Road and the first stage of a wastewater treatment plant.

#### **CENTRAL MOUNTAIN HOUSE**

The Central Mountain House portion of Specific Plan I consists of about 1,040 acres of land and encompasses three neighborhoods: E, F, and G. About 610 acres would be devoted to residential development resulting in construction of more than 4,000 residential units, 94 acres would be commercial, and the remaining 336 acres would be open space, industrial, schools, and institutional land uses (Figure 3.13 and Table 3.13).

#### **OLD RIVER INDUSTRIAL PARK**

This portion of Specific Plan I consists of about 164 acres of land. The land uses would include about 50 acres for the proposed wastewater treatment plant; the remaining acreage would be devoted to industrial uses (Figure 3.14 and Table 3.14). Expansion areas are located to the east and south; development in these areas would require an amendment to Specific Plan I.

#### **MOUNTAIN HOUSE BUSINESS PARK**

This portion of Specific Plan I encompasses about 143 acres in the southeast corner of the project site. The land uses would include an industrial business park, and gateway or freeway commercial development (Figure 3.15 and Table 3.14). An expansion area is located to the west; development in that area would require an amendment to Specific Plan I.

#### **TRANSPORTATION**

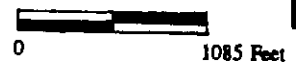
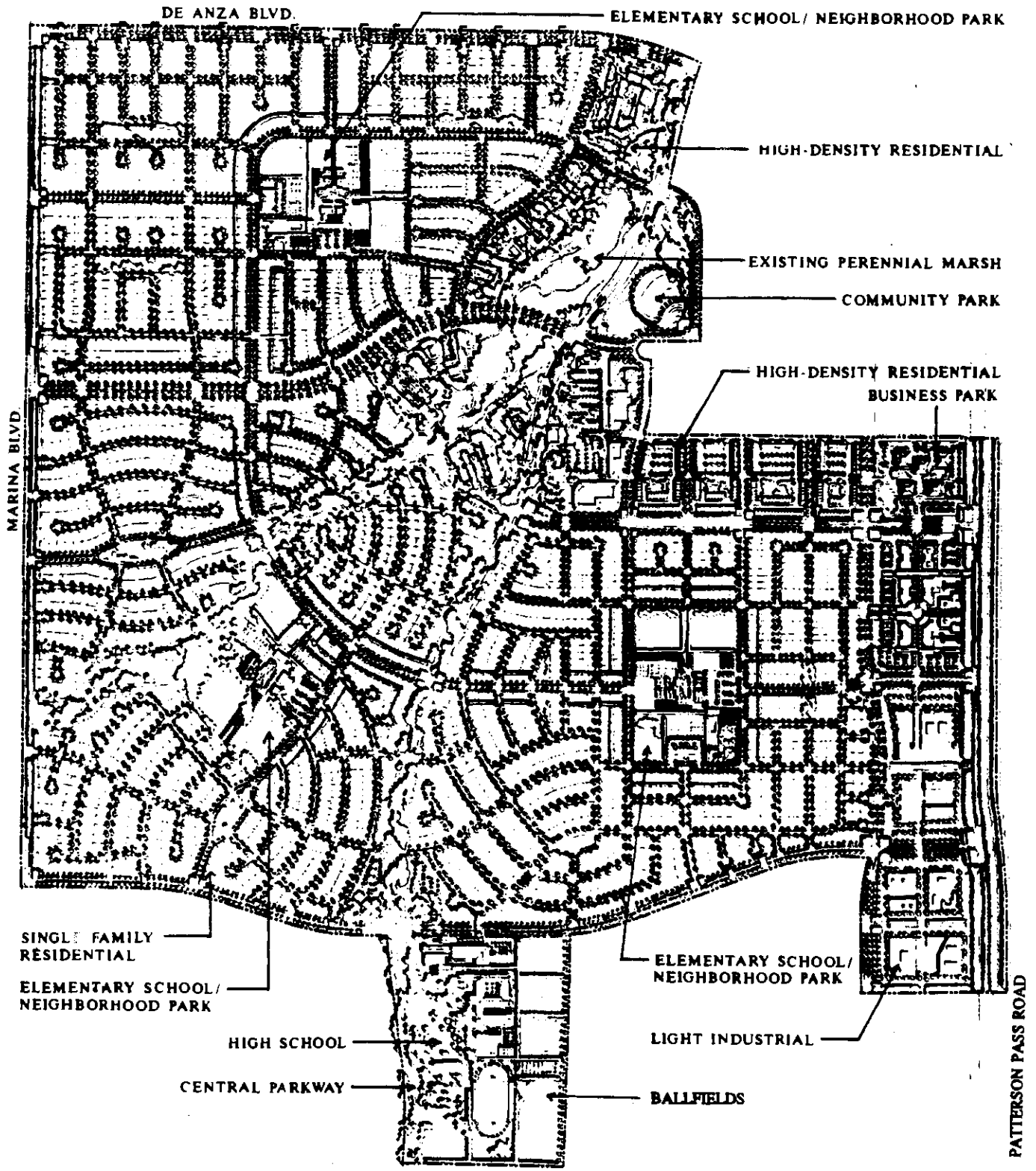
Improvements have been proposed to the regional transportation system to accommodate traffic generated by development of Specific Plan I. Implementation of these improvements would be triggered by specific percentage buildouts of Specific Plan I (Table 3.15).

#### **WATER SUPPLY**

It is estimated by the applicant that full buildout of Specific Plan I would result in a potable water demand of 2,500 acre-feet per year. The water would be provided by BBID. Areas currently not within BBID include about 18.5 acres of the water treatment plant site and Old River Industrial Park, located within Westside Irrigation District. Prior to being able to provide potable water to all of the Specific Plan I area, BBID would have to annex the Specific Plan areas outside of its jurisdiction.

# CENTRAL MOUNTAIN HOUSE CONCEPTUAL LAYOUT

Figure 3.13



Source: The SWA Group, 1994a.

TABLE 3.13

**LAND USE BY SUBAREA**  
**Central Mountain House**

	Acres	Dwelling Units
<b>Neighborhood E Residential</b>		
Residential - low (4.705 du/acre)	123.5	580
Residential - medium (7.31 du/acre)	78.0	570
Residential - medium high (12 du/acre)	19.0	228
Collector street R.O.W.	<u>9.5</u>	
	230.0	1,378
<b>Neighborhood F Residential</b>		
Residential - low (4.88 du/acre)	112.0	527
Residential - medium (6.72 du/acre)	61.5	440
Residential - high (18 du/acre)	24.0	432
Collector street R.O.W.	<u>11.5</u>	
	209.0	1,399
<b>Neighborhood G Residential</b>		
Residential - low (4.69 du/acre)	82.5	388
Residential - medium (7.69 du/acre)	90.0	692
Residential - medium high (13.45 du/acre)	21.0	282
Collector street R.O.W.	<u>14.0</u>	
	207.5	1,362
<b>Other</b>		
Neighborhood commercial	4.5	
Community commercial	19.0	
Office commercial	29.5	
Business park	37.5	
Neighborhood park	15.0	
Community park	54.0	
Wetland	7.5	
Easements	8.0	
K-8 schools	48.0	
High school	46.5	
Civic/Institutional	6.0	
Arterial street R.O.W.	<u>118.0</u>	
	393.5	
<b>TOTAL</b>	<b>1,040.0</b>	<b>4,139</b>

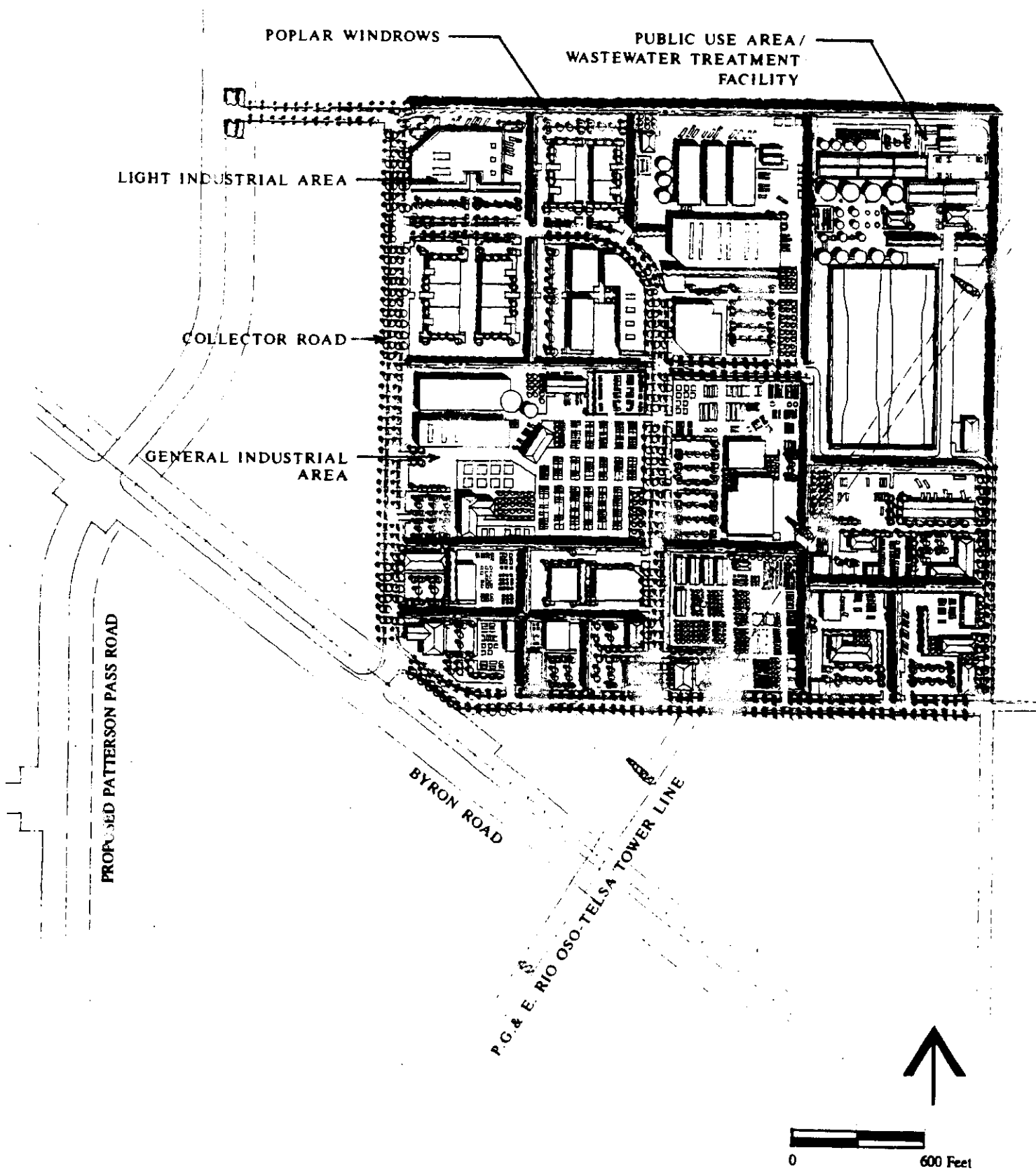
Source: The SWA Group, 1994a.

Notes: du = dwelling units  
R.O.W. = Right-of-way



# OLD RIVER INDUSTRIAL PARK, CONCEPTUAL LAYOUT

Figure 3.14



Source: The SWA Group, 1994a.  
R10114-BO.03 6/6/94

TABLE 3.14  
LAND USE BY SUBAREA

Land Use	Old River Industrial Park Net Parcel Size (acres)	Mountain House Business Park Net Parcel Size (acres)
Freeway Service (F-S)		27.0
Office Commercial (C-O)		14.5
Limited Industrial (I-L)	47.5	
General Industrial (I-G)	56.5	
Business Park (I-P)		72.5
Wastewater Treatment Site/Treatment Site/ Corporation and Support Yards (P-F)	50.0	
Arterial Street R.O.W.		20.5
Collector Street R.O.W.	10.5	9.0
<b>TOTAL</b>	<b>164.5</b>	<b>143.5</b>

Source: The SWA Group, 1994a.

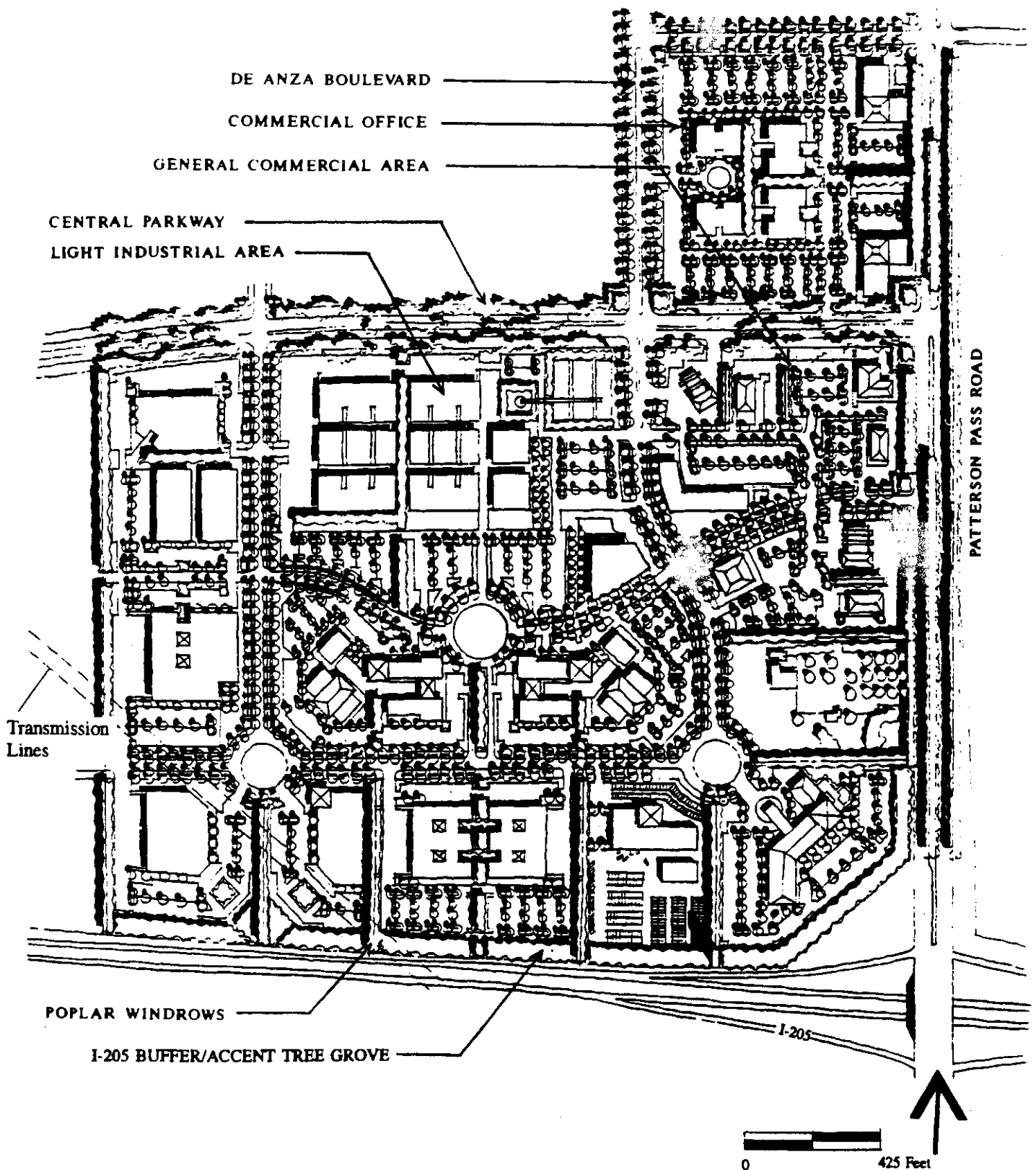
TABLE 3.15  
REGIONAL TRANSPORTATION IMPROVEMENTS

Location	Improvement	Timing
I-205/Patterson Pass Road Interchange	Interim traffic signals at both ramp intersections	At 1,600 residential units
I-205/Patterson Pass Road Interchange	<ul style="list-style-type: none"> <li>• Reconfiguration of westbound ramps</li> <li>• Overpass widened to four lanes</li> <li>• New eastbound loop on-ramp in southwest quadrant</li> <li>• Realignment of east- and westbound on-ramps</li> <li>• Signalization of realigned ramps</li> </ul>	At 3,500 residential units
Patterson Pass Road between I-205 and Central Parkway	Widening to four lanes	The first of either: 3,200 residential units or beginning of construction of Mountain House Business Park
Patterson Pass Road between Central Parkway and Mountain House Boulevard	Widening to four lanes	At 3,200 residential units
Patterson Pass Road between Mountain House Boulevard and Byron Road	Widening to four lanes	At 4,100 residential units

Source: The SWA Group, 1994a.

# MOUNTAIN HOUSE BUSINESS PARK, CONCEPTUAL LAYOUT

Figure 3.15



Source: The SWA Group, 1994.

### 3.0 PROJECT DESCRIPTION

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The water would be supplied from a raw water intake from the California Aqueduct and transmitted to the site along one of three alternative pipeline routes (Figure 3.10). The water would be routed to the water treatment plant and distributed to the areas of Specific Plan I.

Agricultural activities within the project site would continue to receive water from BBID through existing channels traversing the site, except from those portions of the 70-foot and 155-foot elevation irrigation canals that are within the Specific Plan I area (Figure 4.4-1); the 70- and 155-foot canals would be removed as development occurred within Specific Plan I areas.

#### **WASTEWATER RECLAMATION**

Treated wastewater would be used for irrigation either on the interim reuse site north of Byron Road or one of the alternative permanent sites at Fabian Tract or in Alameda County, as described above under the Draft Master Plan (Figure 3.11). At full buildout of Specific Plan I, it is estimated by the applicant that irrigation would occur on about 290 acres of land, and that up to 120 acres of storage ponds would be required.

#### **SCHEDULE**

The schedule for completion of development within the Specific Plan I area would depend on market forces. The applicant has estimated the completion of development to be within 7 to 14 years. Assuming an average absorption rate of 600 dwellings per year, full buildout of the residential component would be seven years. Neighborhood F is expected to be constructed first, followed by E and G. Infrastructure would be built at the time of construction of each neighborhood.

In Old River Industrial Park, the wastewater treatment plant would be constructed prior to the first neighborhood. Some portions of the infrastructure for the Old River Industrial Park would be expected to be constructed during the seven-year Specific Plan I buildout period.

Infrastructure at Mountain House Business Park would be constructed at the time of development. There is no schedule for development.

## 4.1 LAND USE AND AGRICULTURAL ISSUES

### SETTING

#### Existing Agricultural Land Uses

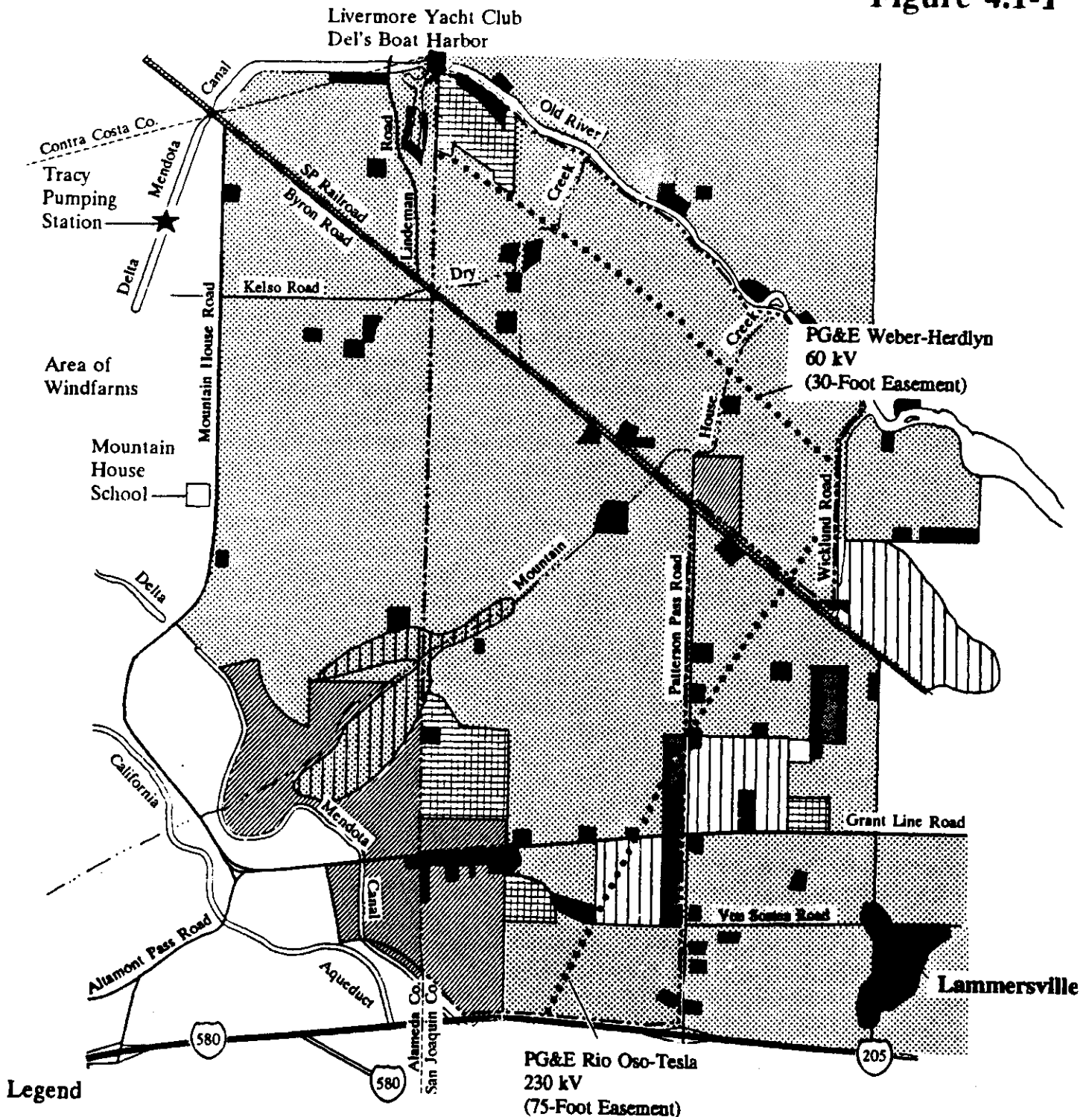
The project site consists primarily of agricultural lands, extending from Interstate 205 (I-205) northward to the Southern Pacific (SP) railroad tracks along Byron Road (Figure 4.1-1) and continuing north to the levees bordering Old River. In the past years, 3,500 to 3,700 acres (73 to 79 percent) have been planted in alfalfa and irrigated row crops (Figure 4.1-1 and Table 4.1-1) (The McCarty Company, 1990 and 1992). Crops currently grown on the project site include alfalfa for hay, irrigated crops (e.g., corn, sugar beets, dry edible beans), and grains (e.g., wheat, oats, and barley). The site also contains a relatively small acreage of irrigated and non-irrigated pasture. In 1989, irrigated crops (excluding alfalfa) represented 58 percent of the acreage under cultivation, and alfalfa represented 22 percent (Table 4.1-1). In 1992, the amount of irrigated acreage shifted to 44 percent of the site in alfalfa and 33 percent in other irrigated crops (The McCarty Company, 1990 and 1992).

Non-farm uses include two dairies located within the project boundaries. One dairy is on a 21-acre parcel along Patterson Pass Road north of Grant Line Road, and a second dairy is on an adjacent 140-acre parcel south of Grant Line Road (Figure 4.1-1). The remaining non-farm acreage on the site includes scattered rural residences (including the Grant Line Village homes south of Grant Line Road, and houses along Old River), roadways, the SP railroad, and PG&E transmission lines rights-of-way.







The majority (3,601 acres or approximately 75 percent) of the project site has been designated Prime Farmland on the draft San Joaquin County Important Farmland Map. Prime Farmland is land that has the best combination of physical and chemical characteristics for the production of crops. This category of farmland has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, according to current farming methods. Prime Farmland must have been used for the production of irrigated crops within the last three years. To qualify as Prime Farmland, the farmland must meet several criteria, including but not limited to: a dependable water supply; ability to hold a specific soil temperature range; retention of an acid-alkali balance; availability of an adequate water table; allowance of a minimum rooting depth; a condition of infrequent flooding; and specific permeability (California Department of Conservation, 1984).

# EXISTING LAND USES

Figure 4.1-1



## Legend

- |   |                                |   |                   |   |  |
|---|--------------------------------|---|-------------------|---|--|
|  | Alfalfa and Irrigated Farmland |  | Irrigated Pasture |  | Very Low Density Residential Development |
|  | Dryland Farmland               |  | Dairy             |  | Project Site Boundary                    |

Note: Crop patterns are from 1989 for off-site areas and 1993 for project site.



**BASELINE**

## Roads

On-site roads include Grant Line, Byron, Kelso, and Wicklund roads (Figure 4.1-1). Roads and freeways that adjoin the project site include Patterson Pass Road and I-205. The interchange of Patterson Pass Road and I-205 is located at the southeast corner of the project site. The SP railroad traverses the site in a northwest to southeast direction, parallel to Byron Road (Figure 4.1-1). The tracks are located on an embankment that is approximately six feet above the level of the surrounding land.

TABLE 4.1-1

### MOUNTAIN HOUSE ON-SITE CROPS, 1989 AND 1992

Type of Crop Production	1989 Cropping Pattern		1992 Cropping Pattern	
	(acres)	(%)	(acres)	(%)
Alfalfa	1,040	22	2,027	44
Other irrigated crops <sup>1</sup>	2,700	58	1,521	33
Irrigated pasture	160	3	254	5
Non-irrigated pasture and grains	370	8	488	10
Other <sup>2</sup>	397	9	371	8
TOTAL	4,667 <sup>3</sup>	100	4,661 <sup>3</sup>	100

Sources: The SWA Group. 1994a: BASELINE. 1992a.

<sup>1</sup> Beans, sugar beets, yellow corn, grains (safflower, silage, barley, oats, and wheat).

<sup>2</sup> Dairy and non-farm uses.

<sup>3</sup> Totals do not include ranchette development, roadways, railroads, and utility easements.

## Transmission Lines

The 230-kilovolt (kV) Rio Oso-Tesla electrical transmission line crosses the southwestern and northeastern portions of the project site. This transmission line is supported by towers placed approximately one-quarter mile apart. The 60-kV Weber-Herdlyn electrical transmission line crosses the northern portion of the project site parallel to Old River (Figure 4.1-1).

## Waterways

Old River, a tributary to the San Joaquin River, borders the project site on the north (Figure 4.1-1). This section of Old River is often used by recreational boaters, including water skiers. The banks of the River have been reinforced over the years and are approximately 10 feet above the surrounding landscape. Riparian areas extend south from the River bank for approximately 50 to 100 feet along the site's entire river frontage.

Dry Creek and Mountain House Creek traverse the site, flowing from southwest to northeast into Old River (Figure 4.1-1). Portions of the creek channels have been reconstructed into farm drainage ditches. Riparian areas are located along sections of the creek corridors. U.S. Army Corps of Engineers jurisdictional wetlands are located along Dry Creek (just north of the railroad embankment) and Mountain House Creek where they flow through the center portion of the project site, and in three locations in the site's southwestern quarter. Riparian areas, wetlands, and sensitive species are discussed further in Section 4.11, Biological Resources.

4.1 LAND USE AND AGRICULTURAL ISSUES

**Existing Agricultural Practices**

The agricultural operations of the site include chemical spraying for pest control and fertilization. The types of chemicals and chemical applications are directly related to the type of crop. The chemical properties and the method of application vary, as some crops are treated with aerial application either by helicopter or fixed-wing aircraft, while others are treated with a ground application. In the vicinity of the Mountain House site, both aerial and ground application are used. Aerial application is primarily by helicopter or small plane early in the morning (Hudson, 1993). Based on crop information for the project site and discussions with the County Agricultural Commissioners Office (Hudson, 1993), the chemicals used on the project site and on lands within a one-mile boundary of the project site are those identified in Table 4.1-2.

TABLE 4.1-2

**CHEMICAL APPLICATIONS ON THE PROJECT SITE AND ADJOINING LANDS**

Chemicals (Brand Names)	Restricted (R)/Non- restricted (N)	Method of Application	Crops
Pen Cap (P) <sup>1</sup>	R	Aerial	Alfalfa
Lasso (H) <sup>2</sup>	N	Directly into soil	Beans, corn
Treflan (H) <sup>1,3</sup>	N	Directly into soil	Beans, alfalfa
Velpar (H) <sup>1,3</sup>	N	Directly into soil	Sugar beets
Lorsban (P) <sup>1</sup>	N	Aerial	Alfalfa
Comite (P) <sup>2</sup>	N	Aerial/ground	Corn
MCPA (H) <sup>1</sup>	R	Aerial	Grain
Banvel (H) <sup>2</sup>	R	Aerial	Grain
Sulfur dust (P) <sup>1</sup>	N	Aerial/ground	Sugar beets
Disyston (P) <sup>4</sup>	R	Aerial/ground	Alfalfa, beans, grain
Orthene (P) <sup>4</sup>	N	Aerial/ground	Beans
2,4-D <sup>1</sup>		Aerial/ground	Wheat, oats
Anthraquinone (BR) <sup>1</sup>		Aerial/ground	Corn
Toxaphene <sup>2</sup>		Aerial/ground	Wheat
Syxtox (H) <sup>4</sup>		Aerial/ground	Grains

Sources: BASELINE, 1992b; Hudson, 1993.

**Notes:** (P) = Pesticide  
 (H) = Herbicide  
 (BR) = Bird Repellent (seeds)  
 Restricted chemicals require a permit from the County prior to use; non-restricted chemicals do not require a permit for use.

- <sup>1</sup> Used in the past and currently.
- <sup>2</sup> Used in the past; not used currently.
- <sup>3</sup> Used in early spring.
- <sup>4</sup> Used in the past; probably not used currently.

Agricultural chemicals are classified as "restricted" or "non-restricted." Four of the chemicals used at the project site (Table 4.1-2) are classified as restricted and thus require a permit from the County Agricultural Commissioners Office. When issuing the permit, the County Agricultural Commissioners office considers several factors, including proximity of residences, adjoining land uses, and wind direction.

Chemicals classified as non-restricted are not considered to pose a health hazard (Jensen, 1991). However, some of the chemicals contained in the non-restricted pesticides/herbicides applications will



cause a rash and irritation to humans and may create a nuisance for adjoining residents, when applied. An example is sulphur dust, a chemical used on sugar beets. When this chemical is applied near residences, the San Joaquin County Agricultural Commissioners Office often receives complaints because of the chemical's odor and fallout from aerial application. Residue of the chemical, particularly when it falls on the water surface of swimming pools, heightens residents' perception of the use of the chemical and potential hazards associated with it (Jensen, 1991). Uninformed residents often equate odor and the fallout with a health hazard. Odor associated with chemical application is one of the major complaints received at the County Agricultural Commissioners office (Jensen, 1991). Further discussion of the chemical properties and rate of degradation of the agricultural chemicals used on or near the project site is included in Public Health and Safety, Section 4.10.

The San Joaquin County Agricultural Commissioner's Office recommends a general setback of a minimum of 100 feet for urban uses adjacent to existing agricultural operations such as alfalfa production which rely on aerial spraying of chemicals. The Agricultural Commissioner recommends that the minimum setback for spraying be increased whenever possible to 200 to 400 feet to increase the safety factor for nearby residents (Hudson, 1993). Airplane noise from aerial spraying is also a significant concern for nearby residents. Aerial spraying is not allowed unless the prevailing winds drop below a set velocity. In the Mountain House area, the winds are often still only in the early mornings, so spraying occurs very early in the day when residential complaints about noise are most prevalent (Hudson, 1993).

Frequency of pesticide spraying varies from year to year, depending on whether there are problems with pests such as weevils. The predominant crop in the area, alfalfa, is usually sprayed two to four times each growing season, depending on the pest situation for that season. Other crops in the area such as oats, wheat, some types of beans, and pasture, are not usually sprayed (Barnes, 1994).

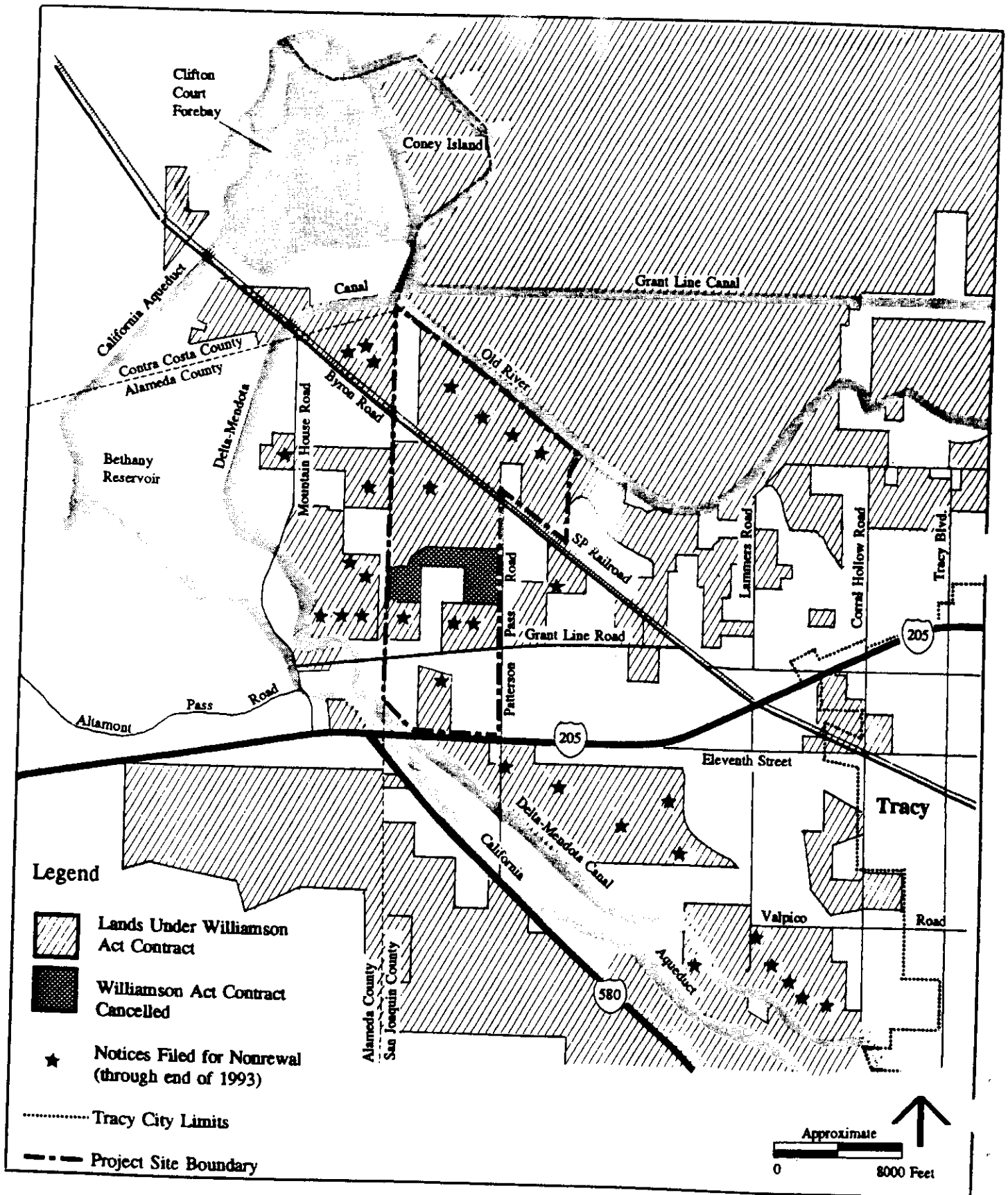
#### **Williamson Act Lands**

Numerous parcels within the project site, in western San Joaquin County, and in adjacent Alameda County are currently under Williamson Act contracts (Figures 4.1-2 and 4.1-3). The Williamson Act allows landowners to enter into an agreement with the County whereby the property owner agrees to maintain the land in agriculture or open space for a period of at least ten years. In exchange, the landowners are allowed a reduction in property taxes for the subject parcel. The Williamson Act contract allows a property owner to apply for cancellation of the contract at any time. Approval of the cancellation request is made by the County Board of Supervisors, based on certain findings. Under the cancellation process, the property owner is subject to penalties for canceling the contract prematurely.

The Williamson Act also allows a property owner to file a Notice of Nonrenewal. This Notice alerts the County that the property owner will take the lands out of contract ten years from the date of notice. Property taxes are reassessed at a new rate immediately upon the filing of nonrenewal. Under this process, the property owner does not pay penalties. The amount of assessment is calculated at a rate that will reach market value at the end of the contract period.

# WILLIAMSON ACT CONTRACTS IN THE PROJECT VICINITY

Figure 4.1-2

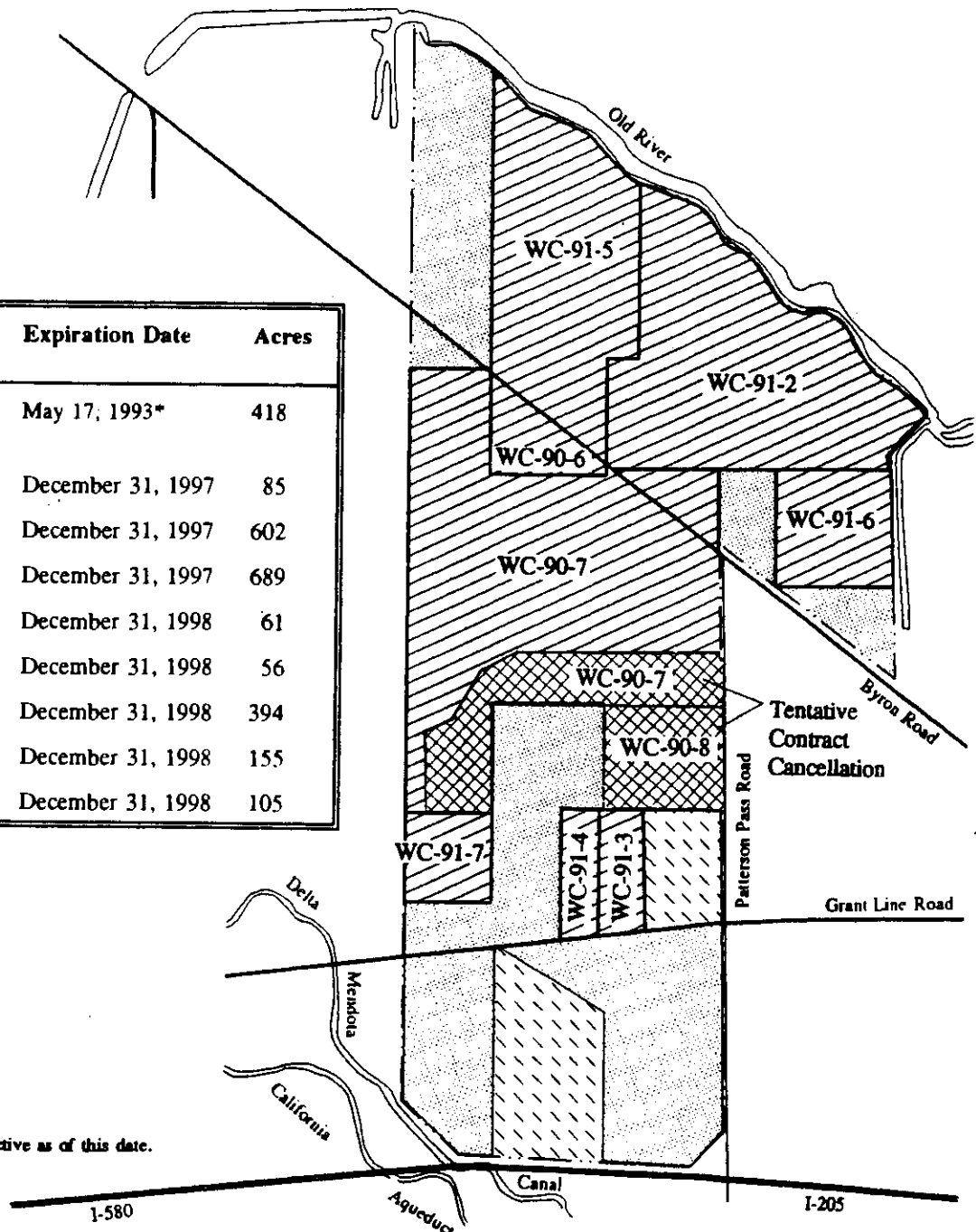


Source: San Joaquin County Community Development Department; Alameda County Assessor's Office.  
R10114-BO.03 6/6/94

# STATUS OF WILLIAMSON ACT CONTRACTS






Figure 4.1-3

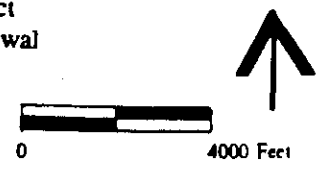
Williamson Act Contract Number	Expiration Date	Acres
WC-90-8/ WC-90-7 (portion)	May 17, 1993*	418
WC-90-6	December 31, 1997	85
WC-90-7 (portion)	December 31, 1997	602
WC-91-2	December 31, 1997	689
WC-91-3	December 31, 1998	61
WC-91-4	December 31, 1998	56
WC-91-5	December 31, 1998	394
WC-91-6	December 31, 1998	155
WC-91-7	December 31, 1998	105



Note: \*Tentative cancellation; effective as of this date.

### Legend

-  Tentative Contract Cancellation
-  Areas Subject to Williamson Act Notices of Nonrenewal, to Expire in December 1997 or 1998
-  Area Not Under Williamson Act Contract
-  Williamson Act Contract Not Subject to Nonrenewal
-  Project Site Boundary



**BASELINE**

#### 4.1 LAND USE AND AGRICULTURAL ISSUES

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The San Joaquin County Board of Supervisors approved the Mountain House New Town General Plan Amendment on 25 February 1993. The application from the developer also included a request to cancel a total of 860 acres in Williamson Act contracts to facilitate development of the first phase of the project.

The Board of Supervisors approved cancellation of 418 of the 860 acres of contracted land (portions of two separate contracts) (Figure 4.1-3), which would be sufficient to effectuate development of the proposed Specific Plan I area. The tentative Williamson Act contract cancellation becomes effective after several conditions have been met by the landowners. The conditions include payment of a contract cancellation penalty to the State of California.

##### **Surrounding Land Uses**

The site is located in the center of a regional agricultural area. Scattered residential uses and the canals of California's aqueduct system are the main non-agricultural uses adjoining the project site. Contra Costa County and Alameda County adjoin the site at its northwestern and western boundaries, respectively.

Northeast of the site and north of the Old River, lands are in agricultural use (Figure 4.1-1). The Livermore Yacht Club and Del's Boat Harbor are located immediately northwest of the site in Alameda County (Figure 4.1-1). The Livermore Yacht Club is a collection of houseboats and small commercial establishments and is located along a slough of the Sacramento-San Joaquin Delta. Del's Boat Harbor provides boat launching and guest docking facilities, a snack bar, and fishing boat rentals. To the north of the marina facilities, in Contra Costa County, lands are in agricultural grain crop production.

The East Contra Costa County Airport, currently under construction, is located approximately four miles northwest of the project site. The County operated airport is expected to serve general aviation aircraft, but will ultimately serve transport and business jets (Wight, 1993). Paving of two new runways has begun as of May 1994.

Immediately west of the project site, lands are in agricultural production similar to that of the project site. Mountain House Road, located approximately one mile west of the project site boundary, serves as an approximate boundary between the level valley land to the east and the rising foothills of the Diablo Range to the west. Mountain House School is located on Mountain House Road west of the site (Figure 4.1-1).

The low foothills west of the site are used for grazing and are also used for wind farms. The electrical-power generating windmills, averaging 50 feet in height, are arranged in rows to catch the prevailing winds that flow through the Altamont Pass area. The foothills also provide the relative elevation needed for the aqueduct systems which carry water to Southern California. Tracy Pumping Station, the intake for the Delta-Mendota Canal, is located west of the site on Kelso Road (Figure 4.1-1). The Delta-Mendota Canal, a part of the Federal Water Project, conveys water southward

through the foothills and passes through the site at the southwestern corner. The canal is currently fenced to keep out cattle. The California Aqueduct, which also flows near the project site, starts downstream of the Clifton Court Forebay and parallels the Delta-Mendota Canal (Figure 4.1-1). Both canals flow to the south and cross under I-205 near the southwestern corner of the project site. The canals are each approximately 100 feet wide and are open, concrete-lined channels. The canals are used for bank fishing by many people.

Level agricultural land with scattered residences is located east of the project site. This area includes: alfalfa and irrigated farmland; irrigated pasture; a dairy; and native pasture (Figure 4.1-1). Lammersville, an unincorporated community, is located approximately one-half mile east of the project site. Lammersville includes approximately 210 residences on average 1.5-acre lots and the Lammersville Elementary School. The western edge of the City of Tracy is approximately 3.3 miles to the southeast of the project site.

South of the project site, approximately 625 acres of land have been designated for Limited Industrial development (Figure 4.1-1). The industrial area, known as the Patterson Pass Business Park, is located south of the I-205 freeway between the Delta-Mendota Canal and California Aqueduct, and south of Schulte Road. Industrial development south of Schulte Road includes the large Safeway regional warehouse complex and other smaller warehouse buildings. The industrial land west of Patterson Pass Road and nearest to the project site has not been developed. Other lands south of I-205 are in agricultural use, planted in alfalfa and pasture land.

## **IMPACTS AND MITIGATION MEASURES**

For the purposes of this DEIR, a significant land use or agricultural impact would include the following:

- the premature loss of prime agricultural land;
- conflicts between urban land uses planned on-site, and on-site or adjacent agricultural operations and rural uses;
- conflicts between on-site land uses and hazards such as canals, dairies, transmission lines, and nearby airports; and
- conflicts between planned on-site urban land uses, such as industry and residences.

## **MASTER PLAN**

The Draft Master Plan proposes to develop the site with residential, commercial, and industrial land uses. The development would occur incrementally over a period of 20 to 25 years. The proposed development differs slightly from the land use patterns and acreages approved in the February 1993 General Plan Amendment, as land uses have been "fine tuned." However, the total number of jobs and housing units proposed is substantially the same as allowed in the previously adopted General

Plan Amendment. A description of the slight changes in land uses from the previous General Plan Amendment is included in Chapter 3, Project Description.

**Impact M4.1-1**

**Development of the proposed project would result in the loss of approximately 3,600 acres of Prime Farmland.**

As part of the approval of the Mountain House General Plan Amendment in February 1993, the Board of Supervisors adopted "Statements of Overriding Consideration," as required by the California Environmental Quality Act, to justify the loss of 3,600 acres of prime agricultural lands and the cancellation of 418 acres under Williamson Act contracts. No additional applications to cancel Williamson Act contracts have been submitted by the applicant at this time.

Part of the Mitigation Monitoring Program from the FSEIR included a recommendation that an in-lieu agricultural mitigation fee be established to mitigate, on a per-acre basis, for the loss of prime farmland converted to urban uses. The Draft Master Plan contains no policies or programs requiring a per-acre agricultural mitigation fee, and no such mitigation fee program has been adopted by the County in the County Development Title.

**Mitigation Measure M4.1-1**

*The following should be added as an Implementation in Chapter Three of the Draft Master Plan:*

*"A If a Countywide agricultural mitigation fee were established, an agricultural mitigation fee, based on each acre converted to an urban use, shall be paid by the developer to the County at the time of the approval of each subdivision map or other discretionary permit, if a Countywide agricultural mitigation fee has been established by the County. ~~The Development Agreement signed between the master developer and the County should state that such a mitigation fee may be established by the County in the future and apply to later phases of the project.~~*

*"Any off-site mitigation resulting in the set-aside of lands by the applicant shall be considered when assessing the fee. Further, consideration shall be made for dual use of mitigation lands, as appropriate. For example, land set aside for Swainson's Hawk mitigation that is also prime agricultural land could be credited as mitigating both impacts."*

**Impact M4.1-2**

**Conflicts between urban/rural land uses would occur, particularly where existing agricultural operations abut planned residential development.**

The project has the potential to create land use conflicts with existing agricultural operations (e.g., complaints by residents regarding chemical drift from aerial applications, chemical odors, dust, and equipment noise). Lands immediately west and upwind of the site in Alameda County are currently

in agricultural use, primarily involved in the growing of alfalfa and other crops. Nearby farmlands could be subject to vandalism, trespassing, and illegal trash dumping from project residents. Project residents could also be impacted by chemical drift from aerial spraying and noise.

The General Plan 2010 land use map includes a 500-foot buffer along the western site boundary to minimize land use conflicts, noise, chemical drift, and growth inducement. A 500-foot setback is consistent with policies in General Plans for other communities in the Central Valley,<sup>1</sup> such as the City of Davis and Sacramento County.

The project proposes various edge treatments along the western site boundary depending on on-site land uses. For residential uses, these edge treatments include 100- to 210-foot setbacks between agricultural uses and the nearest house. For commercial uses, a 60-foot setback is proposed. The setbacks are proposed to include residential back yards, streets, or commercial loading areas.

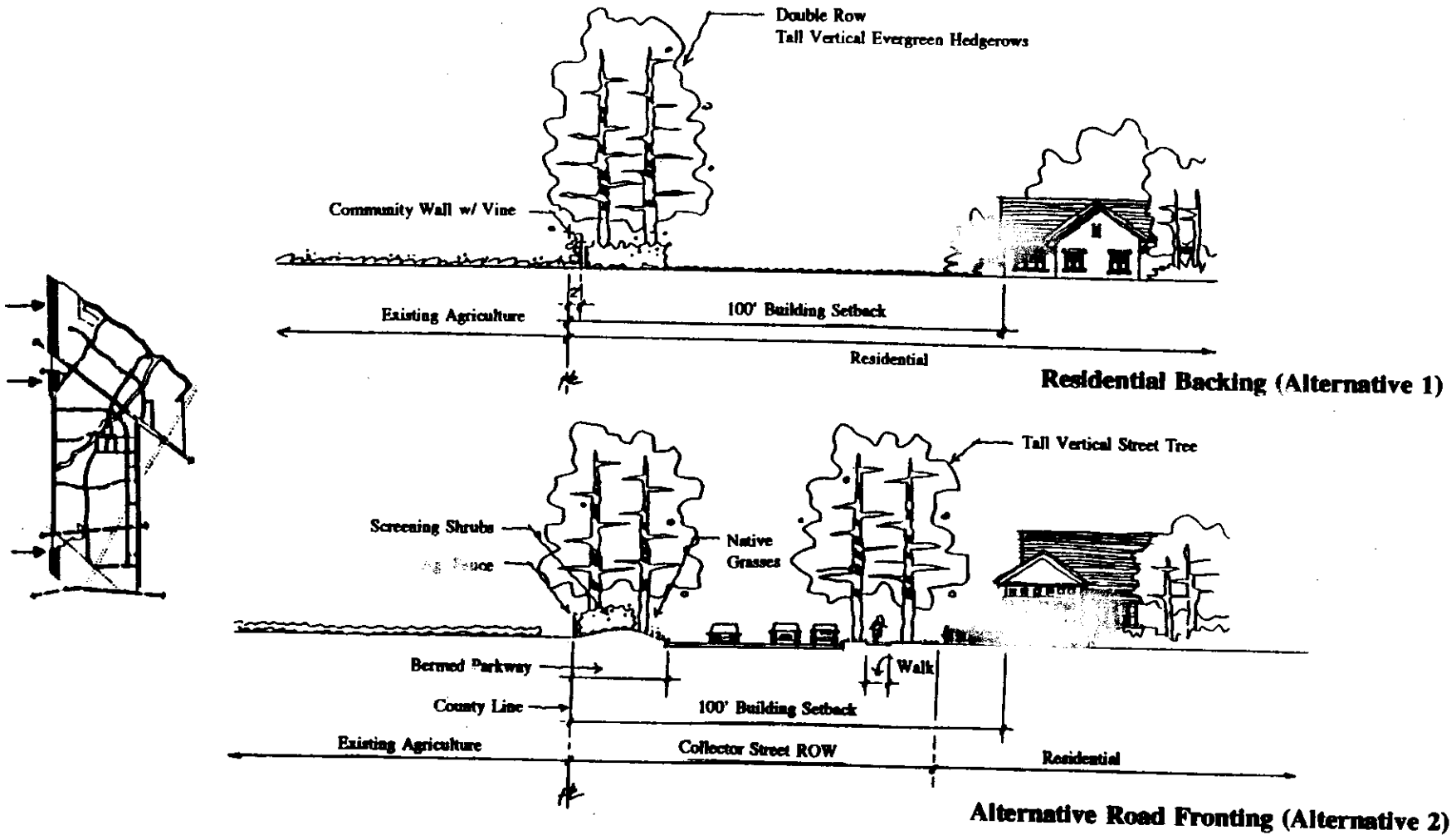
- In the southern portion of the western boundary, south of Grant Line Road, homes would back directly on the western edge, which abuts dry pastureland. The edge treatment consists of a 20-foot landscape buffer, with a total required 100-foot setback between agricultural uses and the nearest house. The 100-foot setback would consist of private yards and the landscape buffer (Figure 4.1-4). Along a portion of the western edge south of Grant Line Road a collector road to the residential neighborhood would be constructed. In this area, the edge treatment would consist of an approximate 20-foot bermed parkway, the collector street, and an approximate 20-foot area with a walkway and streets, for a total setback of 100 feet (Figure 4.1-4).
- Immediately north of Grant Line Road, the western edge treatment consists of a four-lane roadway (Marina Boulevard) linking Grant Line and Byron roads. An evergreen windrow tree planting would be established on either side of the roadway, with a continuous multi-use path on the east side of the boulevard (Figure 4.1-5). A low berm with screening shrubs would be located adjacent to a fence. The total right-of-way for Marina Boulevard and the associated path and landscaping would be 120 feet. The Draft Master Plan proposes that a minimum 100-foot setback would be established between the eastern roadway right-of-way line and the nearest residential use. The area included within the minimum setback could include private uses such as a residential backyard or deck.
- North of Kelso Road, residential uses would also front directly on the western edge, as in the southern area. In this area, the Draft Master Plan proposes a 20-foot buffer area with shrubs adjacent to the property line, with a total required 100-foot setback between the existing agricultural uses and the nearest house (Figure 4.1-4). For commercial uses, a 60-foot setback

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<sup>1</sup> For example, the City of Davis General Plan recommends an average 1,500-foot "greenbelt" around the perimeter of the City to separate urban and agricultural uses, with the minimum width of the buffer to be 500 feet. The Draft Sacramento County General Plan "December 9 Alternative," which is pending approval, includes a policy that requires a buffer of 300 to 500 feet between permanent agricultural areas and agricultural areas proposed for urban development.

# WESTERN EDGE TREATMENT RESIDENTIAL

Figure 4.1-4



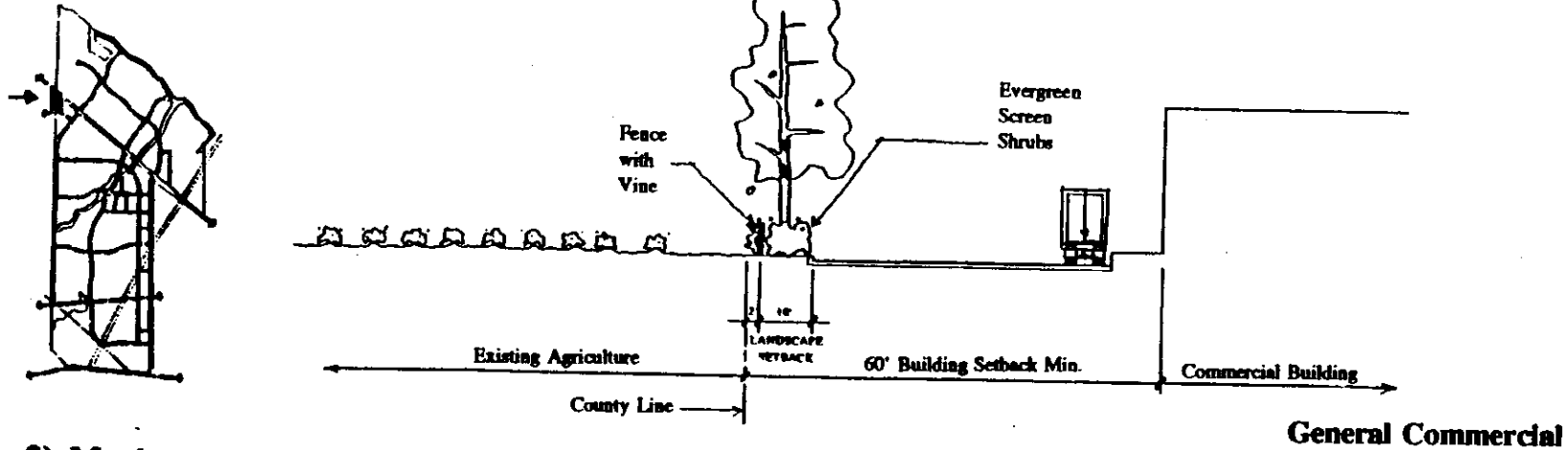
4.1-12



# WESTERN EDGE TREATMENT:

Figure 4.1-5

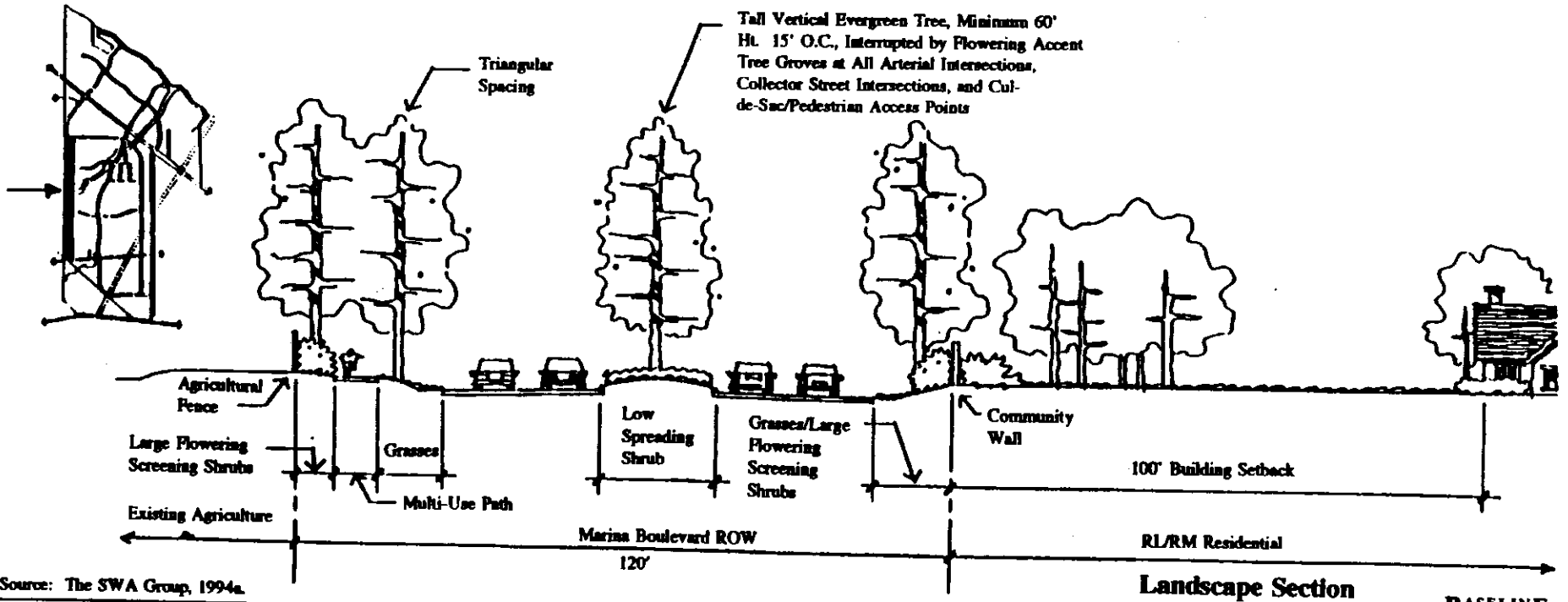
## 1) General Commercial



General Commercial

4.1-13

## 2) Marina Blvd



Landscape Section

BASELINE

Source: The SWA Group, 1994a.

#### 4.1 LAND USE AND AGRICULTURAL ISSUES

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would be required between agricultural operations and the nearest commercial building (Figure 4.1-2). The setbacks could be used as a yard for the residences, as a residential street, or as a loading area or other use for the commercial activity.

The proposed project would also introduce urban uses at the eastern edge of the project site along Patterson Pass Road, adjacent to existing agricultural operations. However, the proposed land uses on the eastern edge are exclusively industrial and commercial, which would not result in significant agricultural land use conflicts. In addition, the prevailing northwest to southeast winds reduce potential impacts of aerial spraying on adjacent urban uses. The planned right-of-way for the four- to six-lane Patterson Pass Road, a 105-foot drainage swale, and a 20-foot utility easement along much of the roadway's length would serve as an adequate 128-foot to 237-foot buffer between uses at the site's eastern edge and nearby agricultural lands.

Other natural or man-made buffers, such as Old River in the north and the Delta-Mendota Canal and I-205 to the south, serve as adequate buffers between the project's urban uses and nearby agricultural operations along those project boundaries.

##### **Mitigation Measure M4.1-2**

*(a) The following Objective, with corresponding Policies and Implementations, should be inserted as Objective 11 under West Edge Treatment in Development and Design (Appendix C) in place of existing Policies a) and b):*

*"Objective 11:*

*"The project site shall be developed to minimize land use conflicts between planned urban uses and existing agricultural operations to the west.*

*"Policy:*

*"a) A buffer area, minimum 500 feet wide, shall be provided along the western site boundary. This minimum 500-foot buffer requirement applies to all portions of the western project boundary except in the south, where planned housing abuts the Delta Mendota Canal.*

*"b) A combination of hard and soft treatments may be applied in the 500-foot buffer area that is required along the western boundary to mitigate potential agricultural impacts, such as aerial spraying, trespass, and vandalism. The 500-foot buffer can be located entirely on the project site (in San Joaquin County) or can be located entirely or partially west of the project boundary (in Alameda County). If existing agricultural lands west of the project are used to satisfy the buffer requirement, conservation easements must be placed on the lands **and dedicated to the Alameda County Open Space Land Trust**. The conservation easement shall stipulate that development rights are permanently restricted and shall be limited to those crops that do not require aerial spraying (e.g., oats, wheat, beans, pasture).*

*"c) A combination of windrow tree plantings of a mature height and width, berms, fences, four-lane roadways, adjacent multi-use pathways, local streets, and utility easements*

*should be included in any portion of the 500-foot buffer that is on the project site. To the greatest extent feasible, the buffer area within the project site should be owned and maintained by a public or quasi-public agency. The inclusion of private residential backyards and private commercial facilities such as parking lots and loading zones shall be limited to a maximum of 50 feet of the total required buffer (e.g., the private backyards of homes along Marina Boulevard shall be no more than 50 feet deep). The buffer area shall ensure that along the continuous length of the western boundary of the project, all privately owned, urban uses such as residential backyards or commercial loading areas would be located a minimum of 500 feet from agricultural operations requiring aerial spraying. The design of any buffer area located in Alameda County shall be reviewed and endorsed by a qualified neutral party with specific expertise in urban/agricultural interface. Any off-site mitigation resulting in conservation easements shall be considered when assessing any per-acre agricultural mitigation fee or any wildlife mitigation."*

*(b) The following Policy and Implementation should be inserted under Objective 3, In Community Monitoring Programs in Jobs/Housing & Affordable Housing ~~Right to Farm Ordinance in Land Use~~ (Appendix C) in place of Policy a) and b):*

*"Policy:*

*"On-site residents shall be notified of the County's Right-to-Farm ordinance and that they are purchasing land or homes in an agricultural area. The disclosure shall cite specific examples of potential nuisances (e.g., noise, dust, odor, vectors, spraying) associated with ongoing and future agricultural activity."*

*"Implementation:*

*"Notification shall be recorded by separate instrument or on the face of the deed for each newly created parcel ~~within 1,000 feet of the western and eastern community boundaries.~~"*

### **Impact M4.1-3**

**The construction of wastewater storage ponds on Fabian Tract may be inconsistent with the Sacramento-San Joaquin Delta Protection Act.**

The Sacramento-San Joaquin Delta Protection Act was enacted by the State Legislature and signed by the Governor in 1992 to provide improved planning and resource protection for the Delta area, including portions of six counties. The Act designates a "primary zone" and "secondary zone" of the Delta. The operative provisions of the Delta Protection Act, including preparation of a resource management plan, are focused on the protection of the "primary zone" from the introduction of new uses that are not consistent with the agricultural and habitat values of the Delta. The primary zone includes most of the historic Delta islands located north of the Old River and west of I-5. The "secondary zone" includes areas with substantial existing or proposed urban development on the outer fringe of the Delta, including all of the City of Tracy and a large portion of the City of Stockton. The area north of the Old River, including Fabian Tract, the project's preferred long-term wastewater reclamation site, is located in the "primary zone" of the Delta.

#### 4.1 LAND USE AND AGRICULTURAL ISSUES

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The Delta Protection Commission, created by the Act, is currently working on the preparation of the resource management plan for the "primary zone." The management plan is supposed to be completed by July 1, 1994, but is not expected to be adopted until sometime in 1995. The Act requires that within six months of adoption of the Delta management plan, all City and County General Plans with jurisdiction in the primary zone must be amended to be consistent with the Delta Protection Plan. Prior to the amendment of the local General Plans, local jurisdictions may approve development projects in the primary zone only after making specific findings on the basis of substantive evidence. Thus, the proposed use of portions of Fabian Tract for wastewater reclamation

and construction of wastewater storage ponds must be found to be consistent with the Act's relevant requirements. The wastewater facilities must be found to not result in:

- wetland or riparian loss;
- degradation of water quality;
- increased nonpoint source pollution or soil erosion;
- degradation of Pacific Flyway habitat;
- reduced public access;
- exposure of the public to increased flood hazards;
- adverse impacts to agricultural lands;
- degradation or impairment of levee integrity;
- adverse impacts to navigation; and
- increased requirements or restrictions upon agricultural practices in the primary zone.

The Draft Master Plan proposes that portions of Fabian Tract would be irrigated with wastewater treated to a secondary level. Two hundred to three hundred acres of wastewater storage ponds are also proposed to be constructed on Fabian Tract to hold treated effluent during winter months when adjacent lands cannot be irrigated (further description of the proposed wastewater facilities is included in Section 4.4.2 of this DEIR). The Draft Master Plan also proposes that portions of Fabian Tract would be enhanced with the planting of trees and other vegetation, to provide habitat for the Swainson's hawk and other species (see related discussion in section 4.11, Biological Resources, in this DEIR).

Construction of 200 to 300 acres of wastewater storage ponds may be inconsistent with the Act, since the construction would result in the loss of agricultural lands and wildlife habitat. In addition, several landowners on Fabian Tract have protested the plan to irrigate non-food crops with treated effluent (Bacchetti, 1994). Agricultural landowners have stated that the most beneficial use of Fabian Tract is for cultivation of high value food crops such as tomatoes, asparagus, and dry beans. At least one large land owner has been advised by their main buyer of processing tomatoes (the Heinz plant in Tracy) that the company "will not purchase tomatoes from lands that have been irrigated, past or present, with treated sewage water" (Bacchetti, 1994).

The proposed wastewater irrigation and storage ponds may not be consistent with the findings required under the Act that development in the "primary zone" not result in: degradation of Pacific Flyway habitat, adverse impacts to agricultural lands, or increased requirements or restrictions upon agricultural practices in the primary zone. The ultimate determination of the consistency of the proposed wastewater facilities on Fabian Tract with the Delta Protection Act must be made by San Joaquin County staff, or if the project approval is appealed, the Delta Protection Commission.

**Mitigation Measure M4.1-3**

*If the preferred location for the project's wastewater irrigation and storage ponds is determined to be Fabian Tract, all mitigation measures in Sections 4.4.2 (Wastewater) and 4.11 (Biological Resources) should be complied with, to mitigate all potential impacts.*

*Alternatively, another location for the wastewater disposal should be identified outside the Delta "primary zone," such as the alternative location in Alameda County described in the Draft Master Plan, or alternative wastewater treatment options (i.e., tertiary treatment) should be implemented.*

#### **SPECIFIC PLAN I**

Specific Plan I provides data on detailed land uses and facilities that would be constructed in the Central Mountain House subarea (Neighborhoods E, F, and G), Old River Industrial Park, and Mountain House Business Park (Figures 3.12, 3.13, 3.14, and 3.15).

#### **Impact S4.1-1 (O,M)**

**The proposed phasing of growth during Specific Plan I may not be possible if Williamson Act contracts have not expired. This could decrease the number of jobs projected for the initial years and could affect the land use balance.**

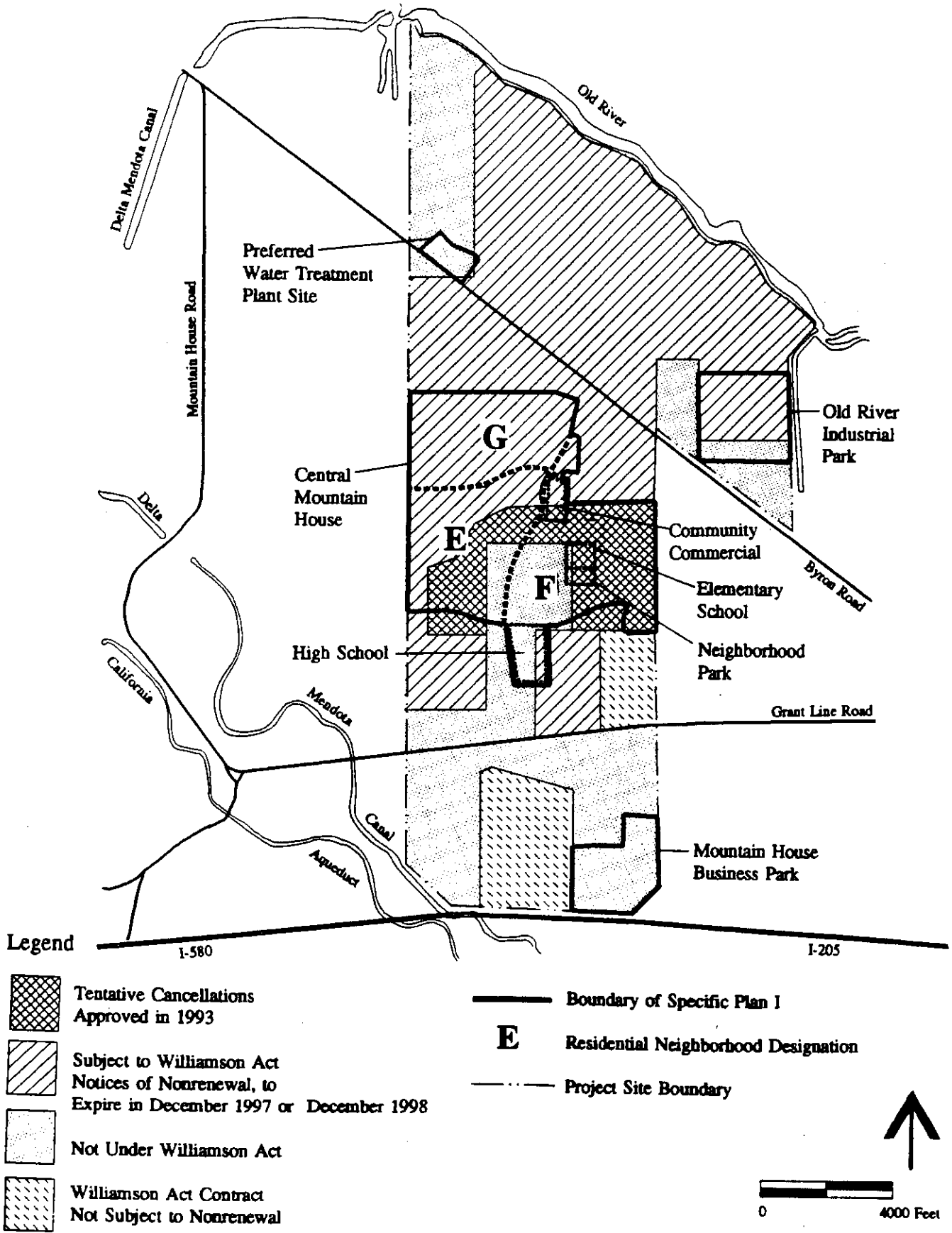
Adequate land may not be available for General Industrial development because some areas, planned for development within Specific Plan I, cannot proceed until existing Williamson Act contracts expire through nonrenewal or are canceled. The Draft Specific Plan I does not address how proposed development would relate to existing Williamson Act contracts and to the scheduled nonrenewal of Williamson Act contracts on lands proposed for development. This issue is especially important in the Old River Industrial Park and for the housing component of Central Mountain House, because Williamson Act contracts on some of the land proposed for development will not expire through the nonrenewal process until the end of 1997 or 1998 (Figure 4.1-6).

The Draft Master Plan designates a total of 233 acres for inclusion in the Old River Industrial Park, including 50 acres designated "Public" for the wastewater treatment plant, 110 acres designated for General Industrial, and 73 acres designated Light Industrial. The Draft Specific Plan I does not include all of the land planned for the Old River Industrial Park; Specific Plan I excludes 53 acres designated for General Industrial and 30 acres designated for Light Industrial because the lands are not currently controlled by the applicant. The lands left out of Specific Plan I are located immediately south and west of the remaining Old River Industrial Park parcels.

Industrial development associated with Specific Plan I, and subsequent job creation, could be postponed for the initial years of the project, since most of the 100 acres designated for Limited and General Industry in the Old River Industrial Park is under a Williamson Act contract that is not scheduled to expire until December 1998. If residential construction begins in 1995 or 1996 (Year 1 of the Specific Plan I schedule) job creation in the Old River Industrial Park could be hindered because not enough land will be free of Williamson Act contract. It appears that developable acreage in the Old River Industrial Park that is not constrained by Williamson Act Contracts is

# WILLIAMSON ACT EXPIRATION DATES

Figure 4.1-6



#### 4.1 LAND USE AND AGRICULTURAL ISSUES

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approximately 10 to 15 acres (including roadways and utility lines).<sup>2</sup> Construction of the wastewater treatment plant in the Old River Industrial Park would not be affected, since public facilities can be constructed on lands under active Williamson Act contract.

Industrial development in the Mountain House Business Park may also be hindered during the initial phases of Specific Plan I construction, due to the high cost of extending infrastructure to the site. The only other location that is designated for industrial uses in Specific Plan I is in the Central Mountain House subarea, where there are 37.5 acres designated for Limited Industrial uses along Patterson Pass Road.

Industrial development of the Specific Plan I area is expected by the applicant to occur according to a "high-growth" absorption schedule. According to this schedule, industrial land absorption rates (sales) are expected to be 18.3 acres of General and Limited Industrial land by the end of the third year which will result in 344 industrial jobs. However, this absorption schedule, which assumes absorption of 11.0 acres of General Industrial uses by Year 3, could probably not be reached until after the Williamson Act contract for most of the land in the Old River Industrial Park expired at the end of 1998 and services were extended to industrial parcels sometime in 1999 at the earliest. If residential construction does not begin until 1997 or 1998, at the earliest, timing of the Williamson Act Contract expirations will not be an issue. However, if residential construction begins in 1995 or 1996 (Year 1 of the Specific Plan I schedule) then the number of industrial jobs anticipated by the end of Year 3 under the "high growth" industrial absorption schedule seems unlikely to occur, unless other lands not under Williamson Act contract are designated for General Industrial uses.

In the central Mountain House subarea, construction of the first residential neighborhood (Neighborhood F) and most of the neighborhood's facilities could occur without delay, since the Williamson Act contracts, affecting approximately one-half of the land in Neighborhood F, were tentatively canceled by the Board of Supervisors in February 1993, when the Board approved the Mountain House General Plan Amendment. However, the Board did not cancel active Williamson Act contracts on lands that are planned for development in the northern portion of Neighborhood E, for one-half of the site planned for the Community Commercial shopping center, and for the western portion of the elementary school/neighborhood park site (Figure 4.1-6). The contracts on these parcels will not expire until December 1997.

Active Williamson Act contracts would also preclude any urban development of lands within Specific Plan I that are planned for Neighborhood G and approximately one-half of Neighborhood E (Figure 4.1-6). The contracts on these lands in Neighborhoods G and E will not expire until December 1997. Construction of public uses such as the planned water and wastewater treatment plants north of Byron Road could occur on lands with active Williamson Act contract, according to provisions of the County Development Title.

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<sup>2</sup> It is unclear how much land in the Old River Industrial Park is not under contract and is not subject to use restrictions because of the Rio Oso-Tesla transmission line.



**Mitigation Measure S4.1-1 (O,M)**

~~(a) The following change should be made to the Specific Plan I land use map: The following Policy should be added to Specific Plan I, Section 4.4.1:~~

~~"b) If the jobs/housing goals are not being met, as determined during annual monitoring, the Old River Industrial Park Expansion Areas should be amended into Specific Plan I, in order to maximize industrial land opportunities in Specific Plan I."~~

~~The 83 acres of land within the Old River Industrial Park that were not included in Draft Specific Plan I should be added to the Specific Plan, to incorporate lands that are not subject to Williamson Act contracts and ensure there is enough General Industrial land available in the early years of the project. Alternatively, other lands in Specific Plan I should be designated or redesignated for General Industrial uses.~~

~~(b) The Draft Specific Plan I should be amended to include the following Objective and Policy in the Land Use section to ensure that enough non-contracted industrial lands are available for development in the early years of the project.~~

~~"Objective: To ensure that an adequate amount of industrial land is available, not subject to Williamson Act contracts or conflicting non-renewal schedules, for development in the early years of Specific Plan I.~~

~~"Policy:~~

~~"a) Lands zoned I-P and C-O on Patterson Pass Road, adjacent to Neighborhood F, shall be provided with on-site infrastructure during the early years of Specific Plan I.~~

~~"b) The Mountain House Business Park shall be provided with on-site infrastructure during Specific Plan I. Allocations of long lead infrastructure such as water and wastewater treatment shall be made available subject to prior commitment to other job generators within the community."~~

**Impact S4.1-2 (M)**

~~Exclusion of the Mountain House Business Park from the "initial Community Services District boundary" could conflict with attempts to provide sufficient industrial land during Specific Plan I and attain a balanced land use program.~~

~~The Draft Specific Plan I includes a proposed "initial Community Services District (CSD) boundary" that excludes the Mountain House Business Park near the I-205/Patterson Pass Road interchange, but includes all other lands owned or optioned by the applicant inside and outside of the Specific Plan I boundaries.~~

~~Not including the business park in the initial CSD boundaries, coupled with the restrictions of the Williamson Act contracts on portions of the Old River Industrial Park, could result in a scarcity of~~

#### 4.1 LAND USE AND AGRICULTURAL ISSUES

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~~available industrial land during the early years of Specific Plan I. Exclusion of the Mountain House Business Park means development of the area will probably not occur during the early years of Specific Plan I, unless the area is annexed into the CSD soon after the Specific Plan is approved.~~

~~Mitigation Measure S4.1-2 (M)~~

~~The portion of the Mountain House Business Park included in Specific Plan I should also be included in the initial boundaries of the Community Services District. The text and graphic in Chapter Sixteen of the Draft Specific Plan I should be amended to reflect this inclusion.~~

**Impact S4.1-3 S4.1-2 (C,O,M)**

**Inclusion of lands within the Community Services District that are not proposed for development in Specific Plan I could result in premature curtailment of agricultural operations.**

Inclusion of all agricultural lands outside Specific Plan I that are owned or under option by the applicant could place an economic burden on current agricultural owners (who have signed options with the applicant) or agricultural operator lessees (who lease lands from the applicant). This economic burden may not occur for optioned properties, if the terms of the option contract require the applicant to pay the increased fees. Unless provisions are made in the Specific Plan to ensure that lands not planned for development for many years in the future are not assessed at a high rate, the economic burden could result in the premature curtailment of existing agricultural operations.

**Mitigation Measure S4.1-3 S4.1-2 (C,O,M)**

*Agricultural properties outside the Specific Plan I boundaries that are not proposed for development within five years should be deleted from the initial CSD boundaries, unless policies are added to the Draft Specific Plan, **Development Agreement, and Public Financing Plan** that ~~indicate~~ **state** existing agricultural landowners or operator lessees of lands outside the Specific Plan I boundaries, but within the initial CSD boundaries, will not be subject to the same ~~high level of~~ **urban benefit assessment fees** as properties that will be developed as part of Specific Plan I.*

**Impact S4.1-4 S4.1-3 (C,O,M)**

**Conflicts between urban/rural land uses could occur within Specific Plan I, particularly where ongoing agricultural operations abut planned residential and industrial development. Such conflicts could result in adverse impacts on the existing Byron-Bethany Irrigation District facilities, and on the existing access routes used by farm workers and equipment to reach agricultural fields. These impacts could in turn lead to the curtailment of agricultural operations, an increase in applications to cancel existing Williamson Act contracts, and the premature conversion of agricultural lands within the project site boundaries to non-agricultural uses.**

Urban/rural land use conflicts could affect ongoing agricultural operations and the infrastructure (roads, irrigation ditches) needed to support those operations. Urban/rural conflicts could affect adjacent agricultural lands under Williamson Act contracts that have not yet expired or have not yet been "nonrenewed" by the property owners.

There is a potential for land use conflicts along the boundaries of the Old River Industrial Park, in the northern portion of the project site. Approximately four-fifths of the 150 acre industrial park is under Williamson Act contracts that will not expire until December 1998. Williamson Act lands

#### 4.1 LAND USE AND AGRICULTURAL ISSUES

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adjacent to the planned industrial park to the north will also not expire until that time. Thus, ongoing agricultural operations to the north of the site, as well as operations on non-contracted lands to the west and south could be impacted. To the east, the Old River Industrial Park is bounded by a waterway, the Wicklund Cut, which forms a natural edge separating the park and the adjacent farming.

Urban/rural conflicts could also be anticipated along the boundaries of the Central Mountain House neighborhoods. Key land uses in the first planned neighborhood F, such as the entire site of the community shopping center, and a part of the high school site, are subject to Williamson Act contracts that will not expire until the end of 1997. Existing agricultural operations, roadways, and irrigation facilities on these and other non-contracted land within, and adjacent to the area designated for the first phase of development in Neighborhood F could be adversely impacted.

Another potential land use conflict associated with the development of the Central Mountain House neighborhoods is the proximity of agricultural lands that have recently (1993) been planted with sugar beets. Approximately 93 acres of land that is within or immediately south of Neighborhood E has been cultivated with sugar beets, which require applications of sulfur dust to control pests. The land is controlled by the applicant. As discussed earlier, the County Agricultural Commissioners office receives numerous complaints from nearby residents about the odor and fallout from the aerial spraying of sulfur dust. According to the Draft Specific Plan I, the first neighborhood to be constructed will be Neighborhood F, which is located immediately to the east, and downwind, from the fields planted in sugar beets.

In the southern portion of the project site, urban/rural conflicts could occur along the boundary of the Mountain House Business Park subarea. The edge treatment between the planned high technology or business park-type uses and the existing farm operations of the 135-acre parcel to the west (owned by the Tusso family) is particularly sensitive. The Specific Plan for development of the business park proposes no roadway or other features which could help to form an effective boundary edge along the west side.

The Tusso family has an active Williamson Act contract on their property, and has not filed for non-renewal. Thus, there is no anticipated expiration date for the Williamson Act Contract on this property. The family currently leases the land to a farmer who grows alfalfa on the property. With no sensitive edge treatment, industrial uses in the planned business park could force the agricultural operator to prematurely curtail farming and induce the current owner, or a new owner, to file for non-renewal or cancellation of the existing Williamson Act contract.

Objectives and policies in the Draft Master Plan encourage farming as long as possible as construction of the new community proceeds. Policies also ensure that the Byron Bethany Irrigation District (BBID) service to ongoing agricultural activities be unaffected by development.

Specific implementation measures of the Draft Master Plan require the preparation of phasing plans which address issues related to ongoing, adjacent agricultural operations, including an assessment of

the impacts of development on BBID facilities and operations. Specific Plan I does contain policies related to BBID facilities located within or adjacent to the Specific Plan I area. However, the Draft Specific Plan I does not include adequate mitigation for other potential urban/rural land use impacts.

**Mitigation Measure S4.1-4 S4.1-3 (C,O,M)**

*(a) Specific Plan I should be amended to provide interim buffers, setbacks, and/or appropriate landscaping treatment along the boundaries of the three Specific Plan subareas, to reduce land use conflicts between planned urban uses and the existing agricultural operations. Any interim buffer areas or larger than normal setbacks should remain in place until the adjacent agricultural operations cease and/or a specific plan is adopted for the adjacent properties. (C,O,M)*

*(b) Agricultural lessees who farm lands owned by the applicant which are within 1,000 feet and upwind of neighborhoods under construction in the Central Mountain House subarea shall be prohibited from cultivating sugar beets. (C)*

*(c) To mitigate the potential for significant **temporary** agricultural/urban land use conflicts along the western edge of the Mountain House Business Park, where no roadway forms a boundary, the Specific Plan I should be amended to require a ~~heavily~~ landscaped area incorporating a combination of windrows, hedges, and evergreens to reduce the impacts of aerial spray and dust from the adjacent agricultural operations. **The intent of this mitigation measure is to provide a buffer strip that would ultimately be a part of the final landscaping design for the Business Park bulldout.** (M)*

*(d) Specific Plan I contains no policies requiring notification to all buyers (not just properties located within 1,000 feet of the western and eastern boundaries) that all properties are surrounded by agricultural operations. The following policy should be inserted in Chapter Three of Specific Plan I:*

*"The deed of each newly created parcel within Specific Plan I shall include a clear statement to inform new buyers that they are purchasing land or homes in a predominantly agricultural area and that the County has adopted a Right-to-Farm ordinance to protect farmers from nuisance suits as a result of normal farming practices." (C,O,M)*

## **4.2 GENERAL PLAN AND DEVELOPMENT TITLE CONSISTENCY**

### **SETTING**

This section addresses the relationship of the project (the Draft Master Plan, Specific Plan I, and the accompanying General Plan Amendment, Zone Reclassification, and Development Title Amendment applications) to the San Joaquin County General Plan 2010 and Development Title. This section also describes the relationship of the project to other relevant plans and zoning, such as the General Plans and zoning for Contra Costa and Alameda counties, and for the City of Tracy.

#### **2010 San Joaquin County General Plan 2010 and Development Title**

San Joaquin County adopted an updated General Plan and Development Title in July 1992. Volume I of the new General Plan addresses goals, objectives, and policies regarding existing and future development within the County, including policies for new communities. The Development Title includes County Zoning Regulations, Subdivision Regulations, Development Regulations, Infrastructure Standards, Financing for Infrastructure and Services, Development Agreements, Natural Resource Regulations, Safety Regulations, Williamson Act Regulations, and Enforcement Regulations.

The San Joaquin County Board of Supervisors amended the General Plan 2010 in February 1993 to include the new community of Mountain House. At that time, the Board designated specific urban land uses for the project site (Figure 3.3). The urban land uses for Mountain House include five General Plan categories of Residential use (Very Low Density, Low Density, Medium Density, Medium-High Density, and High Density), six Commercial categories (Neighborhood, Community, General, Freeway Service, Office, and Mixed Use), two Industrial categories (Limited and General), and various Public, Parks, Resource Conservation and Open Space categories.

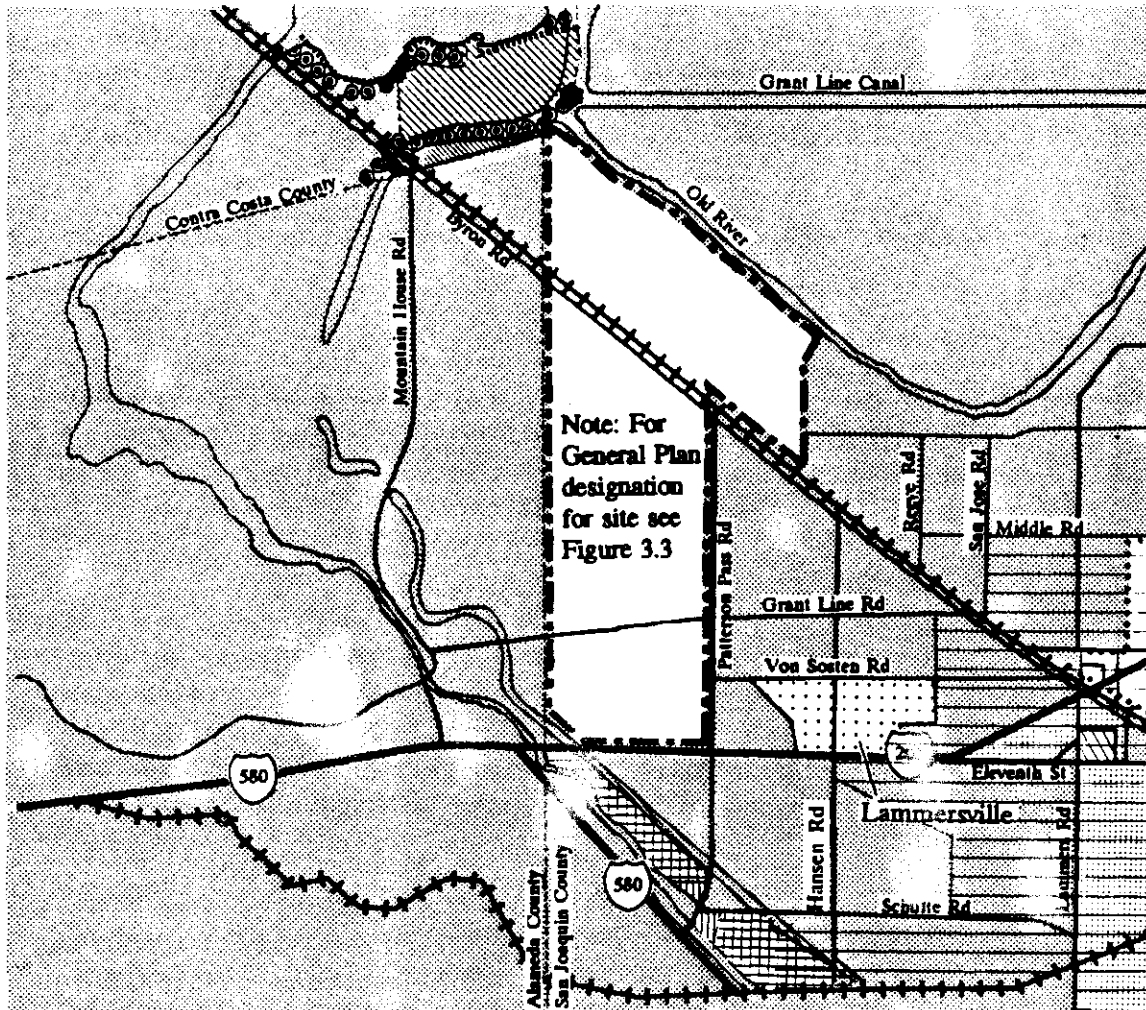
At the time of the General Plan Amendment, the existing zoning for the project site was not changed. The site is currently zoned AG-40, which is General Agriculture with a 40-acre minimum parcel size (Figure 4.2-1).

The project includes a General Plan Amendment that would reconfigure some of the urban land uses approved for the site in February 1993. The proposed number of housing units and acreages devoted to commercial and industrial development are similar to the original land use plan (Table 3.1).

The project site acreage has expanded slightly from 4,667 to 4,784 acres. The difference in acreage is due to the inclusion of Grant Line Village, an existing collection of approximately 30 rural residences immediately west of the previous project boundaries on Grant Line Road, and revisions


# EXISTING GENERAL PLAN DESIGNATIONS FOR SITE AND ENVIRONMENT

Figure 4.2-1




## Legend

### All Counties

 Agricultural (San Joaquin, Alameda and Contra Costa counties)


### San Joaquin County

 Rural Residential (R/R)

 Residential (Low to Medium - High)

 General Industrial (I/G)

 Limited Industrial (IL)

 Area designated for urban development in Tracy Urban Management Plan (but designated Agriculture in San Joaquin County Plan).

 Neighborhood Commercial (C/N)

 Freeway Service Commercial

 City Limits of Tracy

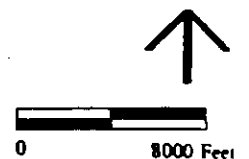
### Contra Costa County

 Public/Semi-Public (PS)

 Parks and Recreation (PR)

 Open Space (OS)

 Delta Recreation



Note: Boundaries are approximate. General Plan designations are as of June, 1994.

**BASELINE**

to streets and rights-of-way calculations. County staff requested that the rural residential area be included in the overall planning for the new community. The General Plan designation for the Grant Line Village area is proposed to be changed from Agriculture, which does not require public services, to Residential-Very Low Density, which requires public water, sewer, and drainage systems for new urban subdivisions.

The project would require several amendments to the County General Plan 2010, including the use of combined Residential-Low Density and Residential-Medium Density land use categories on the project's land use map and a transportation Level of Service (LOS) of D on certain County roads that are "gateways" to the project. The General Plan Amendments would be required to ensure consistency between the County General Plan and the Master Plan. These inconsistencies are identified in the "Impacts" section. Some inconsistencies between the two plans could be rectified by changing policies in the Master Plan to conform with the General Plan. Inconsistencies also have been identified between the detailed use and design standards included in the Draft Master Plan and the County Development Title.

#### **General Plans and Zoning Designations for Surrounding Area**

General Plan and zoning designations for San Joaquin, Alameda, and Contra Costa counties apply to areas surrounding the project site to the south and east, west, and northwest, respectively, and are discussed below.

##### *San Joaquin County*

Within San Joaquin County, the predominant General Plan 2010 land use designation surrounding the project site is General Agriculture (Figure 4.2-2). The nearest non-agricultural land use designations are east and south of the Mountain House site.

The Rural Community of Lammersville is located approximately 1,200 feet (0.2 mile) east of the project site. The Lammersville community is designated Rural Residential (R/R) in the General Plan 2010.

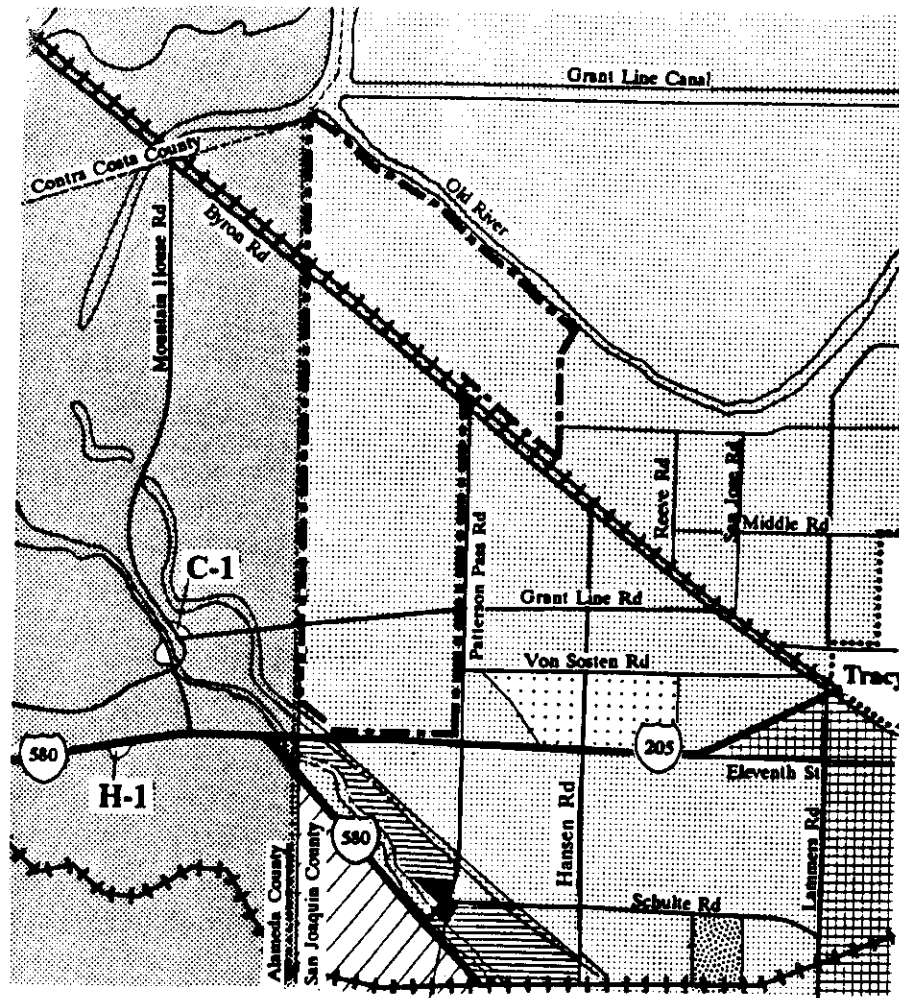
South of the project site, approximately 625 acres of land have been designated for Limited Industrial development (Figure 4.2-2). The industrial area, known as the Patterson Pass Business Park, is located south of I-205 between the Delta-Mendota Canal and the California Aqueduct, and south of Schulte Road. Industrial development south of Schulte Road includes the large Safeway regional warehouse complex and other smaller warehouse buildings. The industrial land west of Patterson Pass Road, near the project site, has not been developed. A portion of the Park is planned for Freeway Service Commercial (C/FS).

East of Lammersville, at the western edges of the City of Tracy, the County General Plan designates a variety of urban uses such as Medium-High Density Residential, Medium Density Residential, Low Density Residential, General Industrial, Limited Industrial, Neighborhood Commercial, General Commercial, and Public Lands (Figure 4.2-1). These urban designations are intended to reflect



# EXISTING ZONING FOR SITE AND SURROUNDINGS

Figure 4.2-2



## Legend

### Contra Costa County



Agricultural

### Alameda County



Agricultural



Retail Business



Highway Frontage

### San Joaquin County



AG - 40: Agricultural (40-acre minimum)



AG - 160: Agricultural (160-acre minimum)



AU - 20: Agricultural-Urban Reserves (20-acre minimum)



R - R: Rural Residential



I - G: General Industrial



I - L: Limited Industrial



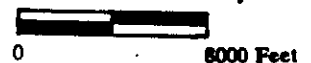
C-FS: Freeway Service Commercial



City Limits of Tracy



Project Site Boundary



Source: Zoning Maps for Contra Costa, San Joaquin, and Alameda Counties. Agricultural Zoning for Contra Costa County includes A-2, A-3 and A-4 Zoning. Zoning as of June, 1994.

**BASELINE**

growth allowed under the City's General Plan. The Tracy city limits are approximately 3.3 miles east of the project site's eastern boundary at Patterson Pass Road.

#### *City of Tracy*

The City of Tracy adopted an update of their General Plan in June 1993. The Tracy Urban Management Plan designates more of the land west of Lammers and Hansen roads for residential and industrial development than is shown on the County General Plan (Figure 4.2-1). The Tracy Urban Management Plan designates the project site as "Agriculture"; and the Plan's land use map depicts a symbol labeled "Mountain House" for the project site.

#### *Alameda County*

The Alameda County General Plan designates the area west of the project site as Agricultural (Figure 4.2-2). The zoning category that applies to this designation is Agriculture (A). The minimum parcel size for the agricultural lands in Alameda County is 320 acres. Two small non-agricultural zoning districts are located within the Agricultural zoning, representing existing or former businesses. One area, near Mountain House and Grant Line roads, is zoned for Retail Business (C-1) and a second area, at the intersection of Grant Line Road and I-580, is zoned for Highway Frontage (H-1) (Figure 4.2-2).

A Retail Business zoning district, approximately one mile west of the project site, is located at the historic area of Mountain House and reflects an existing crossroads bar and restaurant. The Highway Frontage area southwest of the site at the Grant Line Road/I-580 interchange consists of an abandoned gas station site that is used informally as a park-and-ride facility.

#### *Contra Costa County*

Contra Costa County General Plan designations apply to the area northwest of the project site. The area is designated Delta Recreation, Public/Semi-Public, Parks and Recreation, and Agricultural (Figure 4.2-1). Zoning for this area includes three zoning districts which are all agricultural with varying minimum lot areas (Figure 4.2-2). The A-2 district requires a minimum lot size of five acres; the A-3 district requires a minimum lot size of ten acres; and the A-4 district requires a minimum lot size of 20 acres.

## **IMPACTS AND MITIGATION MEASURES**

The CEQA Guidelines indicate that a project will normally have a significant impact if it conflicts with adopted land use policies of the community where it is located. For the purposes of this DEIR, the following are considered potentially significant General Plan and zoning impacts:

- If policies or programs included in the Draft Master and Specific plans are not consistent with General Plan policies (General Plan Amendments for the project can be adopted to prevent these inconsistencies) or with previously adopted mitigation measures;

## 4.2 GENERAL PLAN AND DEVELOPMENT TITLE CONSISTENCY

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- If the proposed General Plan Amendments accompanying the Draft Master and Specific plans conflict with existing policies or create other inconsistencies in the County General Plan;
- If policies or programs in the Draft Master and Specific plans are not consistent with each other; or
- If policies or programs in the Draft Master and Specific plans are not consistent with the County Development Title (text amendments for the project can be adopted to prevent these inconsistencies).

### **MASTER PLAN**

The Draft Master Plan proposes amendments to the General Plan text and to the Land Use Map, rezoning, and text amendments to the County Development Title, as described below.

#### **Impact M4.2-1**

**Policies in the Draft Master Plan conflict with some of the policies of the County's General Plan 2010.**

Several policies and assumptions in the Draft Master Plan are not consistent with adopted policies or performance standards included in the County General Plan 2010 (Table 4.2-1). The Draft Master Plan is inconsistent with the General Plan in the densities proposed for the Residential-Medium Density land use designation. The Draft Master Plan proposes a density range of 5.5 to 10 units per acre, while the General Plan requires a range of 6 to 10 units per acre. The Draft Master Plan also notes that the A-U (Agriculture-Urban Reserve) zone is an implementing zone for the Mixed Use land use designation; this is not stated in the General Plan. There are differences in minimum roadway right-of-way widths proposed in the Draft Master Plan and Table IV-8 in Volume I of the General Plan 2010. The Draft Master Plan land use and circulation map also proposes three "Local Residential" road categories that have different capacities than the County roadway classification. The portion of Patterson Pass Road south of Grant Line Road has a projected average daily traffic load that exceeds its functional classification as a "Major Arterial," according to County General Plan standards.

In addition to combining the R/L and R/M designations and modifying the density range for R/M uses, the Draft Master Plan is not consistent with the County General Plan in terms of the typical uses that are proposed in the Limited Industrial (I/L) and Freeway Service Commercial (C/FS) land use designations. The Draft Master Plan states that "certain retail stores" can be accommodated in the C/FS designation. The permitted uses that are described in Table 3.5 for the C-FS zoning district include all types of retail sales and services, which conflict with the General Plan definition of the Freeway Service designation. Similarly, Table 3.5 indicates that new auto sales would be permitted with a Use Permit in both the C-FS and I-P zoning districts, which is not consistent with the General Plan definitions for the Limited Industrial and Freeway Service designations.

TABLE 4.2-1

## CONSISTENCY BETWEEN GENERAL PLAN AND MASTER PLAN POLICIES

General Plan Policy	Master Plan Policy	Mitigation
The General Plan does not allow the combining of the R/L and R/M designations on the land use map.	The Draft Master Plan land use map shows a combined R/L-R/M designation.	Change Draft Master Plan or adopt a General Plan Amendment (see Mitigation Measure M4.2-1(a)).
The General Plan does not list the A-U zone as an implementing zone for the Mixed Use land use designation.	The Draft Master Plan lists the A-U Zone as an implementing zone for the Mixed Use designation.	Change Draft Master Plan or adopt a General Plan Amendment (see Mitigation Measure M4.2-1(d)).
The General Plan land use densities are 2 to 6 dwelling units per acre for Residential-Low Density and 6 to 10 du/acre for Residential-Medium Density.	The Draft Master Plan land use densities are 5.5 to 10 du/acre for Residential-Medium Density.	Change Draft Master Plan or adopt a General Plan Amendment (see Mitigation Measure M4.2-1(c)).
The General Plan does not specify that new car sales are typical allowed uses in the Limited Industrial (I/L) and Freeway Service Commercial (C/FS) land use designations.	The Draft Master Plan allows new car sales in the I/L and C/FS land use designations.	Change Draft Master Plan or adopt a General Plan Amendment (see Mitigation Measure M4.2-1(b)).
The General Plan defines typical uses for the C/FS land use designation as "travel-related businesses."	The Draft Master Plan allows "certain" retail sales and services in C/FS land use designation.	Change Draft Master Plan or adopt a General Plan Amendment (see Mitigation Measure M4.2-1(b)).
Roadway classifications in Table IV-5, Volume I define traffic levels on types of roadways.	Designation of Patterson Pass Road south of Grant Line Road as "Major Arterial" conflicts with maximum average daily traffic.	Change Draft Master Plan or adopt a General Plan Amendment (see Mitigation Measure M4.2-1(e)).
Roadway minimum right-of-way widths in Table IV-8, Volume I.	Includes some right-of-way widths that are narrower than General Plan requirements.	Change Draft Master Plan or adopt a General Plan Amendment (see Mitigation Measure M4.2-1(e)).
Traffic Level of Service (LOS) standards mandate LOS C on County roads.	Text in Draft Master Plan states LOS C will be observed "except at certain Mountain House gateway locations."	Revise Draft Master Plan text or adopt a General Plan Amendment (see Mitigation Measure M4.2-1(f)).
Policy requires 10 acres of regional park for every 1,000 population.	Draft Master Plan does not contain policies or programs to require 10 acres for every 1,000 population.	Revise Draft Master Plan to include policy and require Specific Plan to include Program (see Mitigation Measure M4.2-1(g)).
Policy for protection of significant biological and ecological species and habitat.	Draft Master Plan does not include policies to mitigate for loss of potential San Joaquin kit fox foraging habitat, and for impacts to other species of concern.	Revise Draft Master Plan to include policies to mitigate for all wildlife impacts (see Mitigation Measure M4.2-1(g)).

**Note:** These are the most significant inconsistencies between the Draft Master Plan and the County General Plan that have been identified. Additional inconsistencies between the two documents may be identified, based on the interpretation of policies by County staff. According to County staff, some amendments to the General Plan necessary to accommodate Master Plan provisions might be applicable Countywide.

## 4.2 GENERAL PLAN AND DEVELOPMENT TITLE CONSISTENCY

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Text and policy language revisions in the Draft Master Plan would be required to ensure that it conforms to the General Plan LOS standards, which require LOS C on all County roads, and LOS D on all Caltrans facilities and at signalized intersections (see related discussion in Section 4.12 of this DEIR).

The Draft Master Plan also fails to address how the new community will meet the General Plan requirements of ten acres of regional park for every 1,000 residents. This issue is examined in more detail in Section 4.3.2, Parks and Recreation, in this DEIR.

Similarly, the Draft Master Plan does not contain policies or plans that appear to comply with wildlife mitigation requirements. The Draft Master Plan does not include a mitigation program that addresses the loss of potential San Joaquin kit fox habitat on the site. The Draft Master Plan does include a habitat management program that creates Swainson's hawk habitat off-site on Fabian Tract, in conjunction with plans for wastewater storage and disposal. However, the Swainson's hawk program does not appear to satisfy requirements of the California Department of Fish and Game. These issues are examined in detail in Section 4.11, Biological Resources, in this DEIR. Failure to adequately mitigate impacts to habitat of endangered and threatened species conflicts with policies in the General Plan which requires such mitigation.

### **Mitigation Measure M4.2-1**

*(a) A new policy should be added to the County General Plan 2010, Volume II, General Plan Policies specific to the Mountain House New Community (page XII-41) allowing the combination of the R/L and R/M General Plan land use designations. Alternatively, the Draft Master Plan land use map should be revised to designate separate Low Density and Medium Density Residential areas within each neighborhood.*

*(b) A General Plan Text Amendment should be adopted that would allow new communities, or projects that have an adopted Master and Specific Plan, to deviate as specified in the Plan from land use definitions and Development Title permitted uses. Alternatively, Table 3.5 of the Draft Master Plan should be amended to delete "Automotive Sales" as a permitted use in the C-FS and I-P zoning districts, and to delete "Retail Sales and Services, Intermediate and General" as permitted uses in the C-FS zone.*

*(c) The density for the Residential-Medium Density land use in Table 3.1 of the Draft Master Plan should be changed to 6.0-10.0 dwelling units per gross acre. Alternatively, a General Plan Text Amendment should be adopted to allow new communities with adopted Master Plans to deviate from the General Plan land use densities.*

*(d) The County General Plan Table VII-2 (Implementing Zones for General Plan Land Use Designations) should be amended to add the A-U zone for Mixed Use designations.*

*(e) A General Plan Text Amendment should be adopted that would amend Table IV-8 or allow new communities, or projects that have an adopted Master and Specific plan, to deviate as specified in the Plan from the General Plan roadway classifications and right-of-way standards (see Mitigation Measure M4.12-5(b) in the Transportation section). Alternatively,*

*standards for roadway classifications and roadway right-of-way widths in Table 9.6 of the Draft Master Plan should be amended to conform with classification, right-of-way, and capacity requirements in the General Plan (Table IV-8 in Volume I).*

*(f) A General Plan Text Amendment should be adopted that will allow new communities, or projects that have an adopted Master and Specific plan, to deviate as specified in the Plan from the General Plan LOS standards (see Mitigation Measure M4.12-5(f) in the Transportation section). Alternatively, Draft Master Plan policies and text referring to County roadway LOS standards should be changed to conform with LOS requirements in the General Plan. In Chapter Nine of the Draft Master Plan, assumptions 9.3 a) and b) and Policies a) and b) under Objective 3 (Appendix C) shall be revised to delete the exception to LOS C for "Mountain House gateway road segments."*

*(g) Draft Master Plan policies and performance standards for regional park standards and for wildlife mitigation should be changed to conform with ~~policies in the General Plan~~ (see Mitigation Measures in sections 4.3.1 and 4.11).*

#### **Impact M4.2-2**

**Some of the Draft Master Plan design and land use standards conflict with standards in the County Development Title.**

Numerous inconsistencies have been identified between the detailed design standards and land uses allowed in specific zoning districts according to the Draft Master Plan, versus the standards in the County Development Title. Many of these conflicts involve minimum lot sizes and lot widths; maximum building heights and building coverage; front, rear, and side yard setbacks; and the specific uses that are allowed in zoning districts.

Differences in other performance standards proposed in the Draft Master Plan from those standards included in the Development Title must also be reconciled. For example, the Draft Master Plan measures the noise standards that new construction must comply with using a different methodology and scale than is used in the County Development Title. The Development Title requires that new construction ensure exterior noise levels will not exceed 60 or 65 decibels using the  $L_{dn}$  scale. The Draft Master Plan states noise standards using the  $L_{eq}$  scale, which measures maximum hourly sound levels. The two scales are not absolutely compatible, since the  $L_{dn}$  scale measures noise over a cumulative duration of a noise event in zero-, one-, five-, fifteen-, and thirty-minute periods. This difference in methodology may not represent an inconsistency, but needs to be reconciled.

The Draft Master Plan includes other regulations or requirements that are not consistent with the Development Title. These are listed in Table 4.2-2. In addition, the Draft Master Plan contains several new regulations, requirements, procedures, and findings that are not addressed in the Development Title. These new regulations are also listed in Table 4.2-2.

TABLE 4.2-2

CONSISTENCY BETWEEN DEVELOPMENT TITLE AND MASTER PLAN REGULATIONS

Development Title Regulation	Master Plan Regulation	Mitigation
The Development Title specifies minimum lot sizes and widths, maximum building heights and coverage, and minimum front, side, and rear setbacks.	Several of the lot and structure standards in Table 4.1 of the Draft Master Plan are not consistent with the Development Title.	Change the Master Plan regulations or adopt a Development Title Amendment (see Mitigation Measure M4.2-2)
The Development Title specifies use types and uses permitted in each zoning district.	Numerous use types and permitted uses indicated in Table 3.5 of the Draft Master Plan are not consistent with the Development Title and vice versa.	Change the Master Plan regulations or adopt a Development Title Amendment (see Mitigation Measure M4.2-2)
The Development Title specifies standards for home occupations, second unit dwellings, fencing and screening, and landscaping.	Some of the Draft Master Plan regulations are not consistent with the Development Title.	Change the Master Plan regulations or adopt a Development Title Amendment (see Mitigation Measure M4.2-2)
The Development Title specifies standards or requirements for subdivision applications, grading and excavation, signs, storm drainage, roadway standards, parking, and parking lots.	The Draft Master Plan includes some standards or requirements that are not consistent with the Development Title.	Change the Master Plan regulations or adopt a Development Title Amendment (see Mitigation Measure M4.2-2)
The Development Title does not allow public alleys.	The Draft Master Plan includes standards for public alleys.	Change the Master Plan regulations or adopt a Development Title Amendment (see Mitigation Measure M4.2-2)
The Development Title does not specify standards or requirements for many regulations and programs included in the Draft Master Plan.	The following regulations or requirements in the draft Master Plan are not consistent or are undefined in the Development Title: contamination reports for subdivisions; different application requirements for subdivisions and Development Permits; setbacks from wetlands, electromagnetic fields, specified roads and land uses; illegal dumping or illicit connections; standards for bikeways, bike parking, pedestrian paths, and public alleys; findings regarding jobs/housing for approval of zone reclassifications; use of public land equity program for public land dedication; cost reimbursement program for expenditures in excess of fair share; and affordable housing fee.	Change the Master Plan regulations or adopt a Development Title Amendment (see Mitigation Measure M4.2-2)
The Development Title requires that a Special Purpose Plan be prepared for the Mixed Use (M-X) zone.	The Draft Master Plan requires that a Specific Plan, not a Special Purpose Plan, be prepared for the Town Center subarea, which includes the M-X zone.	Change the Master Plan regulations or adopt a Development Title Amendment (see Mitigation Measure M4.2-2)

**Note:** These are the most significant inconsistencies between the Draft Master Plan and the County Development Title that have been identified. Additional inconsistencies between the two documents may be identified, based on the interpretation of policies by County staff. According to County staff, some amendments to the Development Title necessary to accommodate the Master Plan might be applicable Countywide and to all new communities.

**Mitigation Measure M4.2-2**

*For each inconsistency between the Master Plan and the County Development Title that allows more lenient standards in the Master Plan, either the Master Plan standard must be changed or the Development Title must be amended to permit the difference. If any regulations in the Development Title are changed to reconcile inconsistencies, the proposed Development Title Amendment should be phrased to apply only to the project, only to new communities, or only to projects that have an adopted Master and Specific Plan.*

**SPECIFIC PLAN**

Draft Specific Plan I includes rezoning of the site to various urban densities. Specific Plan I development would be governed by the County's General Plan 2010 and policies and implementations of the Master Plan. No additional impacts related to General Plan and Development Title consistency have been identified in the Draft Specific Plan I. No further impacts have been identified.



## **4.3 PUBLIC SERVICES**

### **4.3.1 PARKS AND RECREATION**

#### **Setting**

San Joaquin County General Plan 2010 has specific park and recreational requirements for developments in the County. It is the County's objective to provide three acres of local parks per 1,000 residents and ten acres of regional park land per 1,000 residents. Local parks may consist of either pocket parks (less than one acre), neighborhood parks (less than 15 acres), or community parks (15+ acres) with tot lots, softball field(s), tennis court(s), or play areas. Regional parks (15 to 200 acres) should provide opportunities for outdoor recreation, boating, fishing, camping, and hiking.

There are no local parks on or adjacent to the project site. The closest local parks are within the city limits of the City of Tracy, where there is currently 30 miniparks (0.5 acre of open space) and 10 neighborhood parks (six to ten acres). County parks close to the site include the Larch Clover County Park (Figure 4.3.1-1), consisting of a 4.2-acre park with a community center, a tot lot, and two softball diamonds. The Mossdale Crossing and Dos Reis county parks (Figure 4.3.1-1) have boat launching facilities, day use picnicking, and camping. There are no permanent docking facilities at these parks.

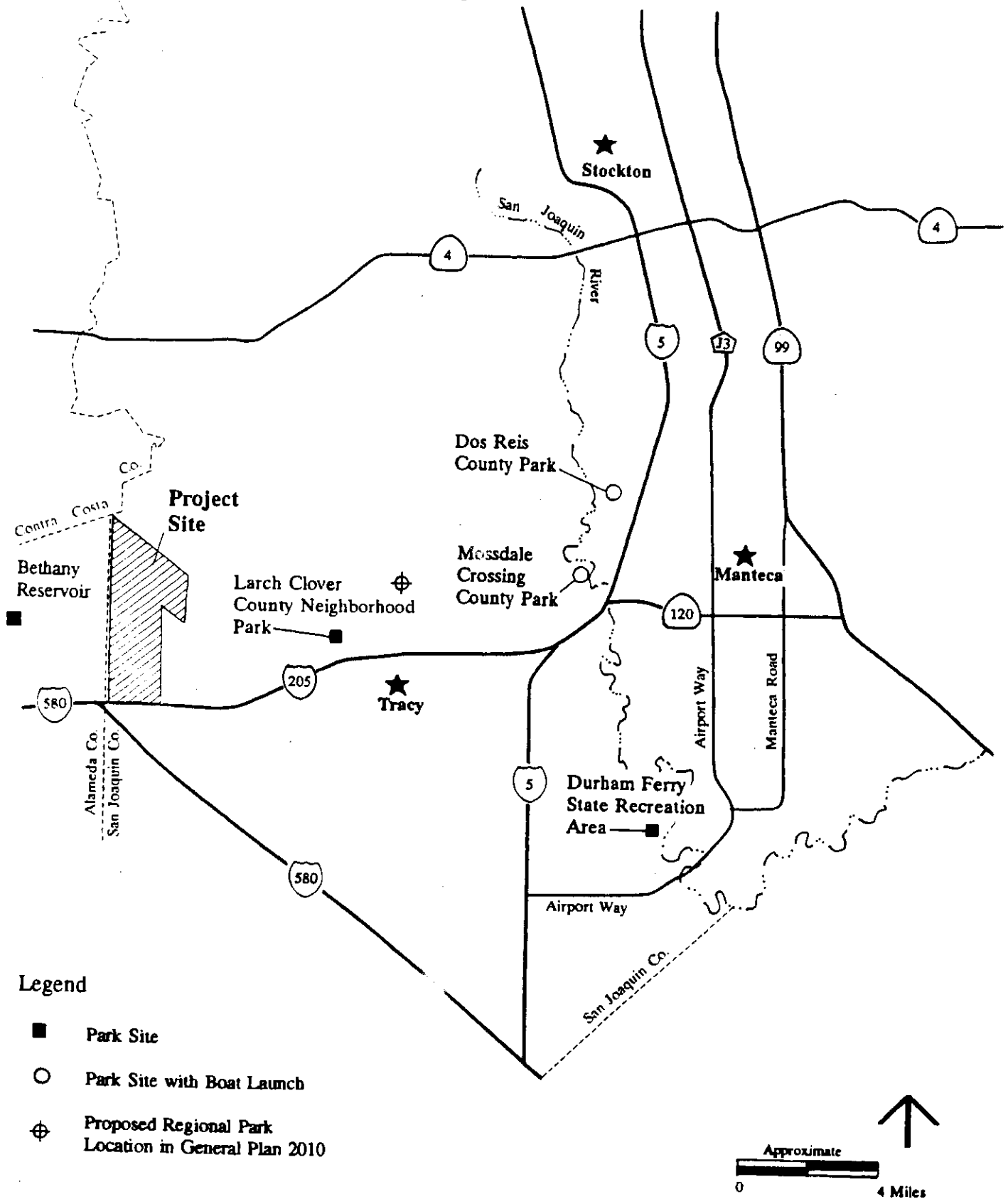
The closest regional park to the site in San Joaquin County is Durham Ferry State Recreation Area. In Alameda County, west of the site, the closest regional facility is Bethany Reservoir Park (Figure 4.3.1-1). The Durham Ferry facility includes 207 acres along the San Joaquin River with camping, day use and group picnicking, group camping, and bike trails. The General Plan 2010 includes a map that shows a generalized location for a proposed regional park near Old River east of the project site (Figure 4.3.1-1). The General Plan states that the generalized locations for parks are to be studied for appropriateness and acquisition if funds become available. The San Joaquin County General Plan 2010 estimates that by 2010, there will be a 3,000- to 4,000-acre deficit in regional parks in the County, assuming 10 acres of regional parks per 1,000 population. The General Plan 2010 states that the County shall develop and adopt programs for funding local and regional parks.

#### **Impacts and Mitigation Measures**

For the purposes of this DEIR, a significant impact would occur if park and recreation facilities were not sufficient to comply with the requirements of the San Joaquin County General Plan 2010 and if planned facilities were not available to the residents as they occupy the site.

# LOCATIONS OF REGIONAL RECREATION RESOURCES

Figure 4.3-1



## MASTER PLAN

At project buildout, it is proposed that the site would contain not less than five acres of local (neighborhood and community) parks per 1,000 residents<sup>1</sup> and 1.6 acres of on-site regional parks per 1,000 residents (Table 3.6). A comprehensive Parks and Open Space Plan (Park Plan) is proposed to be prepared prior to submittal of the first Development Permit. The Park Plan would provide detailed Park and Recreation policies, park facility standards, facility components, conceptual park plans, and preliminary plans for the goals, objectives, and policies for the parks and recreation facilities, assumptions and siting criteria (including signage), and costs and phasing.

The Draft Master Plan proposes that neighborhood parks would begin construction after 50 percent of each neighborhood were completed and be completed before 80 percent completion of the neighborhood.

Community parks would be developed as adjoining lands were developed. About 90 of the 180 acres of community parks would be located along the Mountain House Creek corridor. First-phase development of sports fields for team play would likely be constructed after about 800 units had been built; the first community park would be constructed prior to issuance of the 2,000th dwelling unit permit. The community and neighborhood park acreage proposed in the Draft Master Plan conforms with the County's requirement of three acres of park per 1,000 residents. The project is proposing up to five acres of local parks per 1,000 residents.

A 70-acre regional park would likely be constructed at the time of development of the specific plan(s) adjacent to Old River (Neighborhoods K and L on Figure 3.6). It is expected by the applicant that the regional park would be started at about 50 percent residential buildout of the project. The regional park would contain a linear park and wildlife preserve with facilities for picnicking, boating, fishing, trails, and play areas. Public access to the park would be provided by the extension of Central Parkway near the future marina.

In addition to neighborhood, community, and regional parks, about 450 acres of other open space areas have been proposed. These other open spaces include golf courses (301.5 acres), a marina (62 acres), easements (64 acres), wetlands (23 acres), and landscape buffers (3 acres). The golf courses may be privately or publicly owned, and would be constructed when the demand arose.

The project would include a trail network (Figure 3.8) connecting the neighborhoods and open space areas on-site. In addition, future regional trails connecting to Alameda and Contra Costa counties (including East Bay Regional Park District and Livermore Area Recreation & Park District) would be accommodated on-site. The historic De Anza Trail may be extended by the National Park Service

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<sup>1</sup> The five acres per 1,000 residents include passive open space/wildlife habitat along Mountain House Creek (80.5 acres); if that area were removed from consideration, the project would provide 3.7 acres of local parks per 1,000 residents.

#### 4.3 PUBLIC SERVICES

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onto the project site. If extended onto the site, the historic trail could be accommodated by connections with the on-site trail system.

##### **Impact M4.3.1-1**

**Regional park facilities proposed for the new community would not be adequate to serve residents of the project or to meet County General Plan standards. Parks may not be available to the first residents who occupy the project site.**

The project would need to include 435 acres of regional park land to comply with the 10 acres per 1,000 residents requirements of the San Joaquin County General Plan 2010. Since the project proposes only 70 acres of regional parks, there is a 365-acre deficiency in regional parks.<sup>2</sup> The lack of on-site regional parks would create an increased demand on regional parks in the County as well as on regional park facilities in adjacent Alameda and Contra Costa counties. In particular, the lack of regional park lands on the project site could increase use of the closest regional parks, including Bethany Reservoir in Alameda County (**currently operated by the State, but expected to be operated by East Bay Regional Park District in the near future**) as well as other facilities in the East Bay Regional Park District.

Since the 70-acre regional park is not proposed for development until implementation of specific plan(s) for Neighborhoods K and L (or after about 50 percent residential site development), residents in the first neighborhoods would not have access to on-site regional park facilities until later neighborhoods were developed.

##### **Mitigation Measure M4.3.1-1**

*(a) The Land Use Map, Policies, and/or Implementations under Recreation and Open Space (Appendix C) should be revised in accordance with one of the following alternative mitigation measures:*

- (1) The Land Use Map for the project should be changed to include an additional 365 acres of on-site regional park land to be developed on an incremental basis as the site develops, or*
- (2) The on-site golf courses should be dedicated to the County for public use and maintenance. The Land Use Map also should be changed to provide for 34 acres of regional park in addition to the 70-acre Old River regional park; the regional park facilities and golf courses should be developed incrementally as the site develops, or*
- (3) "365 acres (or less if golf course(s) were donated to the County) of off-site regional park land in the Tracy or Delta Planning Area **along a waterway shall be designated acquired and developed incrementally on a specific plan-by-specific plan basis as approved by the San Joaquin County Department of Parks and Recreation. If***

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<sup>2</sup> It should be noted that the County has not adopted an ordinance for collection of in-lieu fees for regional park facilities.

**more than one park site were acquired there must be one site of 100 acres minimum in size. ~~(possibly combined with The Park land could be developed as part of off-site mitigation for wildlife habitat and/or wastewater reclamation areas only if the development priority were recreational use, )~~ or**

(4) *"If an in-lieu fee program were adopted on a Countywide basis by the County, in-lieu fees shall be contributed to the County to allow the County to expand regional park facilities. An in-lieu fee could be imposed on the project at any time during project site development. This requirement shall be codified in the Development Agreement to apply to all phases of the project," or*

(5) *The County Park and Recreation Department ~~or the applicant~~ should enter into discussions with the East Bay Regional Park District **regarding a reciprocity agreement regarding use of District facilities by County residents and residents within District boundaries using County facilities** ~~regarding use of, expansion of, or maintenance of District facilities as a result of increased use of District parks by project site residents.~~*

(b) *The Draft Master Plan should be amended to ensure neighborhood and regional park availability for the first site residents; the Phasing and Costs section should be amended to read:*

*"Regional parks shall be implemented incrementally on a specific plan-by-specific plan basis; by completion of the first specific plan (which would result in about 25 percent project buildout), 25 percent of the proposed 70-acre regional Old River park shall be developed.*

*"Alternatively, the park can be developed in two stages, with the first stage being during construction of the first specific plan."*

## SPECIFIC PLAN I

The Draft Master Plan requires conceptual park plans for parks in Specific Plan I areas and preliminary park plans in the Parks and Open Space Plan to be submitted prior to the first Development Permit. Specific Plan I includes three five-acre neighborhood parks (total of 15 acres) adjacent to elementary schools and 54 acres of community park area near Mountain House Creek and on the northern edge of the future Town Center. The major portion of the community park acreage would function as wildlife habitat and storm water control; active recreation in this area would be a path. Specific Plan I population at buildout is projected to be about 11,150; thus, about 33 acres of local parks would be required; the proposed total of 69 acres would exceed the County requirements. Regional park land has not been proposed for the Specific Plan I area.

Temporary sports fields and open play areas would be provided prior to the issuance of the 800th dwelling unit permit. An 11-acre community park at Central Parkway and Main Street would be constructed prior to the issuance of the 2,000th dwelling unit permit.

#### 4.3 PUBLIC SERVICES

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##### **Impact S4.3.1-1 (C)**

**Specific Plan I does not provide regional park land in accordance with the requirements of the San Joaquin County General Plan 2010.**

For a population of 11,150 and a San Joaquin County General Plan 2010 standard of 10 acres of regional parks per 1,000 population, Specific Plan I should provide 112 acres of regional parks. No regional park land is proposed in Specific Plan I.

##### **Mitigation Measure S4.3.1-1 (C)**

*Refer to Mitigation Measure M4.3.1-1(a) for alternate methods of mitigation for the regional park land deficiency.*

##### **Impact S4.3.1-2 (C)**

**Community parks may not be available to the first site residents.**

Interim community parks are proposed after 800 dwelling units and an 11-acre park after 2,000 dwelling units. The Specific Plan proposes flood plain improvements along Mountain House Creek in Central Mountain House. Restoration of the riparian corridor, part of the Mountain House Creek Community Park, is also proposed as part of Specific Plan I. Timing of the habitat restoration and park development is not presented in Specific Plan I; **it is unknown whether habitat restoration would occur concurrently with park development. If these actions were not occurring concurrently, the community park may not be available for use during restoration activities.**

##### **Mitigation Measure S4.3.1-2 (C)**

*Habitat restoration and community park development along Mountain House Creek shall be implemented concurrently.*

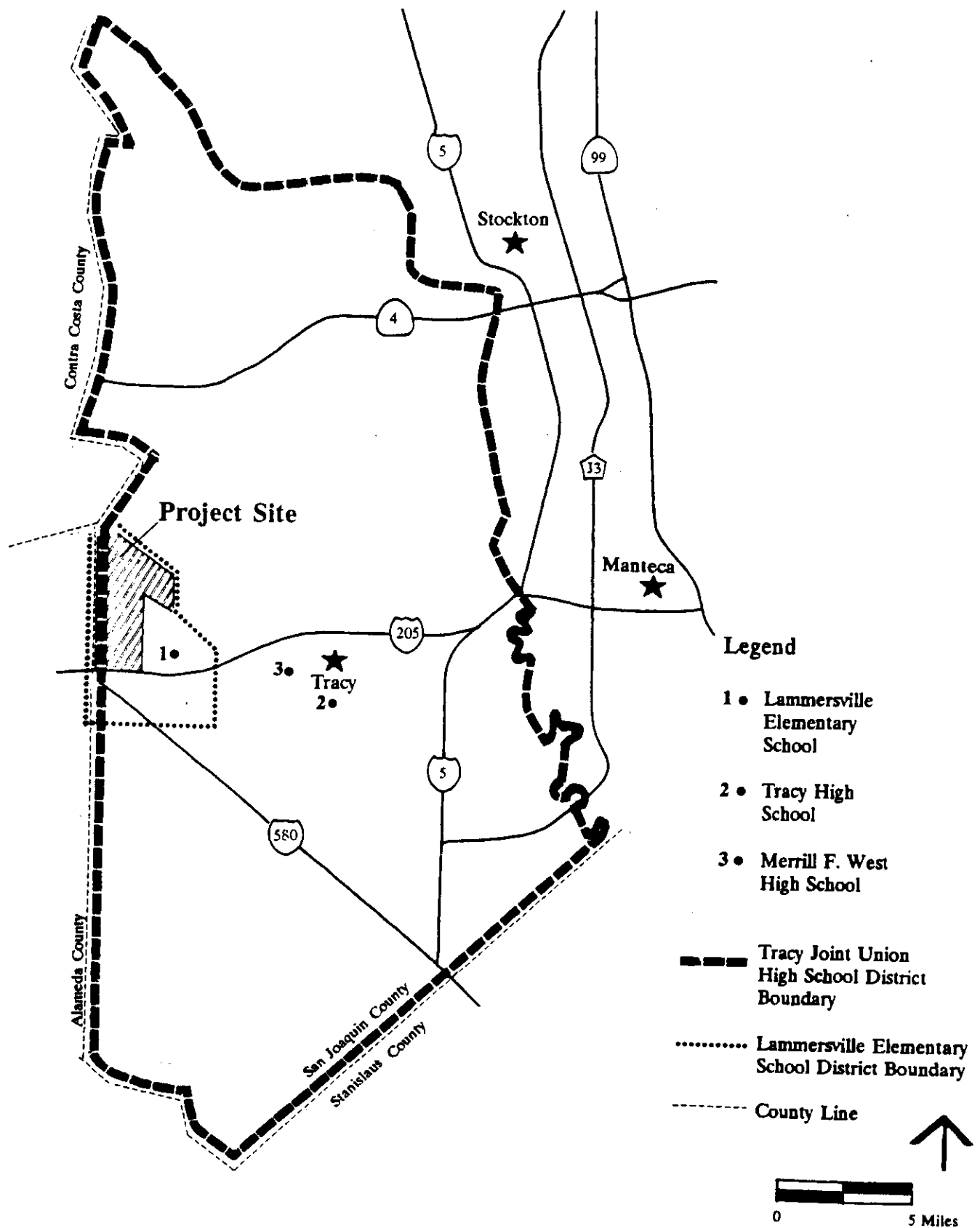
#### 4.3.2 SCHOOLS

##### **Setting**

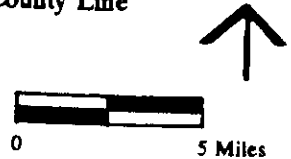
The project site is located within the boundaries of the Lammersville Elementary School District and the Tracy Joint Union High School District (Figure 4.3-2). The closest elementary school to the project site is Lammersville Elementary School at 16555 W. Von Sosten Road, about four miles from the site; this school currently has excess capacity. The closest high school is Merrill F. West High School, about six miles southeast of the site; the school has been partially completed and occupied. At the current time, excess capacity is available and ten portable classrooms would be installed next year to accommodate the transfer of 11th-graders from Tracy High School. Tracy High School is located about thirteen miles southeast of the site; this school has excess capacity at the current time. It is unknown whether the current excess capacity would remain in the future (Gongaware, 1994).

# SCHOOL DISTRICT BOUNDARY

Figure 4.3-2



- Legend**
- 1 • Lammersville Elementary School
  - 2 • Tracy High School
  - 3 • Merrill F. West High School
  - Tracy Joint Union High School District Boundary
  - ..... Lammersville Elementary School District Boundary
  - - - County Line



**BASELINE**

### Impacts and Mitigation Measures

For the purposes of this DEIR, a significant impact would occur if the capacity of the existing schools were exceeded during the initial phases of the project, when on-site schools had not been completed. In addition, significant impacts would occur if the schools were located in areas that could represent a hazard to students.

### MASTER PLAN

Twelve elementary and two high schools are proposed for the site at project buildout. The specific locations of the schools have not been determined. The general school locations are shown on Figure 3.4. The actual siting of each school would be determined in coordination with the School District as part of the preparation of Special Purpose plans<sup>3</sup> for Neighborhood Centers in accordance with the Draft Master Plan siting criteria (Appendix C).

The Draft Master Plan proposes that prior to submittal of the first Development Permit, a School Facilities Plan would be completed outlining the funding, planning, design, approvals, construction, and interim facilities. A K-8 School Plan would be prepared as part of Special Purpose plans prepared for Neighborhood Centers.

It is estimated that there would be a total of 9,811 K-8 students and 4,573 high school students at project buildout. The estimate of students from the project has been developed based on the specific generation rates from the various residential densities proposed at the site (Table 4.3-1). School construction throughout the project life would be phased in accordance with the number of students present on the site (Table 4.3-2).

Students present on the project site during initial construction would have to attend school off-site at Lammersville Elementary School and at Tracy High School. ~~It is unknown whether~~ These facilities ~~would currently do not~~ have capacity to accommodate at the time project students ~~would attend~~ (Gongaware, 1994).

Child care facilities would be permitted uses at each of the schools, neighborhood centers, in business parks, and adjacent to churches and commercial uses. A minimum of three one-acre child care facilities would be provided adjacent to the K-8 schools. A clearinghouse for day care information for site residents would be maintained by the Community Services District.

### Impact M4.3.2-1

~~The proposed project would increase the need for elementary and middle schools. The proposed twelve elementary/middle schools may be insufficient to accommodate the community's students.~~

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<sup>3</sup> Special Purpose plans are required for some areas covered in the specific plans to allow for greater level of design study and review. Special Purpose plans would be prepared for Community Commercial areas, Neighborhood Centers, and Freeway Service areas.



TABLE 4.3-1  
STUDENT GENERATION

Master Plan Residential Land Use Designation	Average Units per Acre	Dwelling Units at Buildout	K-8 Students per Unit	K-8 Students at Buildout	9-12 Students per Unit	9-12 Students at Buildout
Very low	1.08	82	0.676	55	0.300	20
Low	4.50	4,882	0.676	3,300	0.300	1,465
Medium	7.10	8,217	0.676	5,555	0.300	2,465
Medium-high	12.00	1,914	0.338	647	0.240	459
High	18.00	549	0.338	186	0.219	120
Town Center	--	200	0.338	68	0.219	44
Senior housing	--	261	0	0	0	0
<b>Totals</b>		<b>16,105</b>		<b>9,811</b>		<b>4,573</b>

Source: The SWA Group, 1994a.

Note: The student generation rates for medium, medium high, and high density residential areas differ from those used by Lammersville Elementary School District and Tracy Joint Union High School District. These school districts have been working with the applicant to develop different student generation numbers for higher density residential areas and have agreed that the rates presented in this table are appropriate; the rates may change in the future (Gongaware, 1994).

TABLE 4.3-2  
PHASING OF SCHOOLS

	Facility	Timing
Elementary Schools (K-8)	Phase I of first K-8 school (capacity of 600-700 students)	375 residences or 225 students
	Phase II of first K-8 school	1,050 residences or 600 to 700 students
	Phase I of each additional K-8 school	When previous K-8 school is near capacity
	Phase II of each additional K-8 school	When Phase I nears capacity
High Schools (9-12)	Phase I of first high school (core facilities and 1,200 capacity)	650 students
	Phase II (additional 600 capacity)	1,200 students
	Phase III (additional 600 capacity)	1,800 students
	Phase I of second high school (core facilities and 1,200 capacity)	2,400 students
	Phase II (additional 600 capacity)	3,600 students
	Phase III (additional 600 capacity)	4,200 students

The student generation rates (Table 4.3-1) presented in the Draft Master Plan differ from those presented in the FSEIR; specifically, the rates for medium, medium high, and high density residential uses have been reduced, based on the assumption that residents living in higher density development do not generally have as many school-aged children. If this assumption were correct, the twelve proposed elementary schools with a maximum occupancy of 870 students per school would be sufficient to serve the site; if the student generation rates were too low, additional facilities could be needed; if the school rates were too ~~low~~ **high**, ~~fewer~~ **smaller** schools could be required. **Without additional interim facilities, additional students could not be housed in existing facilities at the Lammersville Elementary School and existing Tracy Joint Union High School District's high schools.**

#### **Mitigation Measure M4.3.2-1**

*The Draft Master Plan should include a revised and an additional Implementation under Objective I in Education (Appendix C), and Master Plan Table 17-2, as follows:*

*"f) Funding sources for school facilities, including temporary facilities at existing off-site locations shall be identified in the public financing plan.*

*"g) The second and each subsequent specific plan shall contain an evaluation of the student generation rates in previous specific plan(s) to assess the appropriateness of the assumed student generation rates for medium, medium high, and high density residential development. If the rates were higher than assumed, additional schools may be necessary in subsequent specific plan areas; if the rates were lower, fewer students may be attending each school; **the number of schools shall not change.** The land use plan containing twelve K-8 and two high schools shall not be changed to reduce the number of schools **without a Master Plan revision and concurrence from the school district.**"*

#### **Impact M4.3.2-2**

**Several proposed schools are located in proximity to high voltage transmission lines, natural gas lines, and/or a household disposal area ~~an inactive landfill~~. The presence of these utilities may present health risks to students.**

Review of the land use plan (Figure 3.4) and the locations of subsurface pipelines and an inactive ~~landfill~~ **household disposal area** (Figure 3.7) indicate that two schools ~~would~~ **may** be located<sup>4</sup> in areas that could present health hazards to students:

- Elementary School in Neighborhood I: May be underlain by a natural gas pipeline.

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<sup>4</sup> It should be noted that due to the scale of the land use map, the actual proximity of schools to potential hazards is uncertain. For this analysis, the worst-case conditions have been assumed.

- High school in Neighborhood D (part of Specific Plan I): May be underlain by a former ~~landfill~~ **household disposal area**.

The Draft Master Plan provides for setbacks from transmission power lines to minimize exposure of students from electromagnetic fields (EMF). The setbacks are 100 feet from 50- to 133-kV lines; 150 feet from 220- to 230-kV lines; and 350 feet from 500- to 550-kV lines.

**Mitigation Measure M4.3.2-2**

*The underground pipelines should be moved and the ~~landfill~~ **household disposal area** hazards remediated prior to construction. Alternatively, the Land Use Map for the project should be revised/**refined** to ensure that the elementary school in Neighborhood I is not near underground fuel lines and the high*

#### 4.3 PUBLIC SERVICES

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*school in Neighborhood D should be ~~moved~~ located to ensure that it is not underlain by underground pipelines or an inactive ~~landfill~~ household disposal area.*

##### **Impact M4.3.2-3**

**The school sites may not conform to all siting criteria for schools in accordance with California Code of Regulations (CCR) Title 5, Educational Code, Public Resources Code, California Department of Education guidelines, and San Joaquin County General Plan 2010.**

Regulatory requirements for school siting (Table 4.3-3) are included in the Draft Master Plan. In general, the Land Use Plan for the project appears to conflict with some siting criteria. The school sites in the Draft Master Plan are general; therefore, it is not possible to determine specifically which schools may be in non-conformance with the siting criteria. The following is a general evaluation of conformance with school siting criteria; actual conformance would have to be determined at a time when additional details become available.

- Evaluation of exterior sound levels would need to be implemented prior to site development to ensure that they do not exceed 60 dB L<sub>dn</sub>.
- Moderate to high liquefaction potential soils may be present near Old River and along Mountain House Creek, affecting the high school in Neighborhood J and elementary schools in Neighborhoods I, J, and K.
- The school sites may be located on lands used by protected species for nesting and foraging.
- The northern portion of the Neighborhood D high school may be underlain by an inactive ~~landfill~~ household disposal area.
- The elementary school in Neighborhood I may be underlain by fuel pipelines.
- The schools may be placed in areas underlain by soils containing hazardous materials.
- School sites may be underlain by unstable soils.

##### **Mitigation Measure M4.3.2-3**

*(a) Refer to Mitigation Measure M4.3.2-2 regarding school locations near a ~~landfill~~ household disposal area and fuel pipelines.*

*(b) Refer to Mitigation Measure ~~M4.12-1~~ M4.10-1 regarding investigations for the presence of hazardous materials in the subsurface.*

*(c) Refer to Mitigation Measure ~~M4.13-1~~ M4.11-1 regarding development in areas of special natural resource areas.*

TABLE 4.3-3

## STATE OF CALIFORNIA SCHOOL SITING CRITERIA

Criteria	Master Plan	Master Plan Land Use Plan Conformance	Specific Plan I Conformance
1. Power line distances must be 100 feet for 50-133 kV; 150 feet for 220-230 kV; 350 feet for 500-550 kV	Contains criteria for power line distances to schools	Elementary school in neighborhood A may be located under a proposed transmission line.	No impact.
2. School sites must be more than 1,000 feet from a railroad right-of-way	Contains siting criteria	No impact.	No impact.
3. Exterior sound levels should not exceed 65 dB $L_{dn}$ or CNEL	Contains siting criteria; would not exceed 60 dB $L_{dn}$	Evaluation of outside sound levels would need to be conducted prior to site construction.	No impact.
4. School sites cannot be located in 100-year flood plains.	Contains siting criteria	No schools are located within the 100-year flood plain.	No impact.
5. Schools must not be located across an active fault.	Contains siting criteria	The site is not traversed by active fault traces.	No impact.
6. Schools cannot be within areas of moderate to high liquefaction potential.	Contains siting criteria	Elementary schools in Neighborhoods I, L, and K and the high school in Neighborhood J are near Old River and Mountain House Creek, may be underlain by liquefaction-prone sediments.	No known impacts. <sup>1</sup>
7. School sites should not be adjacent to incompatible uses, such as commercial, industrial, or agriculture.	Contains siting criteria	School sites are not near incompatible uses.	No known impacts.

Table 4.3-3 School Siting Criteria - *continued*

Criteria	Master Plan	Master Plan Land Use Plan Conformance	Specific Plan I Conformance
8. Easements on adjacent sites must not restrict school access or building placement.	Contains siting criteria	No impact.	No impact.
9. Sites should be avoided that contain protected natural resources.	Contains siting criteria	Protected species may use the proposed school sites for foraging or nesting. Refer to Biological Resources section.	Protected species may use the proposed school sites for foraging or nesting. Refer to Biological Resources section.
10. School sites cannot be located on solid or hazardous waste disposal sites.	Contains siting criteria	The northeastern portion of the Neighborhood D high school may be located near an inactive <del>landfill</del> household disposal area.	The high school site may be located near a small <del>solid waste landfill</del> household disposal area.
11. School sites cannot be underlain by pipelines containing hazardous substances.	Contains siting criteria	The elementary school in Neighborhood I may be underlain by pipelines.	No impact.
12. The school site cannot be within two miles of a runway without approval from Division of Aeronautics.	Contains siting criteria	No existing or planned runways are within two miles of school sites.	No impacts.
13. School sites cannot be within ¼ mile of hazardous air emitters.	Contains siting criteria	There are no current industrial uses within ¼ mile of school sites. The elementary school in Neighborhood B may be within ¼ mile of future industrial uses.	No known impacts.
14. Schools must have 200-foot visibility from driveways and be accessible from arterial roads with access to a planned collector or minor arterial street.	Contains siting criteria	Site design to be developed on Specific Plan stages.	No impacts. Refer to Transportation section.

Table 4.3-3 School Siting Criteria - *continued*

Criteria	Master Plan	Master Plan Land Use Plan Conformance	Specific Plan I Conformance
15. Schools must not be on a major arterial.	Contains siting criteria	Schools are not on major arterials.	No impacts.
16. School siting must consider hazardous materials present on-site or aerial spraying.	Contains siting criteria	It is unknown whether the school sites currently contain hazardous materials. <sup>1</sup>	It is unknown whether the school sites currently contain hazardous materials. <sup>1</sup>
17. Joint use of parks, libraries, museums must be considered.	Contains siting criteria	The land use plan proposes joint use of neighborhood parks.	No impacts.
18. School siting must consider adjacent odor nuisances and pest and mosquito breeding sites.	Contains siting criteria	Odor generating land uses are not currently located or planned adjacent to school sites.	No impacts.
19. Topographical protrusions must be considered.	Contains siting criteria	The project site is relatively flat with limited irregular topography.	No impacts.
20. School sites must have stable subsurface soils.	Contains siting criteria	The stability of subsurface conditions must be evaluated at the Specific Plan stage prior to construction. <sup>1</sup>	No impacts.
21. School sites must not be near aboveground fuel tanks without a risk assessment.	Contains siting criteria	There are no current aboveground fuel tanks at proposed school sites.	No impacts.
22. Most K-8 school sites must be within ¼ mile of the served community, and most high school sites must be within two miles of the served community.	Contains siting criteria	The school sites are within the required distance to the served community.	No impacts.

<sup>1</sup> Soil and geologic report and/or Phase I site assessment must be prepared prior to school district acquisition to ensure compatibility with school siting criteria.

*(d) Site-specific soil investigations should be conducted prior to construction to determine the liquefaction potential of the soils in Neighborhoods I, J, and K. All construction should be performed in accordance with the recommendations of the licensed professional preparing the report.*

*(e) The potential extent of the ~~landfill~~ household disposal area should be identified and remediation implemented in accordance with local and State regulatory oversight. Alternatively, the Land Use Map of the Master Plan should be revised to ensure that the high school in Neighborhood D is not underlain by the ~~solid waste landfill~~ household disposal area site.*

### **SPECIFIC PLAN I**

Based on the student generation rates identified in the Draft Master Plan, a total of 2,479 K-8 students and 1,179 high school students would be generated at Specific Plan I buildout (Table 4.3-4). A School Facilities Plan is proposed to be prepared following approval of Specific Plan I and prior to submittal of the first Tentative Map.

In Specific Plan I, three elementary schools and one high school are proposed for construction (Figure 3.12). Each elementary school site would be up to 16 acres in size and the high school would be up to 46.5 acres in size. Upon completion of the first K-8 school, a child care facility would be made available in Neighborhood F.

In Old River Industrial Park, five acres would be available for a corporation yard and other ancillary facilities for the elementary schools and the high school, respectively. The development of these sites would be on an as-needed basis. The siting of the school facilities would conform to regulatory agency siting criteria if the mitigation measures identified for the Master Plan, above, were implemented.

#### **Impact S4.3.2-1 (c)**

**Specific Plan I is not in conformance with the requirements of the Draft Master Plan. A School Facilities Plan is proposed to be prepared prior to submittal of the first Tentative Map.**

The Draft Master Plan requires that a School Facilities Plan be prepared prior to submittal of the first Development Permit. The School Facilities Plan would serve to identify phased funding for schools, planning, design approvals, and construction and opening of schools and affiliated facilities. Specific Plan I proposes that the School Facilities Plan be prepared prior to the submittal of the first Tentative Map and not prior to submittal of the first Development Permit.

#### **Mitigation Measure S4.3.2-1 (c)**

*Specific Plan I should be amended to ensure that a School Facilities Plan be prepared and ~~submitted to the County for review and approval~~ **approved by the State and the school districts** prior to submittal of the first Development Permit.*



TABLE 4.3-4  
STUDENT GENERATION  
SPECIFIC PLAN I

	Specific Plan I Residential Land Use Designation and Student Generation				
	Low	Medium	Medium- High	High	Total
K-8 student generation rate	0.676	0.676	0.338	0.338	--
High school student generation rate	0.300	0.300	0.240	0.219	--
<u>Neighborhood E:</u>					
Buildout Units	580	570	228	0	1,378
K-8 students	392	385	77	--	855
High school students	174	171	55	--	401
<u>Neighborhood F:</u>					
Buildout Units	527	440	0	432	1,399
K-8 students	356	297	--	146	799 <sup>1</sup>
High school students	158	132	--	94	384
<u>Neighborhood G:</u>					
Buildout Units	388	692	282	0	1,362
K-8 students	262	468	95	--	825
High school students	116	208	70	--	394

Note: See note to Table 4.3-1 for discussion of student generation rates.

<sup>1</sup> Includes 68 students from 200 units in the Town Center area.

### 4.3.3 FIRE PROTECTION

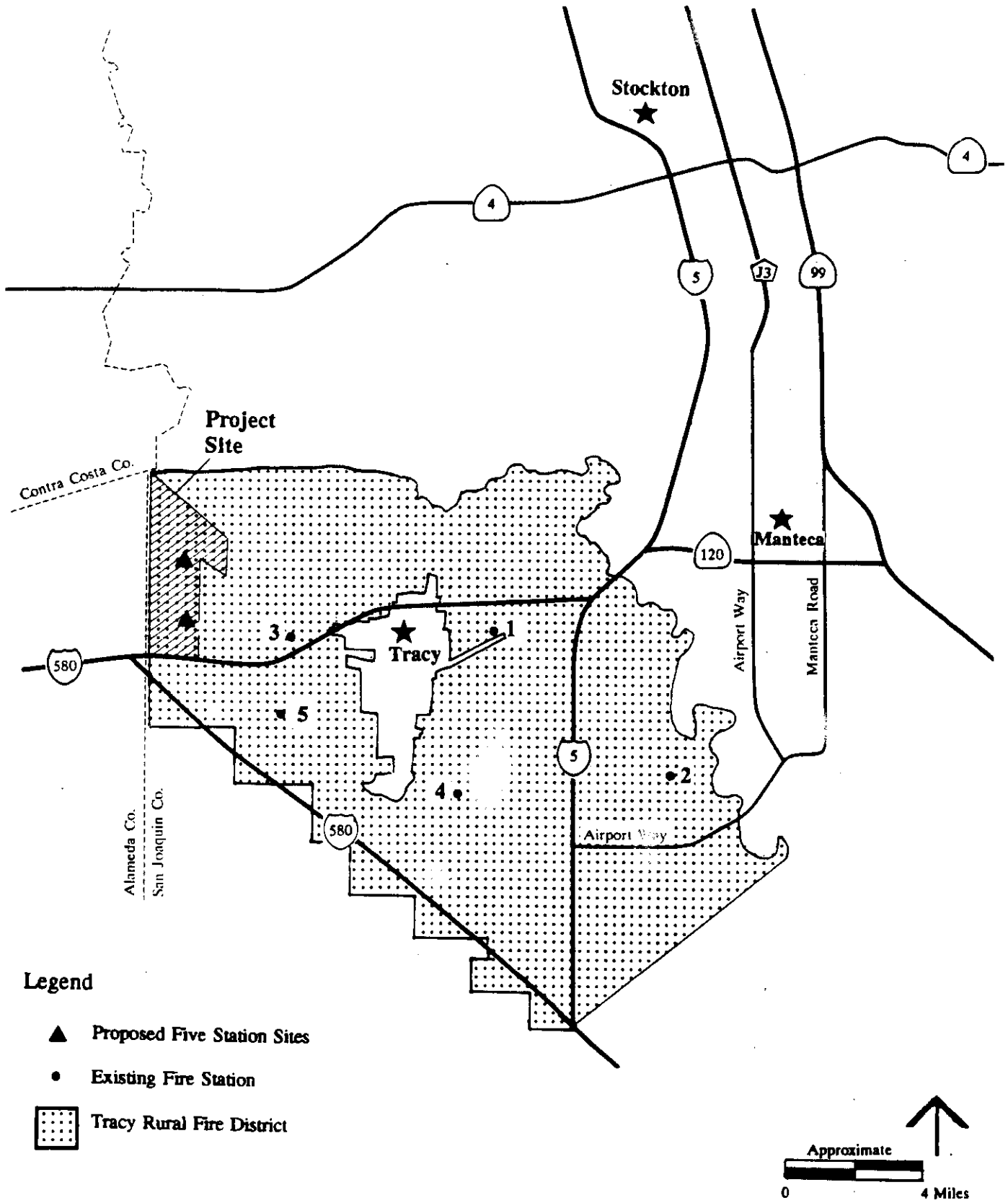
#### Setting

The project site is located within the Tracy Rural County Fire Protection District, which operates four fire-fighting stations and will be adding a fifth station in 1994 (Figure 4.3-3). Emergency medical services are provided within the District by one ambulance housed at Tracy Hospital on Tracy Boulevard and one ambulance housed at Fire Station 3.

Station 3 is the primary response station to the project site. Average response time to the project site is approximately three minutes. A fifth fire station, in the vicinity of Hansen and Schulte roads, is proposed to be opened May 1994; this station is approximately two miles south of the site and would be the primary response station to the southern portion of the site. Response time from

# TRACY RURAL FIRE DISTRICT BOUNDARY AND FIRE STATION SITES

Figure 4.3-3



## Legend

- ▲ Proposed Five Station Sites
- Existing Fire Station
- ▤ Tracy Rural Fire District

Source: Mills Associates

R10114-BO.03 6/6/94

Station 5 to the project site would be two to three minutes (LeBlanc, 1993). The San Joaquin County General Plan 2010 specifies that fire station locations be planned to achieve a maximum run time of three minutes or 1.5 miles in urban areas, or six minutes or four miles in rural areas.

The firefighting force in the District consists of 24 uniform personnel, two non-uniform personnel, and approximately 15 to 20 volunteers. As of January 1994, Stations 1 through 3 will have two persons on duty per shift. Station 4 will have one person on duty. Station 5 has not been staffed. The number of firefighters responding to emergency calls is determined by how many volunteers are available at the time. The District receives approximately 1,600 calls annually. The majority of calls received by the District are for emergency medical services for vehicle injuries or vehicle fires (75 to 80 percent), less than one percent for hazardous materials, and the remainder of responses for structural/wildland fires and other responses. The District is part of the state-wide mutual aid system and can obtain assistance from all of California's fire resources (LeBlanc, 1993).

#### **Impacts and Mitigation Measures**

For the purposes of this DEIR, a potential for inadequate provision of local fire services at the project site would constitute a significant impact.

#### **MASTER PLAN**

When the project is complete, it is estimated by the applicant that approximately 2,200 responses may be experienced annually. Approximately 80 percent would be of a medical nature, 10 percent for hazardous materials, and 10 percent for fires and other events. These estimates were obtained by averaging fire service response data from cities in California with similar demographics to the proposed project at buildout. However, the actual fire responses would likely be lower during the first 10 to 20 years due to the higher percentage of new construction within the community (LeBlanc, 1994).

The project would initially be served by the Tracy Rural Fire Protection District. Services would be provided through a combination of interim and permanent facilities as determined by the needs of the Tracy Rural Fire Protection District. Specific phasing and facility needs would be provided in a Fire and Emergency Protection Plan to be prepared prior to submittal of the first Development Permit.

One or two fire stations are proposed to be constructed on-site. The proposed fire service standards would accommodate a response time of less than three minutes or less than a 1.5-mile run. Emergency medical response would be handled by the fire department. The proposed locations for permanent fire stations are shown on Figure 4.3-3.

Prior to submittal of the first Development Permit, a contract is proposed to be completed with the Tracy Rural Fire Protection District to delineate fire protection standards for the project.

#### 4.3 PUBLIC SERVICES

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A fire safety program is proposed that would include a staff of professional firefighters and paramedics, augmented by cross-trained Community Services District employees. A fire prevention/risk reduction program would be implemented through adoption of regulations which would include public education, pre-fire planning, training, inspections, adoption of risk reduction policies, development of an integrated communications system, and hazardous materials classification and labeling system. The fire department would maintain records pertaining to locations of toxic materials.

##### **Impact M4.3.3-1**

**The proposed project would temporarily increase the demand for local fire protection service until on-site services were provided.**

The proposed project would, at buildout, provide on-site fire protection services, including fully-staffed and equipped fire stations. However, the project would increase the demand on local fire protection services until long-term services would be provided.

The Draft Master Plan specifies general agency responsibility, staffing, equipment needs, preferred station locations, and the development of fire protection standards (Appendix C). The first fire station would be constructed when needed, as determined by the Tracy Rural Fire Protection District to ensure less than a three-minute response time or a less than 1.5-mile run. It is expected that the first phase of a permanent fire house would be constructed after construction of about 1,800 dwelling units.

##### **Mitigation Measure 4.3.3-1**

*The following Implementations are recommended for addition to Objective I in Fire Protection and Emergency Response (Appendix C):*

- "i) The on-site fire station shall include an ambulance if the Fire Services were responsible for emergency medical service transport.*
- "j) Fire service and protection standards during construction and occupation of the project, including the addition of staff and equipment to existing off-site facilities and the construction, staffing, and outfitting of on-site facilities, shall be included in the Fire ~~and~~ Emergency Protection Plan. The standards shall be submitted to the County and local fire protection service agency for review and approval prior to approval of the first Development Permit."*

#### **SPECIFIC PLAN I**

Fire protection would initially be contracted to the Tracy Rural Fire Protection District. The first permanent fire station is proposed when needed to ensure a three-minute run time or a less than 1.5-mile run; it would be located in the northern portion of the site within Central Mountain House near

the future Town Center. An interim facility would be constructed when about 100 dwelling units were occupied.

**Impact S4.3.3-1 (C,O,M)**

**Specific Plan I is inconsistent with requirements for providing institutional arrangements for fire protection services.**

The Draft Master Plan requires that specific plans contain finalized institutional arrangements for fire protection service, policies relative to fire flow requirements, funding, construction, and ownership of fire stations, and a program for implementing proposed services. The Tracy Rural Fire Protection District would determine fire service needs for the community until the community would be able to provide adequate fire protection services directly. Specific Plan I proposes that an interim fire protection facility would be operational when no more than 100 residential units were occupied.

**Mitigation Measure S4.3.3-1 (C,O,M)**

*(a) Documentation pertaining to finalized institutional arrangements, fire flow data, and funding and ownership of stations from construction through buildout should be provided prior to the first Development Permit.*

*(b) The Fire Protection sections in the Draft Master Plan and Draft Specific Plan I should be amended to state that the first permanent fire station shall be provided when 1,800 dwelling units have been constructed and occupied or as determined by the ~~Tracy Rural~~ Fire Protection District.*

#### 4.3.4 POLICE PROTECTION SERVICE

##### Setting

In the project area, law enforcement services are provided by the San Joaquin County Sheriff's Department. The Department operates its patrol division and jail facilities out of French Camp, south of Stockton. The Department has no substations. The Sheriff's Department provides services to the unincorporated portions of the County. Responsibilities of the Sheriff's Department include:

- routine law enforcement duties
- operating the jail
- maintaining security in the courts
- serving civil papers
- providing crime prevention instruction to schools and community groups
- conducting coroner's investigations

#### 4.3 PUBLIC SERVICES

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The site is located within Patrol District 8 which encompasses a large area in the extreme southwest corner of San Joaquin County. The Sheriff's Department is funded only to provide rural police protection throughout the County's unincorporated area. The current ratio of patrol personnel to residents on a countywide basis is 0.7 officer per 1,000 residents, or one officer per approximately 1,430 residents. The ratio of patrol personnel in District 8 is not known, but is thought to be less than countywide (Esau, 1993).

The San Joaquin General Plan 2010 specifies that the standard ratio for law enforcement shall be 1.5 officers assigned to patrol duty per 1,000 residents in urban communities or one officer per 1,000 residents in unincorporated areas. Response times vary depending on the size of the patrol area, density of the population served, the level of traffic congestion, accessibility, and number of incidents occurring at the same time.

Old River is not currently patrolled by the Sheriff's Department (Esau, 1993). The Contra Costa Sheriff's Department Marine Services Bureau patrols Delta Waters in Contra Costa County in the vicinity of the project site once on Saturday and Sunday only (Dodd, 1993). The Sacramento-San Joaquin Delta Protection Act includes provisions for a plan to be developed for a coordinated marine patrol system throughout the Delta to ensure an adequate level of public safety. The plan has not been developed at the time of publication of this document.

#### **Impacts and Mitigation Measures**

For the purposes of this DEIR, an increase in demand for police service as a result of the proposed project would constitute a significant impact.

#### **MASTER PLAN**

The project proposes to provide police protection at a level required by San Joaquin County General Plan 2010 and any additional needs of the community. Initially the project would contract with the San Joaquin County Sheriff's Department. A start-up police patrol of six deputies would be provided by the County Sheriff's Department as the first few homes were developed. A local police dispatching unit would be established if found viable by the Sheriff's Department and Mountain House community. The first phase of a 4,800-square foot police facility would be provided when the community's population reached 7,500 people.

Long-term police services for the site would be developed as part of a contract with the County Sheriff's Department, proposed for preparation prior to approval of the first Development Permit.

#### **Impact M4.3.4-1**

**The proposed project would temporarily increase the demand for police services from the County Sheriff's Department.**

Urban level police services would be provided to the community by the Sheriff's Department, with supplemental contracts for certain duties. Until on-site officers were hired, the project would

increase demand for services from the Sheriff's Department, resulting in the need for increased funding. Using the General Plan standards of 1.5 officers per 1,000 population for an urban community, the project would require approximately 66 officers at buildout.

#### **Mitigation Measure M4.3.4-1**

*The Master Plan should include Implementations under Objective 1 in Police Protection (Appendix C), as follows:*

*"e) ~~I~~ A proposal for institutional and funding arrangements for providing police services shall be finalized prior to submittal of the first Development Permit submitted at the time of formation of the Community Services District, as well as phasing of on-site police services, if required.*

*"f) Deputy officers shall be added to the Sheriff's Department when the first residences in the first Specific Plan area are constructed. Additional Sworn officers shall be provided at a ratio of 1.5 officers per 1,000 residents within the community."*

#### **Impact M4.3.4-2**

**The number of marine patrols on Old River would be insufficient at project buildout to provide effective law enforcement along Old River and in the Delta within the project vicinity.**

The project would increase demand on the San Joaquin County Sheriff's Department and the Contra Costa County Sheriff's Department Marine Services Bureau. Existing patrol services are currently inadequate and may cease in the future due to a lack of funding. The demand for patrol services would increase when marina facilities were constructed.

#### **Mitigation Measure M4.3.4-2**

*The Master Plan should include additional Implementations under Objective 1 in Police Protection (Appendix C), as follows:*

*"g) The Fire ~~and Emergency~~ Protection Plan shall include provisions to patrol the Mountain House marina and the immediate vicinity of the marina.*

*"h) Fees, based on the number of berths, shall be assessed to help offset costs for providing marine patrol services by both San Joaquin and Contra Costa counties. If the counties cease patrol services in the future, the fees shall be used to contract for patrol services; and/or comply with the provisions of the plan to be completed by the Delta Protection Commission for coordinated marine patrols in the Delta.*

*"i) Specific plan(s) for the areas along Old River must incorporate crime prevention policies, such as providing security fencing, good lighting, visible berth numbers, and locked gates on boat docks for the marina and related facilities along Old River."*

#### 4.3 PUBLIC SERVICES

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##### **SPECIFIC PLAN I**

Police protection would be provided by the County Sheriff's Department. The first phase police facility would be provided when the community's population reaches 7,500 people. The police facility would be located in the Town Center area. The Draft Master Plan proposes that prior to the approval of the first Development Permit, a contract with the Sheriff's Department would be in effect for providing police services to the site.

##### **Impact S4.3.4-1 (C,O,M)**

**The proposed project would increase the demand for police services from the County Sheriff's Department.**

The Sheriff's Department would need to provide police protection in accordance with the General Plan requirement of 1.5 officers per 1,000 population (Esau, 1993). With a buildout population of 11,600 residents, Specific Plan I would require approximately 17 police officers.

##### **Mitigation Measure S4.3.4-1 (C,O,M)**

*Deputy officers should be added to the Sheriff's Department when the first residence in the Specific Plan I area has been constructed. ~~Additional~~ **Sworn** officers should be provided in the Mountain House community as the population grows at a ratio of 1.5 officers per 1,000 residents.*

#### **4.3.5 SOLID AND HAZARDOUS WASTE**

##### **Setting**

San Joaquin County is divided into six refuse service areas for solid waste collection. Commercial and industrial wastes are collected by private collection companies. The project is within the South County Refuse Service area. Delta Disposal Company currently is under contract with the County for solid waste collection in the South County Refuse Service Area. Solid waste is brought to a transfer station south of Tracy and trucked to the Foothill Landfill, a Class III landfill permitted to receive nonhazardous waste, located approximately 50 miles from the site in eastern San Joaquin County.

The County Hazardous Waste Management Plan (CHWMP) addresses emergency response programs, contaminated sites, educational, and administrative programs related to hazardous wastes, existing and projected hazardous waste generations, and household hazardous wastes. The CHWMP projected a total hazardous waste stream of 18,748 tons per year for the County by the year 2000, of which 38 percent is attributable to household waste. Some hazardous wastes can be disposed at Forward, Inc., a private Class II landfill in the County. All other hazardous waste is transported to facilities outside the County. The CHWMP has been approved by the Board of Supervisors and by local city governments (Horton, 1993). A Source Reduction and Recycling (SRAR) Element prepared by the



County is currently undergoing revision prior to submittal for final approval by the Board of Supervisors (Karam, 1993). Also, a new transfer station site was approved by the County; it will be in operation in January or February 1995 when the Corral Hollow landfill closes.

The total solid waste generated in the County during 1992 was about 8 pounds per person per day, of which 6.6 pounds were disposed of in landfills; the remainder was recycled or composted. Approximately one percent of the volume landfilled was household hazardous waste.

Title 14 of the California Code of Regulations requires a statewide solid waste reduction goal of 25 percent by 1995 and 50 percent by the year 2000. The County provides three types of recycling services to southwestern San Joaquin County: curbside pick-up, buyback centers, and drop-off centers. In addition, the County provides household hazardous waste collection events in each city.

#### **Impacts and Mitigation Measures**

For the purposes of this DEIR, significant impacts would occur with an increase in generation of solid and hazardous waste and an associated reduced landfill capacity.

#### **MASTER PLAN**

Solid and hazardous wastes would be generated during project construction and by the occupants of the site. An objective of the project is to provide adequate waste management, reduce wastes, and encourage recycling. The Tracy Materials Recovery and Transfer facility is anticipated to reach full operating capacity by approximately 2010. An expansion of the facility and/or construction of additional transfer facilities would be needed. A 10-acre site in the Old River Industrial Park is proposed to be reserved for public land, and used for an additional transfer facility, if needed. In the interim, the proposed site would be available for on-site composting of green waste and re-use within the community.

Disposal of household hazardous waste generated by Mountain House would be managed by the County Solid Waste Division, which has a regional program in place. A Hazardous Materials Management Plan would be developed prior to approval of the first Development Permit for either the water or wastewater facility to address the management and disposal of hazardous waste at those facilities.

#### **Impact M4.3.5-1**

**Solid waste projected for project buildout could be 63,532 tons per year without implementing a recycling program. At buildout, the project could generate 524 tons of household hazardous waste. Solid and hazardous waste generated by the project would contribute to the reduction in local and regional landfill capacities.**

Using County waste generation rates, the project is estimated to generate about 64,000 tons/year of solid waste, based on a waste generation rate of 8 pounds per day per person (Horton, 1993). Of this amount, approximately 11,000 tons of waste would be recycled each year (based on 1992 rates

#### 4.3 PUBLIC SERVICES

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of recycling). Therefore, about 54,000 tons of waste per year would require disposal at a landfill. Successful implementation of the County Source Reduction and Recycling program would further reduce waste that would require landfill disposal.

##### **Mitigation Measure M4.3.5-1**

*The following Implementations are recommended for addition to the Draft Master Plan under Objective 1 in Waste Management:*

*"i) The size of land(s) to be allocated for the on-site transfer station, recycling, and composting center(s) shall be determined on the basis of the ~~most recent~~ actual waste generation rates and projected recycling rates to meet State-mandated reductions in solid waste disposal. Alternative sites for on-site waste management shall be identified in each specific plan.*

*"j) Areas for recycling containers ~~shall be allocated~~ or adequate provisions to ensure on-site recycling opportunities at proposed commercial facilities and large apartment complexes ~~in~~ shall be incorporated into Tentative Maps.*

*"k) Recyclable construction waste, such as wood and metal, shall be separated and arrangement shall be made with the County, or on-site recycling services, for collection. Recycling of construction wastes shall be made part of the construction specifications for contractors."*

#### **SPECIFIC PLAN I**

Solid and hazardous waste generation, disposal, and recycling issues are not addressed in the Draft Specific Plan I.

##### **Impact S4.3.5-1 (C,O,M)**

**The Draft Specific Plan I does not ~~provide a program for~~ complying with the waste reduction and recycling objectives of the Draft Master Plan.**

The Draft Specific Plan I does not ~~specify how solid wastes generated by the project would be managed~~ **provide sites for waste recycling and waste transfer** and does not provide for materials recycling and yard waste composting.

##### **Mitigation Measure S4.3.5-1 (C,O,M)**

*Specific Plan I should be revised to comply with Master Plan implementation measures "j)", as recommended in Mitigation Measure M4.3.5-1 above, regarding alternative on-site waste management sites.*

##### **Impact S4.3.5-2 (C,O,M)**

**The Draft Specific Plan I does not allocate land for a proposed waste transfer station and/or compost facility in the Old River Industrial Park as specified by the Draft Master Plan.**

The Draft Master Plan specifies that a 10-acre site be reserved in the Public Land Use area of the Old River Industrial Park for potential use as a waste transfer facility and interim compost facility. The Draft Specific Plan I Land Use Map does not include areas for these proposed facilities.

**Mitigation Measure S4.3.5-2 (C,O,M)**

*Alternative site locations for the transfer/compost facilities shall be identified in the Specific Plan I Land Use Map, and shall be located in the southern portion(s) of the area.*

### 4.3.6 LIBRARIES

#### Setting

The proposed project is located within the service area of the Stockton-San Joaquin County library system. The County maintains nine branch libraries and one bookmobile. The closest branch library is in Tracy on 20 East Eaton Avenue. That library consists of 16,911 square feet and can serve a population of 33,800. The population of the Tracy area is 33,558 residents according to the 1990 census (City of Tracy, 1991). **The Stockton-San Joaquin County Public Library is using a population of 46,158 for the Tracy Library Service Area; using this population estimate, the library is currently inadequate.** Any significant growth, such as the proposed project, would **trigger** **Increase** the need for new library facilities. The San Joaquin County General Plan 2010 specifies that the minimum space requirements for libraries be based on 0.5 square foot per person, with a minimum of 5,000 square feet.

#### Impacts and Mitigation Measures

For the purposes of this DEIR, a significant impact would occur if existing library capacity were exceeded as a result of the proposed project.

#### MASTER PLAN

Mountain House would initially be served by a bookmobile and interim leased facilities until the population would support the construction of a full-service branch library. The first phase of an on-site library with a minimum of 15,000 square feet is proposed to be provided when the population reaches approximately 10,000. By full buildout, a complete library totaling 21,000 square feet would be constructed in Mountain House. The library would meet the specifications of the "Standards for Branch Library Buildings" Study and would contain a minimum of 118,000 volumes, 176 periodicals, 2,000 audio and visual recordings, and seating capacity for 220 persons. There are no significant environmental impacts associated with providing library services to the site.

#### SPECIFIC PLAN I

Library services for Specific Plan I would consist of a bookmobile. The first phase of a permanent branch library would be constructed prior to completion of Specific Plan I buildout. No significant impacts have been identified.

## 4.4 PUBLIC UTILITIES

### 4.4.1 WATER SUPPLY/DEMAND

#### Setting

The majority of the project site is located within one of three irrigation districts. Approximately 2,900 acres are located within the Byron-Bethany Irrigation District (BBID); approximately 200 acres are located in the Westside Irrigation District; and approximately three acres are in the Plain View Irrigation District (Figure 4.4-1). The remaining land (approximately 1,600 acres) are not located within any irrigation district. Most of these lands (approximately 1,262 acres) are located north of Byron Road and are supplied by water pumped from the inlet channel (along Wicklund Road) for the Westside Irrigation District under riparian rights held by individual land owners.

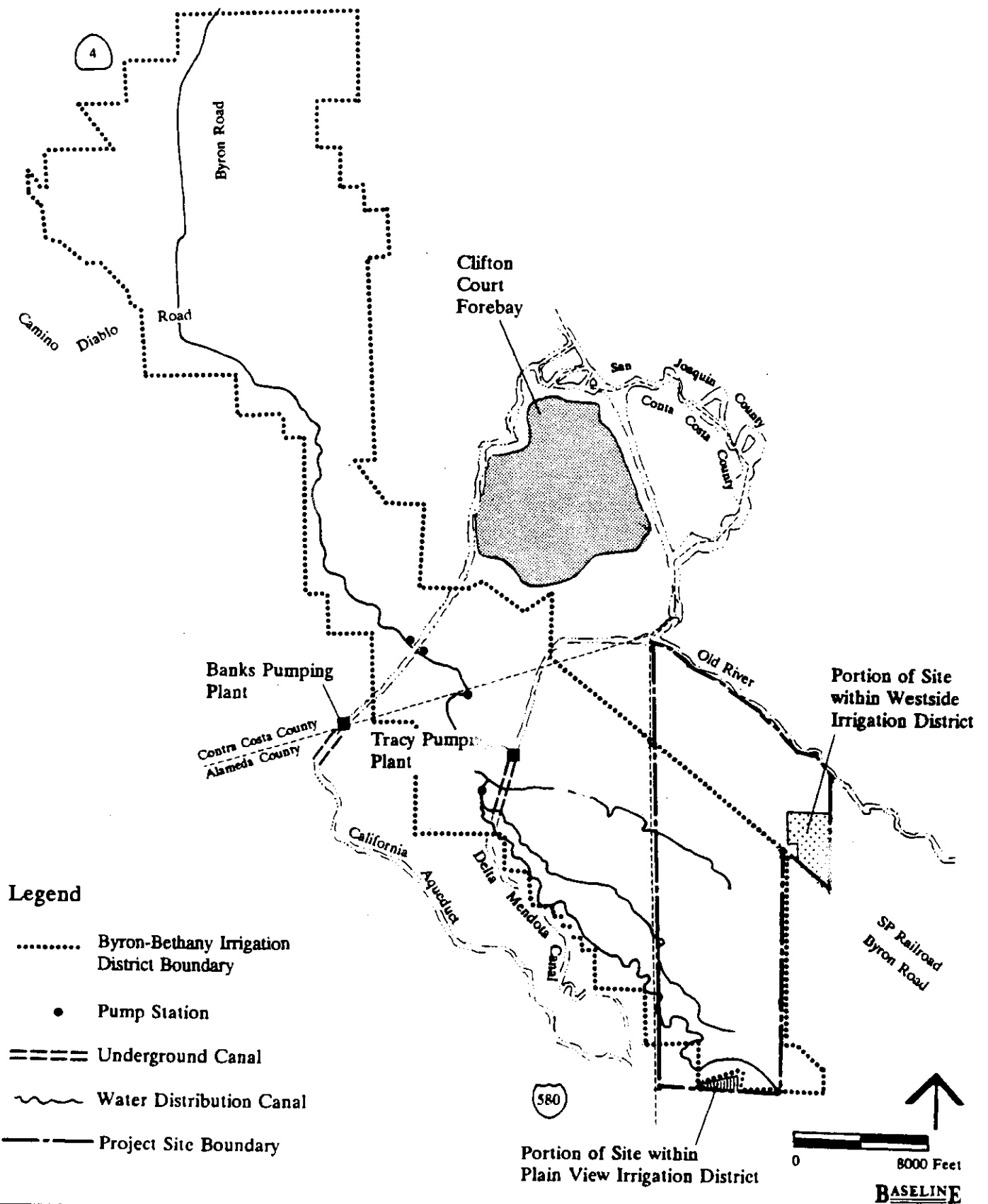
BBID maintains pre-1914 appropriative water rights to divert water from the Sacramento/San Joaquin Delta for beneficial use within its district. Raw water is withdrawn from the intake channel to the California Aqueduct and pumped into three distribution canals in the southern district to serve agricultural customers. Water is distributed across the southern district in canals located at 70-, 120-, and 155-foot elevations.

Irrigation in the project site normally occurs between April and October each year, depending on climatic conditions. An average of 34,070 acre-feet per year has been used within BBID between 1976 and 1991. BBID diverted an average of 9,413 acre-feet per year for agricultural use within the project site, representing 24 percent of the total water use within BBID, between 1976 and 1991 (The SWA Group, 1994a).

The California Department of Water Resources (DWR) has collected water samples from the intake channel to the California Aqueduct, which is the diversion point for BBID's water. In general, the results indicate that the water is potable and would meet drinking water standards following conventional water treatment (BASELINE, 1993).

#### Impacts and Mitigation Measures

An assessment of the potential impacts of the project on water supply begins with a comparison of existing potable water supplies with the demand created by the project. An examination of the adequacy of institutional framework or agreements to deliver potable water to the site is also a part of the impact analysis. While discrepancies between supply and demand are not in themselves technically significant environmental impacts (defined by CEQA as a "substantial adverse change in the physical environment"), the imbalance could affect proposals to obtain an adequate water supply on-site which could have a direct impact on the environment. Potential significant environmental



impacts could occur to water resources, including groundwater and surface water. Use of groundwater resources is not proposed.

For water treatment, a significant environmental impact would be the inability to meet Federal and State drinking water standards or to provide sufficient treatment capacity needed to serve the project. Disposal of water treatment process sludge that does not meet Federal and State regulations could result in significant public health impacts and water quality impacts. A significant impact could also result from uncontrolled releases of hazardous materials associated with water conveyance or treatment.

### **MASTER PLAN**

The Draft Master Plan proposes to contract with BBID, using BBID's pre-1914 appropriative rights to provide most of the water needed for the project. The remainder of the water would be withdrawn from Old River using the riparian rights associated with land located between Byron Road and Old River. A water exchange agreement between BBID and the DWR has been executed to allow BBID to withdraw water during winter months, when BBID has not historically withdrawn water.

New pumping facilities, including a pump station and pipeline, water treatment facilities, and water storage and distribution system, would be constructed to serve the project. Phased construction is proposed for these facilities. The new raw water pump station building would be built initially with a minimum of two pumps at one of three possible locations near the existing BBID intake facility located on the intake channel of the California Aqueduct. Additional pumps would be added as demand increases. Initially, one conveyance pipeline for transporting the water from the intake to the treatment plant would be built; a second pipeline would be added for the second half of development. The different components of the water treatment plant would be constructed in two to six phases. Water from the treatment plant would be pumped into a new water distribution system that would be installed and expanded to serve newly developed areas.

The entire project site is not within the boundaries of BBID, which is the primary supplier of water for the project (Figure 4.4-1). Land currently not within BBID, including land with riparian water rights, would need to be annexed to BBID before BBID-owned water may be used. However, land with riparian water rights would not need to be annexed to BBID if water diverted under riparian rights, not BBID-owned water, were used. Water diverted under riparian rights may be conveyed through BBID's raw water pump station and pipeline without BBID annexation. With possibly the exception of the land with riparian water rights, development outside of BBID boundaries would require an alternative source of water to satisfy project water demand. The portions of the project site currently not in BBID is all the land north of Byron Road, the parcels in the southwestern corner of the site, and those land within the Plain View Irrigation District (**Figure 4.4-1**).

Those areas of the project site outside of BBID boundaries and without riparian water rights must be annexed into BBID to allow the District to provide water for those areas. Portions of the project site would be annexed sequentially, as needed, prior to development. The administrative procedures

#### 4.4 PUBLIC UTILITIES

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for annexation would begin with discussion, review, and agreement between the BBID Board of Directors and the applicant. Once an annexation agreement between BBID and the applicant were finalized, either BBID or the applicant would formally apply to the appropriate Local Agency Formation Commission (LAFCO) to process the annexation request. LAFCO functions to regulate changes in the structure of local government agencies, including cities and special districts; such changes may include annexations, withdrawals, incorporation, formations, and consolidations, or dissolutions.

BBID is a multi-jurisdictional special district that provides water to portions of San Joaquin, Contra Costa, and Alameda counties. Under normal circumstances, the Contra Costa County LAFCO would administer an annexation request because BBID's main office is in Byron, located in Contra Costa County. However, since the proposed project would simultaneously annex and detach territories involving three districts, BBID, Westside Irrigation District, and Plain View Irrigation District, and the majority of these districts is in San Joaquin County, the application would be processed by the San Joaquin LAFCO.

In San Joaquin County, the sphere of influence boundary of a district is conterminous with the district boundary. In processing the annexation, the sphere of influence boundary would be changed first, followed by the annexation action (Scott, 1992). The San Joaquin County LAFCO has approved a change in BBID's sphere of influence to include the entire project site on 17 December 1993; annexation to BBID is still required. Subsequent annexation procedures include the following steps:

- BBID files an application for annexation in the form of a resolution or a petition.
- As of 1 January 1994, if the application includes written consent of all the landowners within the affected area, LAFCO can complete the annexation/deannexation (Scott, 1993). If the application does not include written consent of all the landowners, LAFCO holds a public hearing to consider the annexation application.
- Upon approval by LAFCO, BBID would hold a public hearing unless authorized by LAFCO to proceed without further hearings. BBID may: 1) resolve to approve the annexation proposal if less than 25 percent of the landowners or registered voters protest; 2) hold an election if 25 to 50 percent of the landowners or voters protest; or, 3) terminate the proceedings.
- Upon approval of annexation by BBID, BBID would submit the required fees to the State Board of Equalization, the Executive Officer of LAFCO would certify completion of the annexation process, and a statement of boundary changes would be issued.

Objections of land owners affected by the reorganization could prevent future annexation/deannexation. Since annexation would occur over the entire buildout period, assurance that de-annexation and annexation applications would be successful is needed. The assurance would

be provided if all land owners affected by the reorganization were to express their consent. If reorganization were to occur in the near future, the applications are likely to be successful since there was no opposition to the change in sphere of influence petition (Scott, 1993).

Deannexation from Westside Irrigation District would need to be completed incrementally in order for the San Joaquin County LAFCO to maintain jurisdiction over the process. If the process were to become an annexation process involving only BBID, then Contra Costa County LAFCO would have jurisdiction, unless they relinquish jurisdiction. Another concern is the availability of irrigation water to those parcels deannexed from Westside Irrigation District. Since BBID would not be able to serve those parcels, an interagency agreement between BBID and Westside Irrigation District would be needed to ensure irrigation water service until the land is developed.

#### **Impact M4.4.1-1**

**Inadequate raw water storage facilities may result in interruption of water service, especially if restrictions on water diversion were imposed by State or Federal agencies.**

Historically, BBID has not withdrawn water from the Sacramento/San Joaquin Delta during the entire year because of the lack of demand during the winter months. The past annual water usage at the project site occurred during the period from March 15 to October 15 of each year for the past 15 years (Trimark Communities, 1991a). Since the pre-1914 water rights for BBID are based on past use, BBID would not be able to provide water to the project in the winter. BBID withdraws water from the intake channel of the California Aqueduct, which is operated by DWR. The two agencies have signed a water exchange agreement that would allow BBID to withdraw a maximum of 4,000 acre feet of water between November 1 through March 31 each year, provided BBID does not divert an equal amount of water between April 1 and October 31. Provisions in the agreement are summarized below.

- Agreement expires 31 December 2035; renewal subject to negotiation.
- Exchange water to be used in project only, unless with DWR written consent.
- Amount of exchange water to be agreed upon the preceding year.
- Agreement void if Winter Water Rights granted.
- Obligation to provide water suspended if emergency prevents diversion of water.
- Federal or State restrictions to DWR diversions will likewise restrict BBID diversion under agreement.

The Delta has received close scrutiny from Federal and State agencies relative to fresh water outflow, water quality, and fishery habitat. Water diversions from the Delta reduce the fresh water outflow and generally results in lower water quality and impaired fishery habitat. Existing water rights authorizing diversion from the Delta may be affected by pending Federal and/or State regulatory actions.

On 15 December, 1993, four federal agencies, EPA, Fish and Wildlife Service, National Marine Fisheries Service, and the Bureau of Reclamation, issued proposed water quality standards for the



Delta. These include a salinity standard and survival indices for certain fish species. On the State level, the SWRCB has recently ~~renewed~~ **resumed** its ~~efforts to develop water quality standards for the triennial review of the Water Quality Control Plan for the Delta.~~ Hearings have been scheduled through the summer of 1994 to collect testimony. A draft Water Quality Control Plan is tentatively scheduled for release in December 1994, with possible adoption of the **Water Quality Control Plan** in the spring of 1995. **Following the adoption of the Water Quality Control Plan, the SWRCB will commence a water rights proceeding which may involve a reallocation of water rights within California to comply with the Water Quality Control Plan, resulting in a new Water Rights Decision.** It is unknown how the efforts of the Federal and State agencies on developing water quality standards for the Delta or **potential reevaluation of existing water rights** will evolve. However, diversion of fresh water from the Delta will ~~almost certainly~~ **likely** be curtailed for the large Federal and State diversion projects. The water rights of other **non-Federal or State project users of Delta water would in the Central Valley and the rest of California** may be reconsidered by the SWRCB in order to spread the burden of protecting the Delta.

**Mitigation Measure M4.4.1-1**

(a) *A new Implementation should be added under Objective 1 in Potable Water Supply and Distribution (Appendix C), as follows:*

~~"b) A contingency plan to supply water for the project in case of potential restrictions on water diversion, imposed on BBID and/or DWR under the exchange agreement, shall be provided to the County for review prior to the submittal of the first Development Permit. Actions may include mandatory water conservation and moratorium on new building construction. Specific Plan II and each subsequent specific plan shall reevaluate the adequacy of the confirmed water supply for the remainder of the project in light of any potential or adopted restrictions on water diversion by BBID or DWR. The specific plans shall not be approved unless it can be demonstrated that the confirmed water supply is sufficient to serve the project through buildout. If potential or proposed restrictions on diversion would cause the confirmed water supply to be insufficient to serve the project as proposed in the Draft Master Plan, then the specific plans shall identify additional water conservation/reuse measures to be incorporated into the project to ensure that the demand would not exceed the confirmed supply."~~

(b) *A new Policy should be added under Objective 8 in Potable Water Supply and Distribution (Appendix C), as follows:*

*"b) Adequate raw water storage will be provided to ensure a continued supply to the project in case of restriction to water diversion and emergencies that would prevent diversion."*

(c) *A new Implementation should be added under Objective 8 in Potable Water Supply and Distribution (Appendix C), as follows:*

*"c) Assumptions and calculations for determining adequate raw water storage volume, and plans for providing the storage shall be submitted to the County for review and approval prior to the submittal of the first Development Permit."*

**Impact M4.4.1-2**

**Changing part of BBID's service area from agricultural water use to municipal/industrial water use would create institutional issues requiring resolution. Indirectly, impacts to agricultural operations could include disruption of irrigation water supply and agricultural drainage service.**

BBID provides irrigation water and maintains an agricultural drainage system for most of the project site south of Byron Road, and for a parcel located adjacent to the southeastern corner of the project site. Service to the parcel southeast of the project site must be maintained indefinitely. Since development of the project would progress incrementally, service to the remaining lands within BBID must be maintained until the lands are taken out of agricultural use and developed.

#### 4.4 PUBLIC UTILITIES

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BBID has signed an agreement to provide water to the project. The agreement would become effective upon signing by an authorized person representing the Mountain House Community Service District (CSD) **after formation** and remain in effect in perpetuity. Provisions in the agreement are summarized below.

- BBID will provide up to 9,413 acre-feet of water per year to the project.
- CSD will insure that irrigation and drainage to all lands within BBID will be maintained to existing levels.
- BBID will attempt to obtain permission from DWR to build the new pump station and conveyance facilities.
- CSD will build new pump station and pipelines and transfer ownership to BBID.
- CSD will have the right to convey non-BBID water to the new water treatment facilities.
- CSD will not use reclaimed water for irrigation within BBID without written consent.
- BBID will set fees for water service.
- CSD indemnifies BBID for non-existence or diminished water supplies caused by actions of the U.S. or California government.

##### Mitigation Measure M4.4.1-2

(a) *The second paragraph of Implementation a) under Objective 1 in Potable Water Supply and Distribution should be revised as follows:*

*"~~If any land area included in a~~ **Prior to the submission of a Development Permit Including land that may require use of water associated with riparian water rights, an executed agreement between BBID and the CSD shall be provided prior to the issuance of the first construction permit for any land included in the Development Permit executed, or the Development Permit shall demonstrate that an existing agreement is still in force. This agreement shall indicate that the parties have agreed to the terms under which BBID will wheel riparian water through their pumping and conveyance facilities to the Mountain House community as provided for in the BBID Water Services Agreement.**"*

(b) *Policy a) under Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:*

*"a) Continued irrigation water and drainage service shall be provided to the land within the BBID service area located east of the project site and Patterson Pass Road throughout project buildout."*

(c) *Implementation Measure a) under Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:*

*"a) The appropriate specific plans shall identify how water and drainage services to the land east of the project and Patterson Pass Road within the BBID service area would be affected. They shall identify the infrastructure needed to maintain these services and when construction of these facilities would need to be completed (schedule may be expressed in terms of when certain parcels are developed)."*

(d) *Implementation Measure b) under Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:*

*"b) To ensure an uninterrupted source of irrigation water to undeveloped land, Development Permits, as applicable, shall include a detailed assessment of how irrigation water and drainage services to land within the project site that has not been or is not immediately planned for development would be affected. The assessment shall include consideration of interruption of irrigation patterns, temporary interruptions in service due to installation of underground utilities, and access to farm fields by workers, equipment and trucks. A plan for constructing/modifying facilities to maintain irrigation water and drainage services and a schedule for constructing these facilities shall be included."*

### Impact M4.4.1-3

The projected available supply of water to the project site from BBID (9,413 acre-feet per year) and from riparian water rights (possibly 2,600 acre-feet per year) is less than the project demand (12,874 acre-feet per year based on County Standards) and could result in an inadequate water supply for the project.

**Water Demand.** The applicant has calculated water demand for the project, with and without water conservation. The calculations were based on water demands for the City of Stockton and peaking factors specified in the San Joaquin County Improvement Standards (San Joaquin County Department of Public Works, 1991). The Improvement Standards specify minimum requirements for determining adequate water supply capacity. The water demand calculated by using City of Stockton data and based on the County Improvement Standards is presented in the Table 4.4-1.

TABLE 4.4-1

WATER DEMAND FOR PROJECT SITE

	Annual Water Demand (AF/year)	Average Daily Demand (mgd)	Maximum Daily Demand (mgd)	Maximum Hourly Demand (mgd)
Based on draft County Improvement Standards	12,874	11.5	25.3	43.7
Based on applicant's assumptions with water conservation	9,812	8.8	19.4	33.4
Based on applicant's assumptions without water conservation	11,419	10.2	22.4	38.8

Source: BASELINE, using unit factors contained in the Draft Master Plan.

The water demand calculated for the project, using the different bases, are significantly different. The average daily water demand calculated from the Improvement Standards at buildout is 11.5 million gallons per day (mgd) (Table 4.4-1), corresponding to an annual demand of 12,874 acre-feet per year. The average daily water demands projected in the Draft Master Plan was 8.8 mgd and 10.2

#### 4.4 PUBLIC UTILITIES

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mgd, with and without water conservation, respectively (9,812 acre-feet per year and 11,419 acre-feet per year) (Table 4.4-1).

The Draft Master Plan proposes to incorporate requirements for low-flow shower heads, low-flush toilets, water conserving appliances, and lower-water-use landscaping into community design and building standards. A 14 percent reduction in potable water demand is expected by implementation of these features. A public information program to promote water conservation would also be implemented.

**Water Supply.** The applicant proposes to use up to 9,413 acre-feet of water per year from BBID, and up to 2,600 acre-feet per year from riparian water rights associated with land between Byron Road and Old River.

BBID has supplied an average of 8,246 acre-feet per year for use within the project site. Based on water balance calculations, the amount of water diverted by BBID is 12.4 percent more than that used within the district. This difference is attributed to evaporation and seepage from the distribution canals. The amount of water that BBID has been diverting for the project has been 9,413 acre-feet/year. BBID has agreed to divert up to this amount of water for use on the project site.

The Draft Master Plan identifies 1,262 acres of the land between Byron Road and Old River with riparian water rights (Figure 4.4-2). Riparian water rights are associated with lands immediately adjacent to a natural body of water. These rights allow the owner of the land to withdraw water from the water body for use on that land. If land with riparian water rights is subdivided, the rights may be retained for the entire acreage, even if some parcels are no longer adjacent to the water body, provided that the ~~new deeds~~ **documents of conveyance** state that riparian water rights are retained (Zolezzi, 1992). If riparian water rights were to be retained for the eligible parcels within the project site, the proposed Community Service District (or other public agency) may be able to take an assignment of these rights from the future property owners; BBID would then withdraw water from the Delta using these rights, and the Community Service District would treat and distribute the same volume of water to those same parcels. Although riparian water rights are not limited to specific volumes of water, the amount of water that may be withdrawn using these rights may be limited to the historic use on these acres to prevent infringement of the rights of other water diverters. The exact historic water use on these lands is unknown; however, given the crops planted on these lands, annual irrigation rate is estimated to be between three and four acre-feet of water per acre.

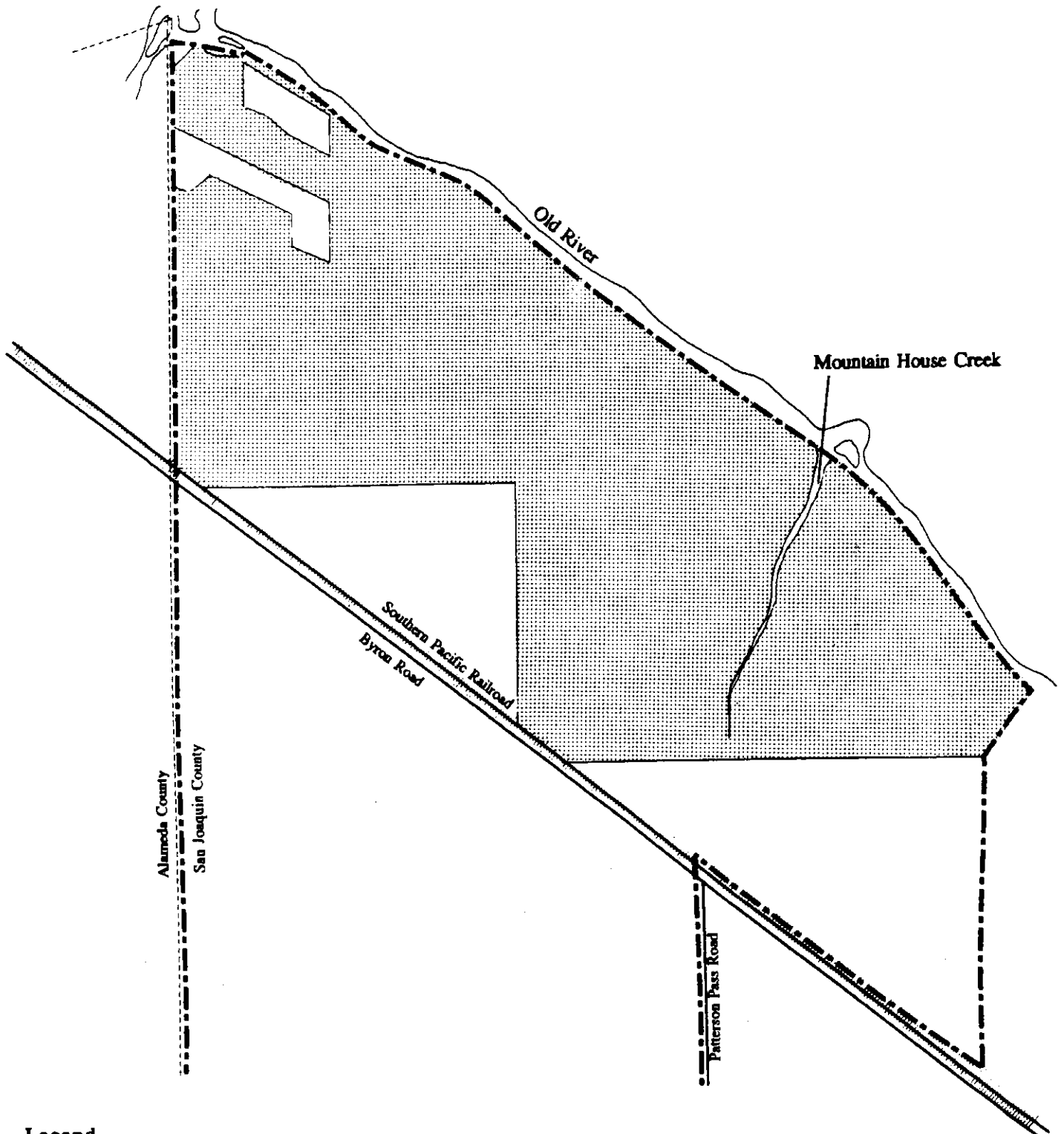
Using the applicant's water conservation demand calculations as a basis, overall unit water demand for the project **upon development** is 2.05 acre-feet per year per acre (9,812 acre-feet per year divided by 4,784 acres). If 2.05 acre-feet per year per acre were used on the 1,262 acres of land with riparian rights, the project may be entitled to approximately 2,600 acre-feet per year under riparian rights.<sup>1</sup>

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<sup>1</sup> The Draft Master Plan states that 2,600 acre-feet of water is available for project use since this figure is based on an urban water demand factor of 2.05 acre-feet per acre, which is less than 3 to 4 acre-feet per acre used historically for agricultural crops. The net amount of water withdrawn for these lands upon development would be less than that historically withdrawn for agriculture and therefore would not infringe upon the rights of other water users in the Delta.

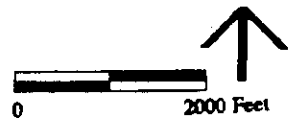
# LAND WITH RIPARIAN WATER RIGHTS

Figure 4.4-2



### Legend

-  Land with Riparian Water Rights
-  Project Site Boundary



**BASELINE**

Source: Neumiller & Beardslee, 1994.

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#### 4.4 PUBLIC UTILITIES

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The San Joaquin County Counsel has completed a preliminary review of the amount of land within the project that has riparian water rights. The Counsel has determined that approximately 1,050 acres of land between Byron Road and Old River have riparian water rights. Another approximate 185 acres may have riparian rights but the Counsel has not yet confirmed that these lands have actually retained their rights. The Counsel concurs with the applicant's assessment of the feasibility of retaining the rights for the project upon development and that the volume of water available to the those lands would be equivalent to historic usage on the lands.

As discussed above, BBID's water rights may be diminished by future Federal and/or State regulatory actions. In anticipation of this possibility, and in response to the trend of decreasing water resources, a prudent approach would be to reduce potable water demand to the maximum extent possible. The land north of Byron Road within the project site is sufficient for the disposal of the wastewater generated through Specific Plan I. The Draft Master Plan proposes two alternative permanent disposal areas. If these areas were not to become available in the future due to institutional or land availability constraints, the wastewater disposal option of restricted irrigation on agricultural lands, as proposed in the Draft Master Plan, could be limited.

##### Mitigation Measure M4.4.1-3

(a) *Implementation b) under Objective 2 in Potable Water Supply and Distribution (Appendix C) should be replaced with the following:*

*"b) ~~A Plan to set forth a program to determine the effectiveness and adequacy of water conservation measures shall be submitted for County review and approval prior to the submittal of the first Development Permit. The program shall be implemented by the Community Service District and shall periodically (at least once every five years) evaluate the percentage of water savings actually achieved relative to the calculations in the Master Plan, and specify actions that would be implemented if water demand exceeds that projected in the Draft Master Plan. Specific plans subsequent to Specific Plan I shall include a comparison of the actual water demand for the project with that calculated in the Draft Master Plan (assuming a 14 percent savings) to assess the effectiveness and adequacy of the water conservation measures. If the water savings specified in the Draft Master Plan were not achieved for a previous specific plan, the next specific plan shall specify additional actions that would be implemented to achieve the water conservation projections contained in the Draft Master Plan. Actions could include public information campaign, additional water conservation fixtures to be included in subsequent development, mandatory water rationing and on-site reclamation. Approval of the specific plan(s) shall be contingent on the adequacy of the proposed actions to increase water conservation effectiveness, if appropriate.~~*

*(b) A new Policy should be added under Objective 1 in Potable Water Supply and Distribution (Appendix C), as follows:*

*"b) Riparian water rights associated with land between Byron Road and Old River shall be reserved for project use. Until the parcels with riparian water rights are developed, the water diverted under riparian rights shall **must** be reserved for agricultural irrigation."*

~~*"c) A new Implementations under Objective 1 in Potable Water Supply and Distribution (Appendix C) should be added, as follows:*~~

~~*"e) The legal basis for retaining riparian water rights for project use shall be submitted to County Counsel for review prior to Master Plan approval."*~~

#### **Impact M4.4.1-4**

**Drinking water may not be available to the project if the water treatment plant were not permitted and constructed prior to occupancy within the project.**

The Draft Master Plan proposes a water treatment plant with an ultimate capacity to treat 19.4 mgd, the maximum daily demand. The plant would include raw water storage reservoirs, ozone contactors (primary disinfection), flocculator/clarifiers, filters, chlorinators and chlorine contact chamber (secondary disinfection), treated water storage reservoirs, and sludge drying beds. These facilities would be built on an 18.5-acre parcel of land near the western boundary of the site, just north of Byron Road.



#### 4.4 PUBLIC UTILITIES

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The water treatment plant must be permitted by the California Department of Health Services, Office of Drinking Water prior to project construction. Initial monitoring of the source water, consisting of one year of quarterly sampling, would likely be required for a specific list of inorganic and organic compounds and physical characteristics. Based on these data, the treatment plant must be designed to treat the source water to attain the drinking water standards. The design must be approved by the Office of Drinking Water. Once the treatment plant is operational, routine monitoring of the source water and/or treated water delivered to customers is required to monitor compliance with the drinking water standards.

##### **Mitigation Measure M4.4.1-4**

*Implementation a) under Objective 7 in Potable Water Supply and Distribution should be revised as follows:*

*"a) Review Process. A Development Permit shall be required for the water treatment plant and shall be approved prior to the approval of the first tentative map. **The Development Permit shall provide a schedule for ensuring that the water treatment plant is fully operational prior to approval of the first final subdivision map, in accordance with the requirements of applicable state agencies.**"*

##### **Impact M4.4.1-5**

**Water treatment sludge disposal could adversely impact local water quality or unnecessarily occupy scarce landfill space.**

One of the primary functions of water treatment is to remove solids from the raw water. The sludge would consist of water, solids removed from the raw water, and coagulants such as alum and polymer that are added during the treatment process to improve solids removal. Sludge from the plant would be placed on drying beds prior to off-site disposal. The Draft Master Plan projects that the maximum daily sludge production rate would be 5,500 pounds per day at project buildout which would require 3.3 acres of sludge drying bed. The disposal alternatives considered would be landfilling, land spreading, and dedicated land disposal.

Sludge disposal options could include industrial reuse in addition to those proposed in the Draft Master Plan. Disposal at a Class III (municipal garbage) landfill may be possible if the sludge were dried to a minimum of 50 percent water content and contingent on available landfill space. However, landfill space has become a scarce resource; the California Integrated Waste Management Board is implementing regulations that are intended to minimize the amounts of waste disposed of at landfills by requiring implementation of all feasible options. Alternatives to landfill disposal of water treatment sludge are encouraged.

Land spreading of sludge would be to use the sludge on agricultural lands as a soil amendment. Dedicated land disposal would be to place the sludge on a land parcel specifically for disposal purposes and not to enhance crop growth. It would be necessary for the land to be controlled by

the Community Service District, either by ownership or long-term contract for both of these options. Industrial reuse would be to use the sludge as a raw material in a manufacturing process, or to recover aluminum oxide from the sludge, which may be added to enhance solid settling, for reuse.

#### 4.4 PUBLIC UTILITIES

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The disposal of dried sludge may require a waste discharge permit from the Central Valley Regional Water Quality Control Board, depending on the alternative chosen. Inadequate drying and inappropriate disposal of sludge from the water treatment process could result in contamination of surface water and groundwater. Inadequate containment of the sludge during drying could result in runoff into nearby streams and storm drains. Disposal of inadequately dried sludge could enhance leaching of contaminants into the local groundwater.

##### **Mitigation Measure M4.4.1-5**

*(a) Policy a) under Objective 10 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:*

*"a) Water treatment plant sludge shall be disposed of through industrial reuse, land spreading, and/or dedicated land disposal inside and in the vicinity of the Mountain House community to the maximum extent feasible in accordance with applicable regulations. Landfill disposal of sludge would be chosen only if the other alternatives were determined to be infeasible.*

*(b) The following new Policies should be added under Objective 10 in Potable Water Supply and Distribution (Appendix C):*

*"c) Industrial reuse of water treatment sludge shall be practiced to the maximum extent possible. The Community Service District shall consider other disposal options only if industrial reuse were infeasible.*

*"d) Adequate sludge treatment and drying facilities shall be provided at the plant through project build out."*

*(c) Implementation Measure a) under Objective 10 in Potable Water Supply and Distribution (Appendix C) should be revised as follows:*

*"a) Sludge Disposal Program. ~~The Development Permit for the water treatment plant shall specify the water treatment sludge disposal method(s) that will be used throughout the development of Specific Plan I. Approval of subsequent specific plans shall be contingent on the identification of an acceptable means of water treatment sludge reuse/application/disposal. If landfill disposal were proposed, an agreement with a landfill that would accept the sludge must be provided with the Development Permit or subsequent Specific Plan. If land spreading or dedicated land disposal were proposed, then guarantees of adequate acres for sludge disposal must be provided in the Development Permit or subsequent specific plans.~~ The Initial Development Permit for the water treatment plant shall specify the water treatment sludge reuse/disposal method(s) that will be used throughout the development of Specific Plan I. Approval of subsequent specific plans shall be contingent on the identification of means of water treatment sludge reuse/application/disposal consistent with applicable local,*

**state, and federal policies and regulations, and which minimizes landfill disposal. If landfill disposal were proposed, an agreement or "will serve" letter with a landfill that would accept the sludge for at least the next five years shall be provided with the Initial Development Permit for the water treatment plant or subsequent specific plan. If land spreading or dedicated land disposal were proposed, then guarantees of adequate acres for sludge disposal for at least the next five years must be provided. Provisions for sludge disposal shall be updated annually so that there are always firm provisions for disposal for at least five years into the future."**

*(d) A new Implementation Measure should be added under Objective 10 in Potable Water Supply and Distribution (Appendix C), as follows:*

- "e) A detailed assessment of water sludge treatment and drying needs shall be provided in the Development Permit for the water treatment plant. The assessment shall provide the supporting calculations for determining sludge production rates, estimates on percent moisture content in raw sludge and dried sludge, application rates and design parameters for sludge drying beds, projected surface area requirements for the drying bed, and land required for sludge disposal (if appropriate)."*

**Impact M4.4.1-6**

**An uncontrolled release of hazardous materials associated with water treatment practices could potentially occur and impact water resources and public health.**

Chlorine, a hazardous material, would be used for disinfection of the water. Accidental release of chlorine gas could have severe health impacts on downwind occupants; release of liquid chlorine (hypochlorite) could cause massive destruction to aquatic organisms if it were to reach nearby wetlands or Old River. In addition, emergency power for the raw water pump station and for the water treatment plant may require diesel storage tanks for use by generators. Accidental spills or long-term leakage of fuel may have acute and chronic effects on aquatic organisms, and may contaminate the water supply for the project and downstream users.

**Mitigation Measure M4.4.1-6**

- (a) Objective 5 in Waste Management (Appendix C) should be revised, as follows:*

*"To insure the safe handling and to minimize the use of chemicals and other hazardous materials at the water and wastewater treatment plants."*

- (b) The following new Implementation should be added under Objectives 1 through 5 in Waste Management (Appendix C), as follows:*

*"i) Chemical Selection and Facilities. Prior to design of the plants, chemicals associated with water and wastewater treatment operations shall be carefully selected to minimize the hazard. Chemical handling and storage facilities shall be designed to minimize and effectively mitigate the potential for accidental releases, including such features as secondary containment, alarms, remote sensing instruments, and other safety features."*

**Impact M4.4.1-7**

**Water treatment plant capacity may be insufficient to meet project demand if any unit process in the plant were under-designed, or if plant expansion did not keep pace with project growth.**

The Draft Master Plan proposes to construct the raw water pump station, conveyance pipeline, reservoirs, and treatment processes in increments. Ultimately, the plant would occupy 11 acres of land, including sludge drying beds. The remaining 7.5 acres on the designated land parcel would be used for additional water storage in later phases of the project, if required.

**Mitigation Measure M4.4.1-7**

*The following new Implementation should be added under Objective 7 B in Potable Water Supply and Distribution (Appendix C):*

*"ed) Calculations, including assumptions and process loading parameters, to support the determination of the amount of land necessary for raw water storage, different water treatment processes, treated water storage, sludge disposal, and support facilities shall be included in the Development Permit application for the water treatment plant."*

**SPECIFIC PLAN I**

No impacts were identified associated with Specific Plan I. Average daily water demand projected for Specific Plan I is 2.25 mgd (2,521 acre-feet per year) assuming water savings of 14 percent due to water conservation measures. Treated water storage would be approximately 6.4 mgd, to be located at the water treatment plant.

The location of the new raw water pump station by the California Aqueduct and route of the conveyance pipeline has not been finalized. **The location of the new pump station would require the approval of DWR and BBID; the alignment of the new conveyance pipeline between the pump station and the proposed water treatment plant would require the approval of BBID.** The capacities of the raw water pump station, pipeline, and treatment plant would be 5 mgd, approximately one-fourth of the capacity needed for project buildout. Flocculators/clarifiers, filters, sludge drying beds, and treated water storage reservoirs would be built in two phases. Raw water reservoirs, filter washwater recovery ponds, and ozone contactors would be built at one time.

Specific Plan I proposes to annex the 18.5-acre parcel that would be used for the water treatment plant to BBID. The parcels associated with the Old River Industrial Park would be de-annexed from Westside Irrigation District and annexed to BBID. These proceedings are proposed by the applicant to be completed prior to the submittal of the first Development Permit.

Specific Plan I proposes to keep the 120-foot elevation water canal in full operation without modification. The eastern segment of the 70-foot elevation canal would be abandoned in increments as land is developed. The eastern segment of the 155-foot elevation canal that passes through Mountain House Business Park would be replaced with a 10-inch diameter pipe and booster pump station. Agricultural drainage service is not expected to be interrupted.

Based on the description in Specific Plan I, it appears that irrigation water to the land between Central Mountain House and Byron Road may be interrupted when the 70-foot elevation canal is incrementally abandoned. This would be addressed in detail prior to submittal of applicable Development Permits that would cause the abandonment of the 70-foot elevation channel as required in the Draft Master Plan.

Specific Plan I estimates that sludge disposal would not be needed for at least five years because the sludge drying beds would have excess capacity during the initial few years. A Sludge Management Plan would be submitted to the County for review and approval prior to the submittal of the first

Development Permit. No significant impacts have been identified for Specific Plan I implementation above and beyond those identified for the Draft Master Plan.

### 4.4.2 WASTEWATER

#### Setting

Existing wastewater discharges in the project site include approximately 70 septic tank and leach field systems, dairy waste ponds, and agricultural drainage. The project site is not currently served by any public wastewater system. The septic tank leach field systems are associated with the private residences located along Grant Line Road and along and north of Byron Road. Two dairies operate along Patterson Pass Road within or adjacent to the project site with a total of approximately 1,400 head of cattle. Each dairy operates an animal waste holding pond where animal waste is deposited for solids settling. The liquids from the ponds are then used for irrigating adjacent lands. The solids are periodically removed and used as fertilizer.

BBID owns runs and maintains surface drainage and agricultural tile drainage systems which collect rainwater runoff, excess irrigation water, shallow groundwater, and agricultural leach water within the project site (Figure 4.4-3). Mountain House Creek is the primary surface drainage channel in the project area and BBID maintains a surface drainage (buried pipeline) along Patterson Pass Road. All surface drainage is discharged to Old River. BBID also maintains an agricultural tile drain system through the project site that receives the discharge from individual tile drains underlying private agricultural fields. The wastewater in the agricultural tile drain system is eventually discharged into the intake channel of the Delta-Mendota Canal (Figure 4.4-3).

The water quality of the existing wastewater discharges from the project site is limited to agricultural drainage data. In general, agricultural drainage quality exceeds the drinking water standards for electrical conductivity, chloride, and total dissolved solids. The only surface water quality data in the vicinity of the project site were collected at the Tracy Pumping Plant, located at the head of the Delta-Mendota Canal. The water quality meets the drinking water standards for chloride, sulfate, and total dissolved solids on most occasions (BASELINE, 1992b).

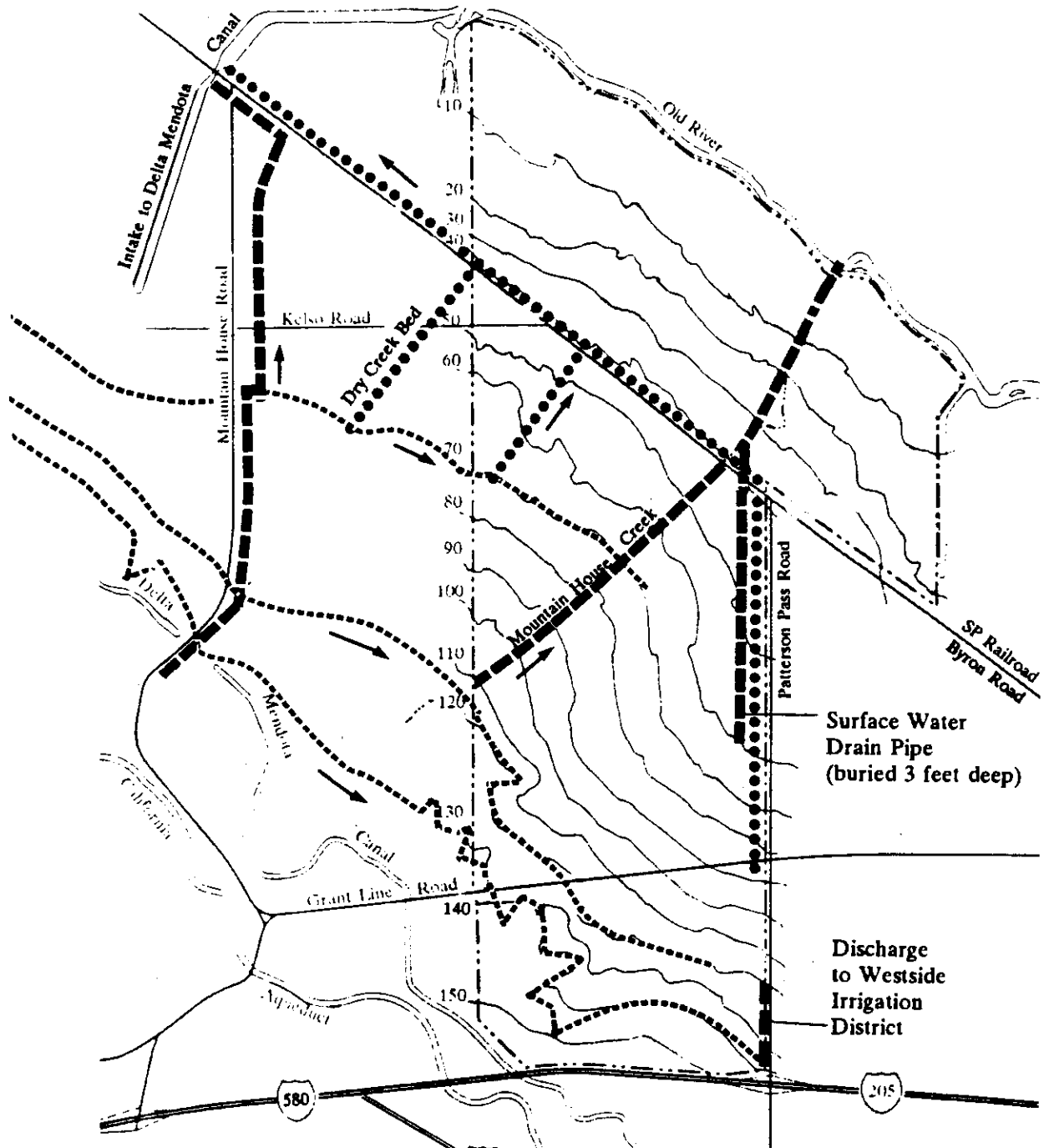
#### Impacts and Mitigation Measures

The potential environmental impacts of the proposed wastewater management system would be associated with the discharge of inadequately treated wastewater, inappropriate wastewater and sludge disposal practices, and release of hazardous materials associated with water facilities. A key measure in determining a significant impact for wastewater is whether the system meets Federal and State requirements. Not meeting these requirements could cause significant impacts to surface water and groundwater resources and to public health.

This section contains an analysis of wastewater generation, disposal, and treatment. Wastewater generation rates, for the new community only, will define the capacity of wastewater treatment plant and disposal system. The method of wastewater disposal will define the degree of treatment required and the types of unit processes that will be needed at the treatment plant.

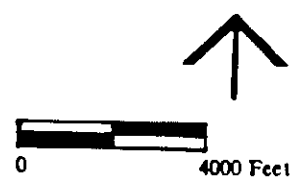
# BBID CANALS AND DRAINAGE SYSTEMS

Figure 4.4-3



**Legend**

- Agricultural Tile Drain
- ▬▬▬ Surface Water Drain
- ⋯⋯⋯ Water Distribution Canal
- Direction of Flow
- ~ 50 ~ Contour Line (feet above MSL)
- - - - Project Site Boundary



**BASELINE**



#### 4.4 PUBLIC UTILITIES

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##### MASTER PLAN

The applicant's projection of wastewater quantities for the project has been performed in accordance with the San Joaquin County Improvement Standards with the exception of the residential wastewater contribution as directed by the County Public Works Department (Lopez, 1990). The wastewater flow calculations were based on the proposed population and commercial, industrial, and school acreages. Projected average dry weather flow rates without water conservation would be 6.6 million gallons per day (mgd), and 5.7 mgd with water conservation. The applicant estimates that a 14 percent reduction in wastewater flow rates could be achieved by using water conservation measures such as low-flow toilets and shower heads.

The Draft Master Plan proposes to build and expand the wastewater treatment plant to accommodate flow rates of 0.473 mgd increments, with an ultimate design capacity of 5.7 mgd (total of 12 increments). The capacity of the plant would be sufficient to serve only the project development.

The location of the wastewater treatment plant would be on the eastern perimeter of the project site, north of Byron Road. Industrial land uses are planned for the area to the west and south of the plant; a regional park borders the north edge of the plant; and the inlet channel for the Westside Irrigation District, Wicklund Cut, runs along the eastern boundary. Agricultural and open space uses would remain east of the inlet channel.

The treatment method for the first three increments (sewage capacity of up to 1.4 mgd) would consist of initial screening, grit removal, biological treatment using facultative lagoons, and disinfection (Stage One). Further expansion of the plant would add a primary clarification process and employ an activated sludge process for biological treatment with the elimination of the facultative lagoons (Stage Two). When the plant reached a capacity of 2.8 mgd (approximately one-half of the buildout capacity) additional treatment processes may be added if wastewater reclamation were to be used within the project site, where human contact with the wastewater would be possible (Stage Three).

The applicant proposes to dispose of all wastewater by reclamation at one of three sites (Figure 3.11). Reclamation of all treated wastewater within the project or discharge to Old River have not been proposed. During at least the initial phases of development, treated wastewater would be transported to the chosen irrigation site where alfalfa and sudan grass would be grown. The Draft Master Plan does not propose to use reclaimed water within the project site (in areas of potential human exposure) initially; the possibility of on-site reclamation would be considered during the second half of project development. Storage of the treated wastewater would be provided to supply irrigation water when needed, to contain the wastewater when irrigation would not be needed (including the winter months), and to isolate potentially inadequately treated wastewater.

The Draft Master Plan proposes two potential permanent reclamation areas, and one interim reclamation area. Fabian Tract, the preferred permanent reclamation area, is located north of Old

River and northeast of the project site ~~in the Primary Zone of the Delta~~.<sup>2</sup> The alternative permanent site is located in Alameda County, adjacent to the western site boundary. The permanent site may be used either during Specific Plan I or not until after Specific Plan I buildout; during Specific Plan I, an interim area north of Byron Road may be used for treated wastewater disposal (Figure 3.11).

**Senate Bill 1866 created the Sacramento-San Joaquin Delta-Protection Act which created the Delta Protection Commission. The Commission is developing a long-term resource management plan to protect and maintain the delta environment, including agriculture, wildlife habitat, and recreational activities. Hearings on the draft resources management plan are being conducted and a final plan is expected to be adopted during the fall of 1994. Policy P-3 under the Utilities and Infrastructure section of the draft plan states that wastewater treatment, storage, and disposal from sources located outside the Primary Delta Zone should not occur within the Primary Delta Zone, whenever possible. The project site is not located in the Primary Delta Zone; however, Fabian Tract is in the Primary Zone. The final resources management plan may preclude the use of Fabian Tract for storage and/or disposal of wastewater from the project.**

The land required for reclamation would be dependent on the chosen site. If the permanent site were located on Fabian Tract, the Draft Master Plan estimates 1,590 acres would be needed for irrigation with 200 acres of storage ponds (maximum water depth of 15 feet). If the reclamation site were in Alameda County, adjacent to the west side of the project site, 1,360 acres of irrigated land and 480 acres of storage ponds (maximum water depth of 6.4 feet) would be needed. At the interim on-site area north of Byron Road, approximately 290 acres would be needed for irrigation with 120 acres of storage ponds for Specific Plan I. The acreages vary among the different locations because of engineering considerations of site-specific terrain and groundwater levels.

#### **Impact M4.4.2-1**

**Inadequately treated reclaimed wastewater could impact local surface and groundwaters and public health. Insufficient reclamation sites could result in illegal and inappropriate discharge of treated wastewater.**

A reclaimed wastewater irrigation system would be regulated by the Central Valley Regional Water Quality Control Board (CVRWQCB) and the California Department of Health Services, Office of Drinking Water (DHS). Requirements for using reclaimed wastewater for irrigation have been developed by the DHS and are included in Title 22 of the California Code of Regulations (CCR Title 22). The regulations include water quality standards, system reliability criteria, and optimal storage capacity. Requirements for bacterial and chemical quality of reclaimed water depend on the intended use.

A permit, referred to as Waste Discharge Requirements (WDR), must be obtained from the CVRWQCB for the operation of the wastewater treatment and reclamation. The DHS may work

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<sup>2</sup> ~~The primary zone is defined in the Sacramento-San Joaquin Delta Protection Act.~~

#### 4.4 PUBLIC UTILITIES

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with the CVRWQCB in preparing the WDR. An engineering report, containing a design of the treatment and reclamation facilities, must be submitted to both agencies, and a Report of Waste Discharge must be submitted to the CVRWQCB to formally initiate the permitting process.

Thirty acres of land have been allocated for the wastewater treatment plant, to accommodate all treatment processes through project buildout. The Draft Master Plan proposes to expand the wastewater treatment plant by increments of 0.473 mgd. Twelve increments would be constructed by project buildout. Design and construction of each additional increment would be completed before the wastewater generation rate of the community exceeded the then existing capacity. The Draft Master Plan proposes to allow lead time for the design and construction of plant expansion, but does not provide a mechanism for ensuring that expansion precedes need.

With the exception of Specific Plan I, agricultural land needed for wastewater reclamation during subsequent specific plans would be secured prior to subsequent specific plan approvals. ~~Since neither of the two potential permanent reclamation sites has been secured by the applicant, the disposal option of restricted irrigating on agricultural land, as proposed in the Draft Master Plan, may not be achievable.~~ **The land north of Byron Road within the project site is sufficient for the disposal of the wastewater generated through Specific Plan I. The Draft Master Plan proposes two alternative permanent disposal areas. If these areas were not to become available in the future due to institutional or land availability constraints, the wastewater disposal option of restricted irrigation on agricultural lands, as proposed in the Draft Master Plan, could be limited.** Alternative wastewater disposal methods may need to be considered, including on-site reclamation, discharge to Old River, and transporting wastewater to other lands for restricted use irrigation.

The Draft Master Plan does not propose to dispose of reclaimed water by irrigation within the project site. The Draft Master Plan indicates that after ~~Specific Plan II buildout~~ **the wastewater flow rate reaches 2.8 mgd, one-half of the flow rate estimated for project buildout**, the option of providing additional processes at the wastewater treatment plant to produce reclaimed water that would be suitable for on-site reclamation (safe for human contact) would be considered. On-site reclamation would require the construction of advanced wastewater treatment processes to produce higher quality water required for use where human contact is possible; a reclaimed wastewater distribution system, **separate from the potable water system**, would need to be installed to transport the water from the plant to the points of use. Although using reclaimed wastewater on-site would require less off-site land for disposal and reduce **project** potable water demand, thereby increasing the community's self sufficiency, the Draft Master Plan proposes total off-site wastewater disposal because on-site reclamation would ~~not be cost effective~~ **cost more than off-site reclamation.**

The Draft Master Plan designates about 240 acres of neighborhood and community parks, and about 440 acres of other open space (including golf course, regional park, landscape easements, and buffers) which could be used for irrigation with reclaimed water. **If the neighborhood parks, community parks, and the golf course were irrigated with reclaimed water (totaling approximately 540 acres) at a rate of 2.7 acre-feet per acre per year, then approximately 23 percent of the total wastewater flow rate at project buildout could be disposed of on-site.** Road buffers and medians and other landscaping at public and commercial areas could also be irrigated with reclaimed water. Another on-site reclamation opportunity would be gray water systems for commercial/industrial uses. **Examples of commercial/industrial uses of reclaimed water include vehicle and bus washing operations, dust control on construction projects, cooling towers for manufacturing plants, and toilet flushing in public or commercial facilities.**

Numerous wastewater treatment plants in California have been upgraded to produce reclaimed water suitable for unrestricted use (safe for human contact). One of the main factors that prevents the widespread use of reclaimed water in areas near these treatment plants is the lack of a distribution system to bring the reclaimed water to different points of use. Installation of a reclaimed water distribution system after an area has been developed is disruptive because the pipeline alignment would have to be excavated; retrofitting a developed area represents a significantly higher expense than if the system were installed as the area is

#### 4.4 PUBLIC UTILITIES

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Initially developed when other buried utilities are also installed. If a reclaimed water distribution system were to be constructed within the project site as each new area were developed, widespread on-site use of reclaimed water could be implemented as soon as the wastewater treatment plant were upgraded to provide tertiary treatment. The Draft Master Plan proposes to upgrade the wastewater treatment at the beginning of Specific Plan . The upgrade could include the tertiary treatment needed to produce unrestricted use of reclaimed water.

On-site wastewater disposal has fewer potential environmental impacts than the off-site alternatives identified in the Draft Master Plan. Land within the project site will already be taken out of agricultural use and existing habitat would be disturbed upon development. On-site reclamation would not further exacerbate land use and wildlife habitat impacts for the project. Restricted reclamation at Fabian Tract would prevent the growth of the food crops currently grown on the land. Storage of millions of gallons of treated wastewater on Fabian Tract represents a flood hazard and could allow the discharge of the reclaimed water to adjacent waterways via the buried agricultural drains. Construction of a pipeline to deliver the treated wastewater to Fabian Tract may impair existing levees along Old River. The alternative permanent reclamation site, land in Alameda County adjacent to the project site, is potential kit fox habitat. Reclamation on these lands may not render the area suitable for kit fox or for Swainson's Hawk mitigation lands. Minimizing off-site disposal would lessen the corresponding impacts.

Exporting the treated wastewater to irrigate sites other than those identified in the Draft Master Plan may also be an alternative. **Irrigation on other sites would require a separate environmental review.** The potential environmental impacts associated with wastewater export would depend on the area to which the wastewater were exported and the type of crops receiving the wastewater. If the wastewater were to be used for irrigating non-food crops in areas of no human contact, secondary treatment would suffice. The impacts associated with disposal anywhere would be similar to those identified for the alternate permanent site in Alameda County. If food crops were to be irrigated with tertiary treated water, the treatment would have to meet the requirements of the CVRWQCB and DHS. Depending on the location of disposal, biological resources may be affected.

Potential discharge of treated wastewater to Old River would require an National Pollutant Discharge Elimination System (NPDES) permit from the CVRWQCB. The NPDES permit is distinct from the wastewater reclamation permit described previously. The CVRWQCB Water Quality Control Plan (Basin Plan) strongly encourages land disposal of treated wastewater over surface water discharge. A surface water discharge would not be allowed if there were other technically and economically feasible disposal options. Any wastewater discharges to Old River would require adherence to pollutant limits and possibly discharge restrictions, as described below.

Discharge of treated wastewater to Old River may impact other Delta water users. Old River flows directly into the intake for the Delta-Mendota Canal and the Clifton Court Forebay (intake for the

California Aqueduct). These water projects export large volumes of water to central and southern California for municipal and agricultural uses. The Bureau of Reclamation, operator of the Delta-Mendota Canal, has previously expressed objection to the potential wastewater discharge to Old River (Capener, 1990). In addition, the South Delta Water Agency provides irrigation water in the vicinity of the project and is concerned that the potential wastewater discharge may increase the salinity of the water, lowering the water quality of the irrigation water available to its customers (Whitridge, 1994).

If an NPDES permit were to be issued for discharge to Old River, it would likely contain effluent limits on conventional pollutants (e.g., solids, oxygen demand, pathogens) as well as toxic pollutants (e.g., metals, organics, pesticides). Conventional pollutant effluent limits would include at a minimum the following items (Mosbacher, 1994):

- Biochemical Oxygen Demand - 10 or 20 milligrams per liter (mg/L)
- Total Suspended Solids - 10 or 20 mg/L
- Coliforms - 2.2 Most Probable Number

There would also likely be limits on the incremental increase in the temperature and change in the pH of the receiving water caused by the discharge.

Effluent limits on toxic pollutants would depend primarily on two factors: 1) water quality standards that is expected to be adopted by the SWRCB in the form of State wide plans or issued by the U.S. Environmental Protection Agency (EPA) in the form of the National Toxics Rule for California<sup>3</sup>; and 2) water circulation patterns in the south Delta. Both the SWRCB and EPA may be establishing water quality standards for surface waterways in California that would include a minimum of 126 priority pollutants. These standards represent maximum concentrations allowable in waterways to ensure the reasonable protection of beneficial uses of the waters and the prevention of nuisance.

Water circulation pattern in the south Delta is likely to change in the near future, but the details have not been determined at this time. The main uncertainty involves proposed modifications to water management practices that have been proposed in the South Delta Water Management Plan (DWR and USBR, 1990). The original EIR for the Plan is being updated and a Draft EIR on the updated Plan may be released by late summer 1994 (Chung, 1994). The preferred alternative identified in the original EIR would include construction and operation of a series of tide gates, and enlargement of certain channels and Clifton Court Forebay, which are designed to increase water surface elevations and improve water quality in selected channels within the south Delta, and to add flexibility to the operation of the State Water Project. One of the proposed tide gates would be located on Old River adjacent to the project. These proposals could drastically alter the flow patterns

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<sup>3</sup> It is unknown which agency will be finalizing water quality standards first. The EPA has indicated that they may be proposing National Toxics Rule (containing water quality standards) applicable to California in November 1994; the SWRCB may also initiate the State rule making process to adopt water quality standards. Regardless of which agency establishes the standards, it would be applicable to all surface water discharges allowed under an NPDES permit.

#### 4.4 PUBLIC UTILITIES

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within the south Delta and largely determine the potential impact of wastewater discharged from the project.

The Draft Master Plan projects the wastewater generation rate at project buildout would be 5.7 mgd. To provide a preliminary assessment of the effects of discharge to Old River, hydraulic modelling of the water quality effects of wastewater discharge to Old River at the eastern boundary of the project was performed for the original Final EIR (BASELINE, 1992a).<sup>4</sup>

The CVRWQCB would require the applicant to demonstrate that land disposal of wastewater would not be feasible before considering an NPDES Permit for discharge to Old River. If an NPDES permit were considered, the applicant would have to demonstrate that the discharge would not violate water quality standards for toxics (once they have been established) and not otherwise affect the beneficial uses of Old River. Factors affecting beneficial uses may include potential increase in salinity in Old River, changes in pH and temperature in Old River, potential interference with the passage of aquatic life in the river, and potential aquatic toxicity caused by the wastewater discharge.

The required treatment processes necessary for discharge to Old River would be determined by the effluent quality necessary to not violate water quality standards or impair beneficial uses. Tertiary treatment (or advanced wastewater treatment) beyond conventional biological treatment (for the removal of organics that would exert an oxygen demand on the receiving water) may be required. There may also be restrictions on when discharge to Old River would be allowed, contingent on water circulation patterns in the south Delta.

Reclaimed wastewater generally has higher salt and trace metal concentrations than water from an inland surface water source. Long-term irrigation with reclaimed water may cause salts and trace metals to accumulate in the soil and render the land unsuitable for crop cultivation. The Draft Master Plan contains a Salt and Metals Plan which describes suitable reclaimed water quality for use

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<sup>4</sup> A wastewater discharge rate of 6.5 mgd was assumed to occur from November to April. The model was used to predict the effects during a dry winter (1963-1964) and a wet winter (1974-75), both under current flow conditions and under the preferred alternative identified in the original EIR on the South Delta Water Management Plan (DWR, 1990). The dry winter preferred alternative scenario assumes the operation of a tide gate on Old River adjacent to the project.

The maximum component of wastewater discharged from the project that may reach the intake of the Delta-Mendota Canal and California Aqueduct was 0.65 and 0.09 percent, respectively, under all the scenarios considered. The highest percentage of wastewater in Old River one mile from the discharge point would be approximately seven percent. These scenarios correspond to a dry winter with the operation of the proposed tide gates. The model was also used to predict the incremental increase in total dissolved solid (a measure of salinity) concentration at various locations caused by wastewater discharge from the project. It was assumed that the background total dissolved concentration in Old River was 150 mg/L which corresponds to a flow condition where there is a net southward movement of water in the Delta from the Sacramento River toward the intakes for Delta-Mendota Canal and the California Aqueduct. The largest incremental increase in total dissolved solids concentration that may affect the intake water for the Delta Mendota Canal and the current intake for the California Aqueduct was predicted to be approximately 2.3 mg/L and 0.4 mg/l, respectively, under all the scenarios analyzed. Similarly, the largest total dissolved solids increase in Old River one mile from the discharge would be approximately 11 mg/L under the different scenarios.

on crops and monitoring of the soil and reclaimed water quality. Selection of long-term crops would be made based on the salt concentrations in the reclaimed water. Trace metals are not expected to be a problem, since non-residential discharges to the wastewater system would be regulated under a pretreatment program. However, pre-disposal trace metal removal at the treatment plant would be provided if any of the concentrations exceeded crop tolerance levels.

The Salt and Metals Plan, part of the Reclamation Plan proposed, would need to contain a schedule for the long-term monitoring of reclaimed water, soils irrigated with reclaimed water, and wastewater discharged from agricultural drains. Results should be used to set irrigation rates, crop selection, and soil amendment programs. It should also describe thresholds that would represent unacceptable conditions and the corresponding actions needed to remedy the conditions.

Old River water is currently being used for irrigation on Fabian Tract, the preferred permanent wastewater reclamation site. The fields under cultivation have buried agricultural drainage systems that were intended to maintain groundwater levels below the crop root zones. The drains serve a secondary purpose of carrying away excess irrigation water, which has seeped through the shallow soils. Using excess irrigation water is the primary means for leaching salts and metals from the root zone, to prevent excess salt buildup. According to the Draft Master Plan, the function of at least 15 percent of the water applied to agricultural fields is for leaching. Higher percentage of leaching water may be necessary to maintain adequate salt and trace metal concentrations in the soil to sustain crop growth. Since the drains discharge to a nearby surface water way, such as Old River or Grantline Canal, the use of reclaimed water may cause an increase in the amount of salts and trace metals discharged into nearby surface waters.<sup>5</sup>

Two hundred acres of wastewater storage ponds would be needed at project buildout if Fabian Tract were used as the reclamation site. Maximum water depth in the ponds would be 15 feet. Soils on Fabian Tract have moderately low to moderate permeabilities (The SWA Group, 1993a); if the existing land surface were used as the pond bottoms, the volume of wastewater seeping into the ground would be significant. Assuming a permeability of  $10^{-6}$  cm/s (corresponding to a low permeability material similar to clay), a water depth of 15 feet, and an unsaturated zone of five feet, the volume of water discharged from the bottom of the ponds into the groundwater would be 0.63 mgd, or eleven percent of the wastewater volume at project buildout. Depending on the proximity of agricultural drains to the storage ponds, the wastewater may be added to drainage water and discharged to a nearby surface waterway.

#### **Mitigation Measure M4.4.2-1**

*(a) Objective 1 in Wastewater Treatment Plant (Appendix C) should be revised, as follows:*

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<sup>5</sup> The Draft Master Plan states that excess irrigation water that produces surface runoff would be collected and reapplied to the fields. The Draft Master Plan does not propose to capture the excess irrigation water that percolates through the soil and enters the subsurface drainage system.



#### 4.4 PUBLIC UTILITIES

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*"To ensure that wastewater treatment processes be selected, designed, constructed, and operated to provide adequate treatment capacity and water quality for the method(s) of disposal throughout project buildout."*

*(b) Policy a) under Objectives 1 and 2 in Wastewater Treatment Plan should be revised, as follows:*

*"a) Initial treatment processes shall be selected to meet effluent quality required for restricted use reclamation such as irrigation of agricultural lands."*

*(c) Two new policies should be added under Objectives 1 and 2 in Wastewater Treatment Plant (Appendix C), as follows:*

*"c) Additional wastewater treatment processes shall be provided if unrestricted use reclamation, including irrigation on-site, industrial/commercial reuse, or surface water discharge were implemented.*

*"d) Expansion of the wastewater treatment plant shall be constructed and completed before the existing capacity has been exceeded."*

*(d) Implementation b) under Objectives 1 and 2 in Wastewater Treatment Plant should be revised, as follows:*

*"b) Ultimate Treatment. **The facultative lagoons shall be replaced by activated sludge treatment, or other similarly effective process(es), to provide secondary treatment process to be used after Specific Plan I bulldout is complete shall be activated sludge.** Additional treatment processes shall be added to produce the required effluent quality necessary for disposal options other than restricted use reclamation, if implemented."*

*(e) Implementation c) under Objectives 1 and 2 in Wastewater Treatment Plant should be revised, as follows:*

*"c) Level of Treatment. Initially, all process designs shall be sufficient to treat effluent for surface irrigation of crops and/or landscape irrigation with limited public access. Processes shall be upgraded or replaced to produce higher quality effluent suitable for other disposal methods; such other disposal methods may include irrigation with potential human contact, if on-site reclamation and discharge to Old River were implemented."*

*(f) Implementation f) under Objectives 1 and 2 in Wastewater Treatment Plant (Appendix C) should be revised, as follows:*

*"f) Development Permit. A Development Permit shall be required for the wastewater treatment plant **and shall be approved prior to the approval of the first tentative map.** The permit application shall include a schedule for design, construction, and permitting for the plant to ensure that the wastewater treatment and reclamation*

facilities would be operational prior to the approval of the first ~~Tentative final~~ **subdivision** map. A separate Development Permit shall be required for each ~~major~~ change in ~~wastewater treatment or disposal method or area (e.g., change from facultative lagoon to activated sludge, addition of tertiary treatment), or with each specific plan after Specific Plan I, whichever is sooner. Each Development Permit for the wastewater treatment plant shall describe the mechanism by which the construction of additional facilities for incremental expansion in treatment capacity shall be completed before the existing capacity is exceeded.~~

(g) The following new Implementations should be added under Objectives 1 and 2 in Wastewater Treatment Plant (Appendix C):

~~"g) Each Development Permit for the wastewater treatment plant shall describe the mechanism by which the construction of additional facilities for incremental expansion in treatment capacity shall be completed before the existing capacity is exceeded.~~

~~"h g) The initial Development Permit for the wastewater treatment plant shall describe a wastewater flow rate monitoring program and specify the actions that would be taken if wastewater flow rates exceeded projections made in the Draft Master Plan. Wastewater flow rate entering the treatment plant shall be compared to the volume estimates used to design the plant. Flow rate monitoring shall be performed by the Community Service District on a routine basis (with time between monitorings not to exceed five years). If flow rates were higher than those predicted, assuming a 14 percent reduction due to water conservation measures, mitigation measures shall be implemented, including additional conservation measures in subsequent new construction. Specific plans subsequent to Specific Plan I shall include a comparison of the actual wastewater generation rates for the project with those calculated in the Draft Master Plan. If wastewater flow rates were higher than those predicted in the Draft Master Plan, assuming implementation of water conservation measures, then the next specific plan shall specify actions that would be implemented in the next specific plan to reduce the wastewater generation rates. Approval of the specific plan(s) shall be contingent on the adequacy of the proposed actions to reduce wastewater generation rates to those calculated in the Draft Master Plan, if appropriate."~~

(h) Objective 1 in Wastewater Reuse Program (Appendix C) should be revised, as follows:

"All wastewater from the project shall be reclaimed to the maximum extent possible by assuring that the best beneficial use of the wastewater is implemented throughout the life of the project."

(i) Policy c) under Objective 1 in Wastewater Reuse Program (Appendix C) should be revised, as follows:

#### 4.4 PUBLIC UTILITIES

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"c) Water reclamation facilities shall be designed and operated to ~~ensure no~~ minimize physical adverse effects on crop production, public health, groundwater, or surface waterways from agricultural irrigation with reclaimed water. ~~Irrigation with reclaimed water shall not result in~~ **Physical adverse impacts include** salt and trace metal buildup in soil that prevents the growth of crops, or ~~in adverse~~ impacts to surrounding surface waterways due to discharge from agricultural drainage systems underlying the reclamation site."

(j) Implementation a) under Objective 1 in Wastewater Reuse Program (Appendix C) should be replaced with the following:

"a) A Reclamation Plan shall be approved by the County prior to the submittal of the Development Permit for the wastewater treatment plant. The Reclamation Plan shall include an engineering report and a schedule for ensuring that the design, construction, and permitting of the reclamation facilities would be completed prior to the approval of the first Tentative Map. The Reclamation Plan shall be updated and approved prior to the approval of specific plans subsequent to Specific Plan I."

(k) Implementation b) under Objective 1 in Wastewater Reuse Program (Appendix C) should be revised, as follows:

"b) **Specific Plan Requirement.** With the exception of Specific Plan I, no specific plan shall be approved unless guarantee has been provided to the County that sufficient land to meet the required storage and disposal acreage is under the control of the plan applicant or the community, and the consent of all ~~involved jurisdictions~~ **agencies which have the legal responsibility to approve and/or issue permits** has been obtained. Alternatively, if sufficient off-site land cannot be secured, then on-site reclamation shall be practiced to the maximum extent possible. Other disposal options, including discharge to Old River and piping the effluent to non-contiguous lands for irrigation, shall be considered, if necessary. ~~If disposal methods other than restricted use reclamation on the proposed sites were proposed, no specific plan shall be approved unless detailed environmental review of the method(s) has been performed, all necessary permits and land acreage have been secured, and detailed plans for constructing new and upgraded facilities have been developed.~~ **If future specific plans propose an Interim or permanent wastewater reclamation at a site other than the sites identified in the Master Plan, all the policies in the proposed Master Plan, and all the adopted mitigation measures, shall be applicable to the proposed alternative reclamation site(s). Any alternative wastewater reclamation site shall also be subject to the permitting requirements of the Central Valley Regional Water Quality Control Board and the Department of Health Services. Prior to the approval of any specific plan utilizing an alternative wastewater reclamation site not specifically identified in the Master Plan/Specific Plan I EIR, site-specific environmental review shall be performed (including but not limited with respect to human contact, biological impact, crop types, etc.) and additional mitigation measures will be adopted to mitigate any site-specific environmental impacts not previously addressed.**"

(l) Implementation h) under Objective 1 in Wastewater Reuse Program (Appendix C) should be replaced, as follows:

"h) **Monitoring.** A detailed Salt and Trace Metal Management Plan shall be submitted as part of the reclamation plan to ensure that irrigation with reclaimed water is a viable long-term disposal option and to ensure minimization of salts and trace metals that are discharged to surface waters via the agricultural drains."

(m) The following new Implementation Measures should be added under Objective 1 in Wastewater Reuse Program (Appendix C), as follows:

- "j) The location and design specifications for the wastewater storage ponds shall be provided in the Reclamation Plan. The location of agricultural drains within a one-half mile radius of the storage ponds and the sources and characteristics of soil that would be used to construct the ponds shall be identified. The design specifications shall address levee and pond bottom permeability, levee stability, and flood protection.*
- "k) An estimate shall be made of the wastewater volume that may seep from the ponds, and an assessment of potential flow paths from pond seepage shall be determined for the interim and potential permanent reclamation sites. The result of the assessment shall be*

*submitted to the CVRWQCB for determination of whether agricultural drain discharge from land irrigated with reclaimed water would be regulated as a point-source discharge under the NPDES program. The determination by the CVRWQCB shall be provided in the reclamation plan. If it appears likely that the CVRWQCB would regulate the agricultural drain discharge, then assurance that the discharge would be allowed must be documented prior to approval of the reclamation plan."*

**(n) A new Policy should be added to Objective 3 In Wastewater Reuse Program as follows:**

**"f) The project shall be constructed such that on-site wastewater reclamation could be practiced to the maximum extent possible upon the completion of an advanced wastewater treatment plant with minimal retrofitting of developed areas."**

**(o) A new Implementations should be added to Objective 3 In Wastewater Reuse Program.**

**"g) On-Site Reclamation. A reclaimed water distribution system shall be installed throughout the project upon initial development. The system shall provide for transmission of treated wastewater from the treatment plant to all public landscaped areas, parks, industrial and commercial areas, and other areas where reclaimed water could reasonably be used in the future. Major reclaimed water pipelines shall be sized to serve "downstream" areas upon development."**

**(p) A new Implementation should be added under Objective 3 In Potable Water Supply and Distribution, as follows.**

**"d) On-Site Reclamation. Upon operation of the advanced wastewater treatment plant to produce reclaimed water suitable for human contact, on-site reclamation with reclaimed water shall be used to replace potable water to the maximum extent possible. The Community Services District, and/or other public municipal agencies, shall use reclaimed water for irrigation of public areas and operations (e.g., equipment/vehicle/bus washing). The Community Services District shall ensure that industrial and commercial operations that use water for washing or processing be required to use reclaimed water to the maximum extent possible."**

#### **Impact M4.4.2-2**

**Illegal discharge of waste and wastewater to the intake channel of the Delta-Mendota Canal via agricultural drains may occur if the drains were not abandoned upon development.**

The purpose of agricultural drains is to carry away excess irrigation water and to keep potential shallow groundwater below the crop root zone. In an urban environment, these drains represent potential conduits for improperly disposed waste or wastewater to be discharged. The major drains under the project site are operated by BBID and discharge into the intake channel of the Delta-Mendota Canal authorized by a NPDES permit from the CVRWQCB. Individual drain systems

maintained by farmers discharge into the BBID drains. All agricultural tile drains should be removed and/or permanently abandoned upon development. **Abandonment of BBID drains will be subject to the rules and regulations of BBID.**

**Mitigation Measure M4.4.2-2**

*(a) A new Policy should be added to Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C), as follows:*

*"Obsolete agricultural irrigation and drainage facilities shall be removed or properly abandoned upon development of an area."*

*(b) Implementation c) under Objectives 4 and 5 in Potable Water Supply and Distribution (Appendix C) should be revised, as follows:*

*"c) Farm Drainage Requirements. All Development Permit submittals shall include a report on the impact on existing farm drainage facilities. The report shall include a map of all existing farms drains that flow through the area covered by the permit or map, an assessment of the impact on the drainage system, and a determination of the planned dispossession of the system. The potential for drains to act as conduits for waste or wastewater to be discharged to nearby surface waterways shall be eliminated. Drains are to be identified on the maps as to type, location, and function. Portions of a system that would be abandoned shall be removed unless they could be incorporated into the storm drainage system."*

**Impact M4.4.2-3**

**An inadequate wastewater sludge treatment and disposal system could adversely impact water resources and public health. Scarce municipal landfill space may be occupied by sludge if alternative disposal/reuse options were not aggressively pursued.**

The Draft Master Plan predicts that wastewater sludge disposal would not be needed during the first part of the project while biological treatment would be provided by facultative lagoons. Solids that settle in the lagoons would continue to decompose in the anaerobic environment at the bottom. The extended sludge retention time in the lagoons, and hence extended treatment time, would substantially reduce the sludge volume. Sludge treatment and disposal would become necessary when facultative lagoons would be replaced by activated sludge treatment. This would occur in Specific Plan II. At project buildout, the Draft Master Plan projects that 11,300 pounds per day of treated sludge would require disposal if only secondary treatment were provided. If the sludge were dried to 50 percent water content, the volume of sludge would be 13 cubic yards per day. An additional 5,500 pounds per day, or 7 cubic yards per day at 50 percent moisture of sludge would be produced at build out if tertiary treatment were also provided to produce reclaimed wastewater that may be used to irrigate areas within developed areas.

Sludge treatment and drying processes would be built at the same time that activated sludge biological treatment units would be built to replace the facultative lagoons. The proposed sludge treatment processes would consist of dissolved air floatation thickening (to decrease the water content of the waste activated sludge), anaerobic digestors (to further decompose organic materials in the sludge), and sludge drying beds (to decrease the water content of the treated sludge).

The Draft Master Plan identifies several options for sludge disposal. These include disposal at a Class II or III landfill, agricultural land spreading (soil amendment), dedicated land disposal, and composting. Sludge disposal options would not be further evaluated until treated and dried sludge becomes available (i.e., after the plant is expanded beyond 1.4 mgd). Sludge characterization would be the first step in determining viable disposal options. Until other options were identified and arranged, the sludge would be transported to a landfill for disposal.

The sludge from the project should not be a hazardous waste by Federal or State criteria, with the implementation of effective nonresidential pretreatment, public education, and hazardous waste collection programs. Even for nonhazardous sludge, the regulatory framework regarding sludge disposal is complex because it is regulated by multiple Federal, State, and local agencies. Federal regulations in Part 503, Title 40 of the Code of Federal Regulations specify performance-based standards, including maximum contaminant concentrations in sludge, for different disposal options. Disposal of sludge to land is regulated by the California Regional Water Quality Control Boards, whose mandate is to protect surface and groundwater resources. The California Integrated Waste Management Board implements regulations that are designed to minimize the amounts of waste, including sludge, disposed of at landfills by implementation of all feasible options. All of the regulations applicable to sludge disposal are intended to minimize the adverse impact of sludge disposal on the environment and to protect human health and safety from potential exposure to the sludge.

Beneficial reuse of sewage sludge is strongly encouraged by both Federal and State regulations. In the past, sewage sludge has generally been considered a waste that required either landfill disposal or dedicated land disposal (depositing sludge on designated land which is not used for other



purposes). Since landfill space has become scarce and traditional sludge disposal practices have caused contamination of water resources, it is advantageous to consider sludge as a resource rather than a waste. Sludge contains significant nutrients and microorganisms that could be directly used as an agricultural soil amendment, or could be composted for soil amendment application by individuals.

The evaluation of sludge disposal options should consider both economic and environmental benefits and impacts. Landfilling of sludge should be chosen only if all other alternatives have been rejected based a thorough benefit/impact analysis. In addition, the evaluation process should be initiated as early as possible, to allow lead time for arranging for potential soil amendment sites or compost markets, if appropriate. The primary factor that limits potential beneficial sludge use options is based on the metals content of the sludge. An aggressive pretreatment program to regulate non-residential discharges to the sewer would be crucial to maximize sludge disposal options.

**Mitigation Measure M4.4.2-3**

*(a) The following Policies should be added under Objective 1 in Sludge Disposal (Appendix C), as follows:*

*"b) Beneficial reuse of sewage sludge shall be implemented to the maximum extent possible to minimize sludge disposal at a landfill or at a dedicated site.*

*"c) Sludge quality from the project shall not limit sludge reuse options. This shall be accomplished via effective pre-treatment, public education, recycling programs, and additional treatment, if necessary."*

*(b) Implementation b) under Objective 1 in Sludge Disposal (Appendix C) should be revised, as follows:*

*"b) Interim Disposal. If the sludge meets acceptance criteria of a specific landfill, the sludge shall be initially disposed of ~~in the Foothill or another acceptable~~ **at an appropriately permitted** landfill. Sludge shall meet nonhazardous classification and shall be dried to a minimum of 50 percent solids prior to disposal at a landfill. The duration of landfill disposal shall not exceed two years from the startup of the activated sludge treatment process, unless the sludge disposal program described in Implementation e) concludes that landfill disposal of wastewater sludge is the only viable option."*

*(c) Implementation e) under Objective 1 in Sludge Disposal (Appendix C) should be revised, as follows:*

*"e) Initial Wastewater Sludge Disposal Plan. Within one year after the startup of the ~~activated sludge~~ **permanent secondary** treatment process, the Community Service District shall submit an Initial Wastewater Sludge Disposal Plan to the County and other appropriate agencies for review and approval. The Plan shall document the sludge characterization findings, a*

*detailed impact/benefit analysis of sludge disposal options, and a proposed sludge disposal method for the duration of the current specific plan."*

*(d) The following new Implementations should be added under Objective 1 in Sludge Disposal (Appendix C), as follows:*

- "f) Sludge disposal options shall be evaluated as early as possible, not later than one year after the startup of the ~~activated sludge~~ permanent secondary treatment process, to allow for early identification of disposal options. Evaluation shall include sludge characterization, survey of potential sites where sludge may be used as a soil amendment, and assessment of viability of the compost market.*
- "g) In all specific plans where wastewater treatment sludge requires disposal, the specific plans shall ~~contain~~ Identify the proposed method(s) of sludge disposal for the duration of the plans. The CSD may subsequently adopt other sludge disposal options provided the new method(s) will achieve an equivalent or higher degree of environmental and public health protection, as determined by the County, and meets all applicable regulatory requirements. The County shall be notified of the proposed change in disposal method at least six months prior to implementation of the new disposal method.*
- "h) ~~If temporary or permanent sludge disposal at a landfill is proposed in any specific plan or the initial Wastewater Sludge Disposal Plan, a commitment with a landfill shall be included in the respective plan.~~ If landfill disposal of the wastewater sludge were proposed, an agreement or "will serve" letter with a landfill that would accept the sludge for at least the next five years shall be provided with the Initial Wastewater Sludge Disposal Plan or subsequent specific plan. If land spreading or dedicated land disposal were proposed, then guarantees of adequate acres for sludge disposal for at least the next five years must be provided. Provisions for sludge disposal shall be updated annually so that there are always firm provisions for disposal for at least five years into the future."*

#### **Impact M4.4.2-4**

**An uncontrolled release of hazardous materials could occur during wastewater treatment operations and could impact water resources and public health.**

The Draft Master Plan proposes to use chlorine, a hazardous material, either in the form of hypochlorite or chlorine gas for wastewater disinfection. Other hazardous materials that may be present at the treatment plant include petroleum products (fuel and lubricants) for support vehicles and emergency generators and solvents for cleaning mechanical equipment. Airborne releases of hazardous materials could cause significant health effects among occupants down wind of the treatment plant. Spills may enter into the storm drainage system and be discharged to Mountain House Creek or Old River; spill may also seep into soils and become a source of groundwater contamination. Releases of hazardous materials may occur during use, storage, and transport.

#### 4.4 PUBLIC UTILITIES

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The use of hazardous materials should be minimized. This can be accomplished by substituting hazardous materials with alternatives, choosing materials that pose the least hazard, and minimizing the volume of hazardous materials used. Facilities needed for the handling, storage, and use of hazardous materials should be designed to minimize potential releases, include secondary containment, remote monitoring, alarms, and appropriate ventilation. Procedures should be established to handle and use the materials in a safe manner, and employee training should be provided.

**Mitigation Measure M4.4.2-4**

*Refer to Mitigation Measure M4.4.1-6.*

**Impact M4.4.2-5**

**Failure of the levees around wastewater treatment and storage ponds could cause flooding in the surrounding areas.**

The wastewater storage pond capacity identified in the Draft Master Plan would be approximately one billion gallons at project buildout. Depending on the location of the final reclamation site, the depth of water in the ponds could range between 6 to 15 feet. In addition, up to 60 acres of facultative lagoons would be used for secondary treatment in Specific Plan I. Failure of the pond levees could cause localized flooding and could cause human injuries and property damage. **Inundation of ponds constructed in flood plain areas during flooding events could cause loss of pond storage capacity.**

**Mitigation Measure M4.4.2-5**

*(a) A new Policy should be added under Objective 1 in Wastewater Reuse Program (Appendix C), as follows:*

*"d) The wastewater treatment and storage pond levees shall be capable of withstanding a maximum credible earthquake; **and ponds located within the 100-year floodplain shall prevent inundation due to levee failure along Old River or other nearby waterways, be capable of withstanding the effects of flooding, and shall not impair the structural integrity of existing flood control levees.**"*

*(b) A **Three** new Implementations should be added under Objective 1 in Wastewater Reuse Program, as follows:*

*"j) The detailed design of the wastewater treatment and storage pond levees shall be included in the Reclamation Plan and initial Development Permit for the Wastewater Treatment Plant, and in all subsequent reclamation plans where additional ponds are proposed. **The pond levees within the 100-year floodplain shall meet, as a minimum, the requirements of Section 65.10 Mapping of Areas Protected By Levee Systems, 44 CFR Ch. 1 and the design standards specified herein.***

*"k) **The wastewater treatment and storage ponds located within the 100-year floodplain shall be set back from existing flood control levees to not interfere with inspection, maintenance, or repair of the flood control levees, if applicable.***

*"l) **The wastewater treatment and storage pond levees shall be set back an appropriate distance from existing flood control levees to ensure that there will be no loss of integrity of the flood control levees.**"*

**SPECIFIC PLAN I**

The wastewater treatment plant capacity at the end of Specific Plan I would be 1.42 mgd. This capacity is projected to be sufficient to serve the first three neighborhoods as well as the two

#### 4.4 PUBLIC UTILITIES

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industrial/commercial areas, or about 31 percent of the wastewater generation at project buildout, assuming residential water conservation measures would result in a 14 percent reduction in wastewater generation. The capacity of the wastewater treatment facilities is smaller than that calculated based on the land uses included in Draft Specific Plan I. The calculated wastewater generation based on the land uses is 1.76 mgd, assuming water conservation measures are implemented. The reason for undersizing the wastewater treatment plant is that all of the land designated for industrial/commercial uses in Specific Plan I is not expected to build out before the next Specific Plan area begins construction, and therefore it would not be necessary to provide wastewater treatment capacity for these unused lands during Specific Plan I. Treatment capacity for the unused industrial/commercial portions of Specific Plan I would be provided in the subsequent specific plan. The plant would be constructed in three increments to meet the increasing treatment demands throughout Specific Plan I.

The treatment units would consist of an influent headwork with screens and aerated grit tanks, chlorinators and contact chambers, facultative lagoons to provide secondary (biological) treatment, treated wastewater storage ponds, and pumping facilities. The headwork and chlorination facilities would be located on the 30-acre site designated for the future wastewater treatment plant within the Old River Industrial Park portion of Specific Plan I. The facultative lagoons would be built in 20-acre increments, resulting in 60 acres of ponds by the end of Specific Plan I. The lagoons would be located immediately north of the Old River Industrial Park and east of Mountain House Creek, outside of the Specific Plan I area (Figure 4.4-4).

The location of the treated wastewater storage ponds and irrigation fields needed for Specific Plan I may be located at an interim site (between the facultative lagoons and Old River), at the primary permanent site on Fabian Tract across Old River, or at the secondary permanent site in Alameda County. Selection of an initial site would be specified in the Reclamation Plan required in the Draft Master Plan.

If the interim site located between Byron Road and Old River were used, 120 acres of storage ponds and 290 acres of irrigation fields would be needed to serve Specific Plan I (Figure 4.4-4). As development progressed toward buildout of Specific Plan I, the irrigation area shown in Figure 4.4-4 would be mostly occupied by treated wastewater storage ponds. Additional land would be needed for irrigation when the wastewater generation reaches approximately 0.5 mgd, approximately one-third of the flow rate calculated for Specific Plan I. The Draft Specific Plan I states that transfer of reclamation activities from the interim site to either of the permanent sites may occur any time during Specific Plan I.

Impacts associated with Specific Plan I buildout would be those described under Master Plan. No further impacts have been identified.

### 4.4.3 STORM DRAINAGE

#### Setting

The project site is used almost entirely for agriculture and pasture. The only impervious cover on the site includes roads, pavement, and areas covered by structures. Local drainage is largely dictated by an extensive system of ditches and agricultural drains. Mountain House and Dry creeks, traversing the northern portions of the site, drain to the north into Old River.

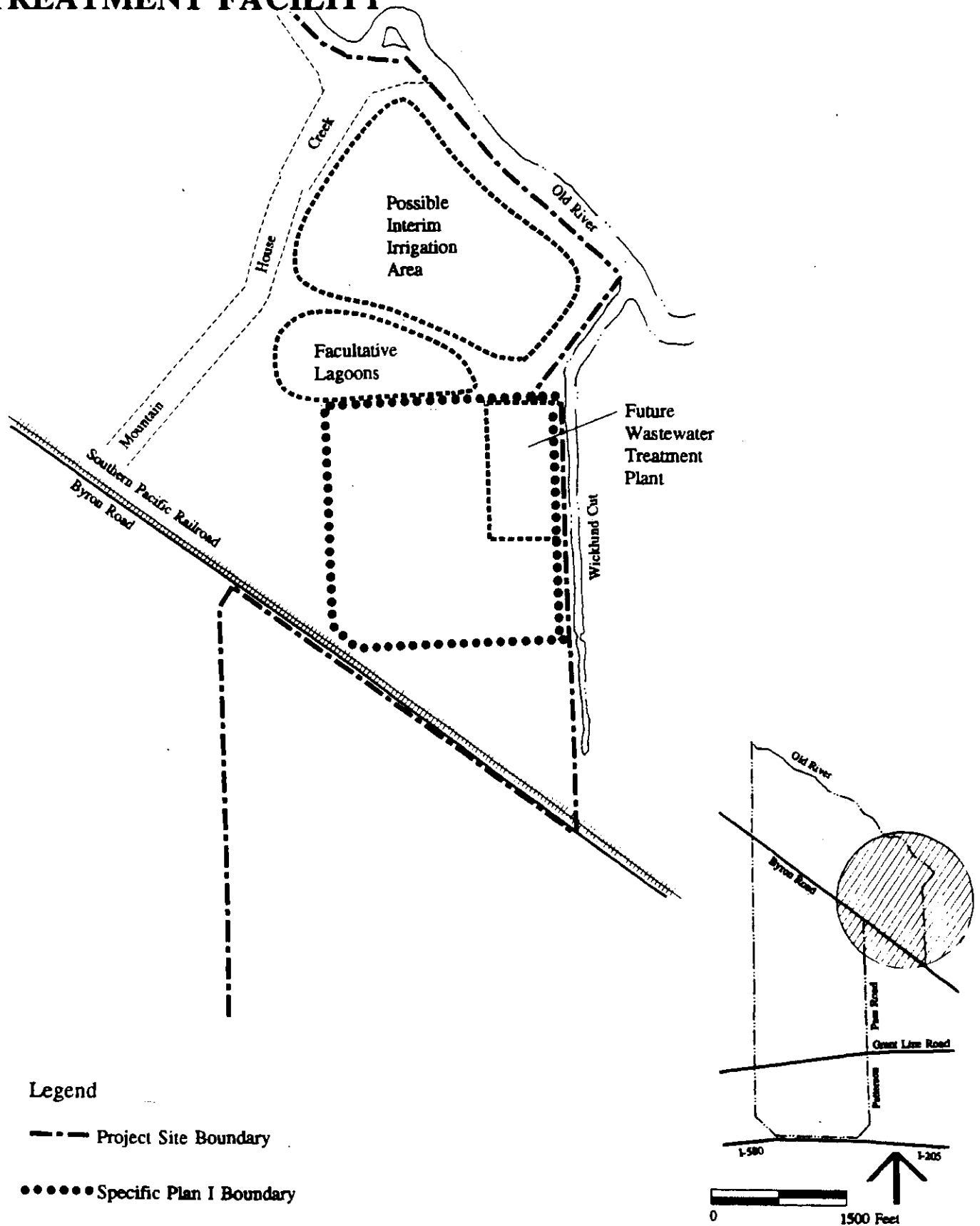
The area within 2,000 feet of Old River is subject to flooding during a 100-year flood event. The level, flow rate, and direction of the water flow in Old River are significantly influenced by pumping operations associated with the Delta-Mendota Canal and California Aqueduct, tides, and runoff.

#### Impacts and Mitigation Measures

Significant impacts related to storm drainage include: potential flooding due to an inadequate storm water drainage system; water quality degradation due to an inadequate storm drainage system;

# SPECIFIC PLAN I WASTEWATER TREATMENT FACILITY

Figure 4.4-4



BASELINE

destruction of riparian habitat to accommodate storm water runoff; and infringement on utility easements.

#### **MASTER PLAN**

An extensive storm water runoff drainage system has been proposed to serve the project site. The drainage system would consist of catch basins, underground piping, open drainage channels, and detention basins. Storm water would ultimately be discharged to Old River. The existing agricultural ditches and drains would be abandoned as areas become developed.

Pipes and/or open channels would be used to intercept and convey storm drainage. They would be designed and constructed to transport the 100-year 24-hour storm event and minimize erosion. The primary storm drain collection system includes trunk storm drain pipes (72-inch and larger), major open channels, and detention basins. The design and construction of detention basins would be based on the 100-year, 24-hour storm event.

Mountain House Creek would be used as an open flood protection channel and would discharge into Old River. Two existing dams on Mountain House Creek would be redesigned and reconstructed to preserve existing wetlands and to pass larger flood flows over the dam crest. Wetland check berms would be designed and constructed to trap sediment thus reducing sediment load to Old River. To protect future residents from 100-year flooding, an additional set of levees has been proposed for construction along Old River.

Storm water from urban areas contains numerous contaminants that may adversely affect receiving waterways. Common pollutants in urban runoff include sediments, nutrients, bacteria, oil and grease, trace metals, trace toxic organics, and chlorides or salts. The degradation of organic materials by naturally occurring bacteria in the receiving water can deplete the water of dissolved oxygen necessary for aquatic life.

The Water Quality Act of 1987 amended the Federal Clean Water Act by directing the U.S. Environmental Protection Agency (EPA) to regulate storm water discharges from large urban areas and from areas associated with industrial activities into surface waters. The EPA regulations specify application and permit requirements of such storm water discharges. In California, these regulations are being implemented by the Regional Water Quality Control Boards (RWQCB). The current regulations require all communities that have a population greater than 100,000 people to apply for a National Pollutant Discharge Elimination System (NPDES) Permit for municipal storm water discharges.

Although the project, as proposed, would have a population of under 100,000 people, the storm water drainage system should be designed and built with the consideration that storm water regulations may be extended to communities with lower populations in the future. For storm water discharge from an urban area, the regulations require a municipality to submit a two part application to the appropriate RWQCB. The application includes 1) information on water quality data, 2) a description of the existing storm water collection system, 3) identification of the legal authority to control



#### 4.4 PUBLIC UTILITIES

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discharges, 4) an existing storm water management program, and 5) financial resources devoted to implement the storm water control program. The NPDES permit issued to a municipality includes requirements to effectively prohibit non-storm water discharges from entering the storm sewers and controls to reduce the discharge of pollutants to storm water to the maximum extent practicable.

Construction activities are considered an industrial activity and are regulated under the new storm water regulations. Frequently, large amounts of sediment from construction sites are flushed into creeks, rivers, and other water bodies during rain. Sediment loading into natural water bodies adversely impacts existing fish and wildlife and causes siltation problems. The California State Water Resources Control Board adopted an NPDES General Permit for construction activities in 1992. For the project, a Notice of Intent would have to be submitted to the Central Valley RWQCB at least 30 days prior to the commencement of construction according to the General Permit. The Permit contains a prohibition on discharges of waste water other than storm water and a requirement to prepare and implement a Pollution Prevention Plan. The Pollution Prevention Plan is required to include descriptions of erosion and sedimentation control, structural practices for diverting flow from exposed soils, and measures for minimizing pollutant discharges after construction has been completed.

The Draft Master Plan has developed several objectives, policies, and implementation measures within the individual sections under Public Health and Safety and Storm Drainage and Flood Protection (Appendix C) to mitigate adverse impacts resulting from storm water discharge from the site.

The potential impacts of storm water runoff from construction activity areas are addressed in Objective 5 in Potential Site Hazards under Public Health and Safety and Objective 3 in Primary Storm Drain Collection System under Storm Drainage and Flood Protection (Appendix C). The stated objectives propose to reduce or eliminate the impacts of erosion and sedimentation during construction activities, and are supported by a policy in the Master Plan to control erosion. Implementation of the policies would include conformance with the NPDES General Permit for construction activities.

The discussions of the Primary Storm Drain Collection System and Mountain House Creek Improvements (Appendix C) also include policies requiring that drainage channels within the project be designed to minimize erosion. Implementations for the policies require that the stream channels be designed and constructed to convey runoff at or below flow velocities that could cause erosion. Additional implementations are included under the Primary Storm Drain Collection System that require stream bed protection and/or energy dissipation structures for areas of potentially high erosion hazards.

The Storm Drainage and Flood Protection section of the Draft Master Plan includes a discussion of Best Management Practices (BMPs) for the storm drain system (Appendix C). Objective 1 sets the goal of developing a storm drain system design that reduces the discharge of storm water pollutants. This objective is supported by three policies, including incorporation of appropriate source control

BMPs in each specific plan. The implementation of these policies includes management to minimize directly connected impervious surfaces, management plans for potential pollutants, a sewer maintenance program, enforcement of an illicit connection ordinance, spill prevention and cleanup plan, and incorporation of site-specific and regional BMP treatment processes into drainage system design.

The applicant has proposed to use detention basins (also referred to as ponds) as part of the storm water collection system to reduce peak flows downstream and to catch the runoff from the approximately first one-half inch of rain which generally carries the highest concentration of pollutants. Although the design of the basins has not been determined, an Implementation presented under Primary Storm Drain Collection System of the Draft Master Plan states that the detention basin designs will conform with San Joaquin County Public Works Department standards.

Detention basins are effective in removing particulate pollutants from storm water and in slowing the peak runoff rate in downstream pipes and channels. This system reduces erosion of earthen channels and allows smaller pipes to be installed. Heavy metals, nutrients, and organic matter that absorb onto sediments can also be removed from the runoff, thus reducing contamination of waterways and wildlife habitat. For detention basins to effectively remove particulates, they must be sized to detain runoff long enough for particulates to settle.

The applicant has proposed to place detention basins in school, parks, open space, residential, and light industrial areas. Detention/retention ponds are allowed by utility companies to be located near or within underground utilities or overhead electrical transmission line easements. The ponds would not infringe on easements without the approval of the owner of the easement.

Agricultural activities would continue on the undeveloped portions of the project site during the early phases of project construction. The applicant proposes to maintain separate drainage systems for urban and agricultural runoff as the project proceeds. Existing drains on farmlands that are developed would be abandoned as the land is developed. Farm drains would be rerouted around adjacent new urban areas so that farm drainage is not impeded.

The Draft Master Plan addresses the potential disruption of BBID's facilities in Objective 4 and associated policies under Potable Water Systems. Four implementations are presented for the objective and policies which provide for identification, assessment, and maintenance of BBID facilities.

The applicant proposes to widen and deepen the lower sections of Mountain House Creek to eliminate flooding along the creek and to accommodate the increased flow rates due to development. The Creek has been modified from its natural configuration over the years, largely due to farming activities. Any modifications to natural channels must receive a Streambed Alteration Agreement pursuant to Section 1603 of the Fish and Game Code from the California Department of Fish and Game (CDFG). No net loss of riparian habitat can occur as a result of any stream modification. Following submittal of an application and fee to CDFG, a warden would assess the conditions of the

creek and formulate mitigation measures. After evaluation, a signed agreement regarding the stream modification, including all the mitigation measures, would be formalized between CDFG and the applicant. CDFG would monitor construction to ensure compliance with the agreement. The U.S. Army Corps of Engineers (USACOE) operates under the authority of Section 404 of the Clean Water Act to regulate modifications that affect waters of the United States. These include all navigable waters and wetlands and tributaries to these waters. A permit or exemption from the Corps would be required for modification of Mountain House Creek or wetlands, as well as marina dredging on the project site.

Implementations under Objective 2 of the Mountain House Creek Improvements section of the Draft Master Plan acknowledge the requirements for compliance with a Streambed Alteration Agreement and Section 404 and Section 10 permits administered by USACOE. The Draft Master Plan also specifies that streambed modification and riparian vegetation proposals shall be prepared for each Specific Plan area.

#### **Impact M4.4.3-1**

**The accumulation of floating debris and petroleum residual in detention ponds could create a nuisance condition (e.g., odors, mosquito infestation, and excessive algae growth) and cause adverse aesthetic effects.**

Detention ponds do not provide direct treatment for floating pollutants, such as residual fuel and litter from urban areas. These floating pollutants would build up in the detention basins unless they were manually removed. Detention basins also provide no treatment for dissolved organics and inorganic pollutants.

Detention basins require relatively intensive routine maintenance. Maintenance activities include inspections; landscape maintenance; removal of weeds and woody growth from the surrounding area and spill ways; erosion and bank repairs; and nuisance abatement. Without a good maintenance program, nuisance conditions, such as odor problems, mosquito infestation, floating debris and fuel, and excessive algae growth in the water would be common. Long-term maintenance activities include periodic sediment removal and occasional structural and plumbing repairs.

The design and maintenance of detention basins are addressed in the Draft Master Plan by one Implementation presented in the discussion of the Primary Storm Drain Collection System (Appendix C). This implementation includes the consideration of surface barriers at the basin and preparation of performance criteria for the storm water collection system; this would partially ensure that the capacity of the basins would be maintained.

#### **Mitigation Measure M4.4.3-1**

*The following mitigation measure should be included as an Implementation under Objective 3 in Primary Storm Drain Collection System (Appendix C):*

~~"e) Prior to Development Permit approval for the first major or minor subdivision within the project site, an Operations and Maintenance Manual for the storm water collection system shall be prepared and submitted to the Building Inspection Division of the Department of Community Development for review and approval. The objective of the Manual shall be to ensure regular maintenance of the basins. Any proposed plans for construction or grading which include a detention basin shall include a proposed schedule and description of necessary routine maintenance activities for such detention basin(s) (including access roads). The maintenance plans may be in the form of a general operations and maintenance manual or may be specific to the detention basin(s) for which construction/grading plans are being submitted."~~

### SPECIFIC PLAN I

A description of the components of the storm drainage collection system is presented in the Storm Drainage section of the Draft Specific Plan I. Development under Specific Plan I would include design and construction of the primary and secondary storm drain collection systems within each of the three development areas, Central Mountain House, Mountain House Business Park, and Old River Industrial Park. Implementation of Best Management Practices required in the Draft Master Plan for the collection system applies to all of the development areas. Specific Plan I presents policies and implementations for the management of off-site drainage flowing into the areas to be developed under the Plan. General design criteria are proposed for the Primary Storm Drain Collection System that would include the construction of interim or temporary retention basin(s) sized to manage the 10-year 24-hour storm event. The design of the primary storm drain system would not change existing conveyance structures under Byron Road (three 36-inch culverts).

The Draft Specific Plan I proposes improvements to Mountain House Creek for reaches of the Creek that are within the Central Mountain House area. Other improvements to Mountain House Creek proposed in the Draft Master Plan would not be implemented as part of Specific Plan I. Flood hazards downstream of the improved reach of Mountain House Creek would remain the same.

The Draft Specific Plan I proposes the construction of temporary retention basins for flood control in the areas developed under the Plan. The plan specifies that the storm flows crossing under Byron Road would be controlled by the detention basins to a degree adequate to control 100-year flow rates. The design of the basins will be prepared prior to the submittal of the first Development Permit.

Impacts associated with Specific Plan I buildout would be those described under Master Plan. No further impacts have been identified.

#### **4.4.4 GAS AND ELECTRICITY**

##### **Setting**

Pacific Gas and Electric Company (PG&E) currently supplies electricity and natural gas to the project site. Herdlyn Substation, located near the intersection of Herdlyn Road and Byron Road, approximately two miles northwest of the project boundary, is the primary electrical feed to customers within the project site. The major existing on-site users of electricity and natural gas are the rural residences and two dairies.

Two existing and two proposed electrical transmission line easements traverse the project site (Figure 3.7). The Weber-Herdlyn 60-kilovolt (kV) overhead transmission line (30-foot wide easement) runs across the northern portion of the project site, parallel to Old River. The Rio Oso-Tesla 230-kV overhead transmission line (75-foot easement) runs across the southeast portions of the project site and the site's northeast corner. A 200-foot wide easement is adjacent to the Rio Oso-Tesla line, resulting in a combined easement of 275 feet; the additional easement was for the Rancho-Seco Tesla Project.<sup>6</sup> In addition, the preferred alternative for the Wesley/Tracy 230-kV transmission project traverses the southwestern boundary of the site (Figure 3.7).

Three natural gas pipelines owned by PG&E cross the project site (Figure 3.7). Two pipelines, the 26-inch diameter Stan Pac pipeline (Line No. 2) and newly constructed 36-inch diameter natural gas pipeline, share a 50-foot wide easement that runs across the southern portion of the project site. An 18-inch diameter Chevron crude oil pipeline is located adjacent and parallel to the gas pipelines. An 8-inch diameter natural gas pipeline with a 16.5-foot wide easement also runs from the northwest to the southeast crossing Byron Road and Patterson Pass Road.

### Impacts and Mitigation Measures

For the purposes of this DEIR, significant adverse impacts are considered to be those that would not conform with development restrictions for existing natural gas and electrical line easements across the project site or that would result in the use of significant amounts of non-renewable energy resources. Potential health impacts from overhead transmission lines and environmental impacts from fuel pipelines are discussed in Section 4.10 of this DEIR.

### MASTER PLAN

PG&E has indicated that it would be able to service the project site. Existing local substation capacity would be able to supply power to approximately the first 25 percent of the community's development. Beyond that, new facilities, including a substation and transmission lines, would be required. A typical substation would require an approximately five-acre site with street access. New transmission and distribution lines would require additional on-site easements.

The total constant electric demand of the project (the amount of energy required to be available at all times) with energy efficiency design implemented has been estimated to be about 100,000 kilowatts (kW), and total natural gas demand to be about 630,000 cubic feet at project buildout. These values include a 25 percent reduction in energy use compared with "typical" designs (Pennino, 1993). The Draft Master Plan specifies that energy efficiency would be incorporated from the initial phase of development through the life of the community. The consumption of energy would be minimized through building design and orientation, landscape design, community programs, and use of PG&E's Energy Planning Services. Through their Energy Planning Service, PG&E assists in

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<sup>6</sup> This project has been deferred by PG&E, and there is a low probability that the project would be constructed in the near future; other projects may be proposed for this corridor in the future (Thomas, 1994).

#### 4.4 PUBLIC UTILITIES

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determining energy requirements and potential costs, and provides site- or facility-specific recommendations to increase energy efficiency.

The Herdlyn 60-kV transmission line is proposed to be moved to Byron Road. The eight-inch diameter natural gas pipeline has also been proposed to be relocated near Byron Road and Central Parkway. To relocate a PG&E electrical transmission line or natural gas pipeline, a proposal must be presented to PG&E for approval.

An open space corridor or industrial land use has been specified for the Rio Oso-Tesla 230-kV electrical transmission line along the eastern portion of the project and PG&E's gas pipelines and Chevron's crude oil pipeline along the southwestern portion of the project.

PG&E limits development in easements associated with electrical transmission lines and natural gas pipelines. Some improvements may be allowed in electrical and natural gas line easements pending PG&E review of the detailed proposal. Chevron also limits development above fuel pipelines. Federal and State regulations restrict development in the fuel pipeline easements, similar to those applicable to natural gas pipelines. Access to the easement must be provided so that the pipeline(s) can be maintained or upgraded. The Draft Master Plan proposes to comply with PG&E's land use restrictions and states that specific plans would be submitted to PG&E for review and comment on proposed development in the vicinity of electrical power lines.

##### **Impact M4.4.4-1**

**The Draft Master Plan does not provide specifications for moving existing utilities and establishing easements.**

A proposal to PG&E to relocate the Weber-Herdlyn 60-kV transmission line and eight-inch diameter natural gas pipeline is not included in the Draft Master Plan. The width of any additional easement for these utilities is not specified.

##### **Mitigation Measure M4.4.4-1**

*The following Implementations should be included under Objective I in Electricity ~~or Objective I in Natural Gas~~ (Appendix C):*

- "e) A formal application shall be submitted to PG&E to relocate the Weber-Herdlyn 60-kV electrical transmission line or provide an adequate open space corridor or other appropriate land use approved by PG&E for the easement prior to submittal of the first Development Permit north of Byron Road.*
- "f) A detailed proposal to relocate the eight-inch natural gas pipeline located north of Byron Road shall be included in the draft specific plan(s) for that area. A preliminary response from PG&E regarding the proposed relocation shall be secured and documented in the applicable final specific plan(s).*

- "g) *An open space corridor or appropriate land use approved by PG&E shall be provided for the Rio Oso-Tesla transmission line easements. PG&E's approval shall be secured prior to the first Development Permit in the applicable specific plans.*
- "h) *Construction plans shall be submitted to PG&E and other easement owners for review prior to construction in applicable specific plan areas. In particular, the construction plans should identify proposed land uses in utility easements, and procedures for movement of heavy machinery over pipelines installed in non-roadway areas which may not be designed to withstand forces exerted by heavy loads."*

*The Master Plan should include Policies under Objective I in Electricity (Appendix C) to read as follows:*

- "i) *Land uses shall be compatible with overhead transmission line corridors, existing or proposed.*
- "j) *Specific plans that propose residential or school development adjacent to an overhead transmission line shall summarize and provide an evaluation of the latest information regarding EMF exposure and incorporate additional measures to mitigate those effects, if appropriate."*

#### **Impact M4.4.4-2**

**The project would have a significant energy demand and would contribute to the depletion of non-renewable resources and the demand for environmentally-detrimental renewable resources such as hydroelectric power.**

The objective of the project is to achieve a 25 percent energy saving by efficient community design. The energy demand of the project would create a significant impact on non-renewable energy resources such as fuel oil, coal, and natural gas, and could increase pressure to develop environmentally-destructive renewable resources, such as hydroelectric power.

A significant portion of the total energy demand associated with the project would be related to transportation. Locating commercial centers within convenient walking distance (e.g., one-quarter to one-half mile) from residences would reduce residents' dependence on private automobiles. According to the proposed project, some residences located in Neighborhood L may be located more than one-half mile from the nearest neighborhood commercial center.

The use of solar energy to decrease the demand for electricity and natural gas is a feasible alternative at the project site. The Solar Rights Act of 1978 states that: 1) local planning and building ordinances should not prohibit or unreasonably prohibit the use of solar energy systems, 2) tentative subdivision maps should be reviewed to provide, to the extent feasible, opportunities for future use of natural heating or cooling, and 3) local governments are allowed to adopt an ordinance requiring easements for solar access as a condition of subdivision map approval (California Energy



#### 4.4 PUBLIC UTILITIES

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Commission, 1979). The Solar Shade Control Act of 1978 prohibits the placement of vegetation in locations that would shade a solar collector on another person's property.

The Draft Master Plan contains Policies and Implementations under Objective 1 in Energy Efficiency (Appendix C) to minimize the consumption of nonrenewable energy resources and encourage the development and use of alternative energy sources. A community energy conservation plan would be prepared with the assistance and recommendations of PG&E prior to submittal of the first Development Permit.

##### **Mitigation Measure M4.4.4-2**

(a) *The following Implementation should be added under Architectural Guidelines in the Design Manual (Appendix 4-A of the Draft Master Plan):*

*"rr) Residential street layouts that include building and roof orientations that optimize the ability of residences to use solar energy to the maximum extent possible."*

(b) *The following Implementation should be added under Landscape Concepts and Policies, General Issues, in the Design Manual (Appendix 4-A of the Draft Master Plan):*

*"m) Street trees shall not be located in areas that would prevent residents' ability to use solar energy, unless they are deciduous trees that will not impact solar access during winter months."*

(c) *The Design Manual for the Master Plan should be amended to include a section on energy efficiency that would provide guidelines for energy efficient designs for residential and non-residential development within the entire community.*

*The guidelines for buildings should meet or exceed the most recent standards established by the California Energy Commission and promote passive solar design. The guidelines for the community should incorporate PG&E's recommendations, encourage efficient street design, and transportation alternatives to reduce automobile use.*

~~(d) The Land Use map in the Draft Master Plan should be revised to increase the number of areas zoned for commercial use to ensure that residential areas are located no more than one quarter to one half mile from commercial areas. A new Implementation should be added under Commercial Objective 2 in Land Use (Appendix C):~~

*"c) The neighborhood commercial areas shall be sited so that as many homes as possible are located within a one-quarter mile walk of the closest neighborhood or community shopping area."*

**SPECIFIC PLAN I**

The total electrical demand by Specific Plan I could not be adequately served by the existing neighborhood electrical distribution system in the vicinity of the project site. An electrical power substation would be needed during the development of the Specific Plan I area to serve the needs of the development. Two alternative sites for the substation have been proposed, adjacent to the Rio Oso-Tesla power line within the Old River Industrial Park (preferred alternative) or adjacent to the

#### 4.4 PUBLIC UTILITIES

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Rio Oso-Tesla power line between Grant Line Road and Patterson Pass Road. Existing nearby PG&E natural gas facilities have sufficient capacity to serve the Specific Plan I areas.

##### ~~Impact S4.4.4-1 (C,O,M)~~

~~The Draft Specific Plan I proposes inconsistent land uses, such as landscaping, within electrical transmission and natural gas line easements and does not appear to provide adequate corridors for planned utility easements.~~

~~Electrical transmission lines and natural gas pipelines traverse sections of the three Specific Plan I subareas. Land uses within PG&E easements must be approved by PG&E and be in compliance with land use restrictions specified in the Draft Master Plan. Landscaping in the vicinity of electrical transmission lines should not exceed mature heights greater than 15 feet; trees or deep rooted plants should not be located within 10 feet of a natural gas line.~~

~~Specific Plan I does not identify specific land uses within utility easements, locations and distance of any setback requirements, documentation of PG&E approval for proposed land uses, and does not modify landscaping to conform to easement restrictions.~~

##### ~~Mitigation Measure S4.4.4-1 (C,O,M)~~

~~Refer to Mitigation Measure M4.4.4-1 i).~~

##### ~~Impact S4.4.4-2 S4.4.4-1 (C,O,M)~~

~~The Draft Specific Plan I does not include specifications for complying with the Draft Master Plan's objective to minimize the consumption of nonrenewable energy and encourage the development and use of alternative energy sources at the site.~~

Policies of the Draft Master Plan for energy efficiency include incorporating measures to save energy, such as designing residential streets and homes to promote the use of solar energy, designing buildings and facilities within the community to incorporate cost-effective measures to reduce the need for energy use and maximize the benefits of solar energy, including native landscaping and efficient use of water resources, and planning infrastructure systems to include cost-effective energy efficient designs and technology.

##### ~~Mitigation Measure S4.4.4-2 S4.4.4-1 (C,O,M)~~

~~Refer to Mitigation Measure M4.4.4.-2.~~

#### 4.4.5 TELEPHONE

##### Setting

Telephone service to the project site is provided by Pacific Bell. Approximately 65 percent of the existing telephone capacity in the project site is being used. Two main feeder plants currently

provide telephone service to the project site. Aboveground distribution lines branch off the feeder plants at three switch locations. The feeder plants, distribution lines, and switch locations are within public utility easements. Two buried fiber optic lines, owned by American Telephone and Telegraph Company and GTE, respectively, are within the public utility easement.

### **Impacts and Mitigation Measures**

To provide telephone service to the project site, new feeder plants and other facilities would be required. The Integrated Technology Planning group within Pacific Bell is responsible for planning telephone service for the project site. Extensive underground conduits would be required to house all telephone wires. Pacific Bell estimates that a total of 21,000 cable pairs would be required at full buildout. A central office within the project site may be required for housing switching equipment. The applicant must secure easements for all necessary telephone conduits and facilities, including a central office, if needed, for Pacific Bell.

The applicant and Pacific Bell would negotiate an agreement that assigns construction and financial responsibilities for new facilities. The developer would be required to pay for relocation and/or underground conversion of existing feeder plants and distribution lines.

### **MASTER PLAN**

The Draft Master Plan contains policies and implementation measures to provide the project with modern telecommunication services for current and anticipated future needs (Appendix C). The telecommunications transport system would consist of a high speed digital fiber optics network with a centrally located hub. The center backbone transmission facilities would be constructed underground following the main routes of other service utilities to connect designated substations to a communications center. Preliminary locations for communications facilities have been proposed in neighborhood centers, the Town Center, and at Mountain House Business Park in the Specific Plan I area.

No significant adverse environmental impact has been identified in association with providing telephone service to the proposed project.

### **SPECIFIC PLAN I**

Backbone transmission facilities would be constructed to connect to neighborhood substations in the three Specific Plan I areas. The backbone facilities would be constructed underground and would follow the main routes of other service utilities. The transport media would be based on fiber optics and standard telephone cables.

There are no significant environmental impacts associated with providing and maintaining telephone services to the site.

## 4.5 CULTURAL RESOURCES

### SETTING

Archeological, ethnographic and historical overviews, and intensive archeological reconnaissance have been performed on the project site (Baker and Shoup, 1991, and Archeo-Tec, 1989, and 1990). The results of these investigations are summarized in the FEIR (BASELINE, 1992a). Additional studies were not performed for this EIR.

The project site and environs were probably part of the ethnographic territory of the Cholbon tribelet of the Northern Valley Yokuts (Bennyhoff, 1977). The tribelet's territory apparently extended westward along Old River to just west of Bethany. Spanish-led explorers arrived in the late 18th and early 19th centuries and may have had first contact with the project site when the expedition of Juan Bautista de Anza traveled from San Francisco Bay to the Sacramento-San Joaquin Delta. The Spanish never settled this region. Mountain House, Mohr's Ferry Landing, and Wicklund emerged as settlements and stopping-off points in the mid-1800s serving transportation and trade activity along the Old River. Agriculture has dominated the region from historic times to the present.

Records or evidence of four prehistoric and historic archaeological sites are available for the project site. Prehistoric site, Ca-SJo-136, recorded near Mountain House Creek, has only general locational information and was not located during intensive surveying for the previous EIR (BASELINE, 1992a). Anecdotal reports indicate the potential for unidentified prehistoric sites in the project area. More than fifty years ago boys playing along Old River, east of the terminus of Kelso Road, found Native American artifacts. Present day accounts include a farmer east of Wicklund Road and one from the Fabian Tract area that have reported finding Native American artifacts (Dusina, 1993; Burick, 1994).

The historic sites are all believed unlikely to qualify for the National Register of Historic Places. Historic archaeological site Ca-SJo-229H consists of the remains of the village of Wicklund. The integrity of the site is poor and the information potential of observed artifacts is low. A third site, Site Ca-SJo-230H, is also of poor integrity; the sparseness of artifactual remains indicates that information potential in the southern portion of the site is poor, and that historical associations are unimportant to State or local history. Site Ca-SJo-231H, west of Wicklund Road, approximately 50 years of age, lacks integrity and important historical associations, and is not likely to contain much information potential.

## 4.5 CULTURAL RESOURCES

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A number of historic (over 50 years of age) structures are located on the project site including houses, barns, water towers, an old industrial building, and garages. Historical architectural evaluations have not been performed for these structures.

A National Historic Trail, the De Anza Trail, may be extended through the project site in the future. The National Park Service, responsible for establishing a plan for the commemorative trail route, could establish a segment of the trail through the project site.

### **Impacts and Mitigation Measures**

For the purposes of this DEIR, a potentially significant impact on cultural resources is defined as the effect of any activity that has the potential to disrupt or adversely affect a prehistoric archaeological site or historic structure. A cultural resource is defined as a site or structure eligible for, or on, the National Register of Historic Places, or listed on the California Inventory of Historic Resources.

### **MASTER PLAN**

The archaeological sites identified within the project site are not on, or likely eligible for, the National Register of Historic Places or the California Inventory of Historic Resources (BASELINE, 1992a). Unidentified prehistoric or historic archaeological materials may be located in the subsurface of the site. The National Register eligibility of identified sites could also be affected by discovery of additional material evidence on those sites. The eligibility of the historic structures on-site for the National Register has not been determined.

It is unknown whether the De Anza Trail may traverse the project site. The planning for the trail alignment has not been completed by the National Park Service at this time. If it were to traverse the site, the Draft Master Plan, under Objective 8 in Recreation and Open Space in Appendix C, contains Implementations to ensure coordination with the Service.

### **Impact M4.5-1**

**Development of the project could result in the disturbance of currently unknown subsurface prehistoric cultural deposits or artifacts related to the prehistoric setting or historic archaeological deposits or features dating from the establishment of Euro-American settlement in San Joaquin County.**

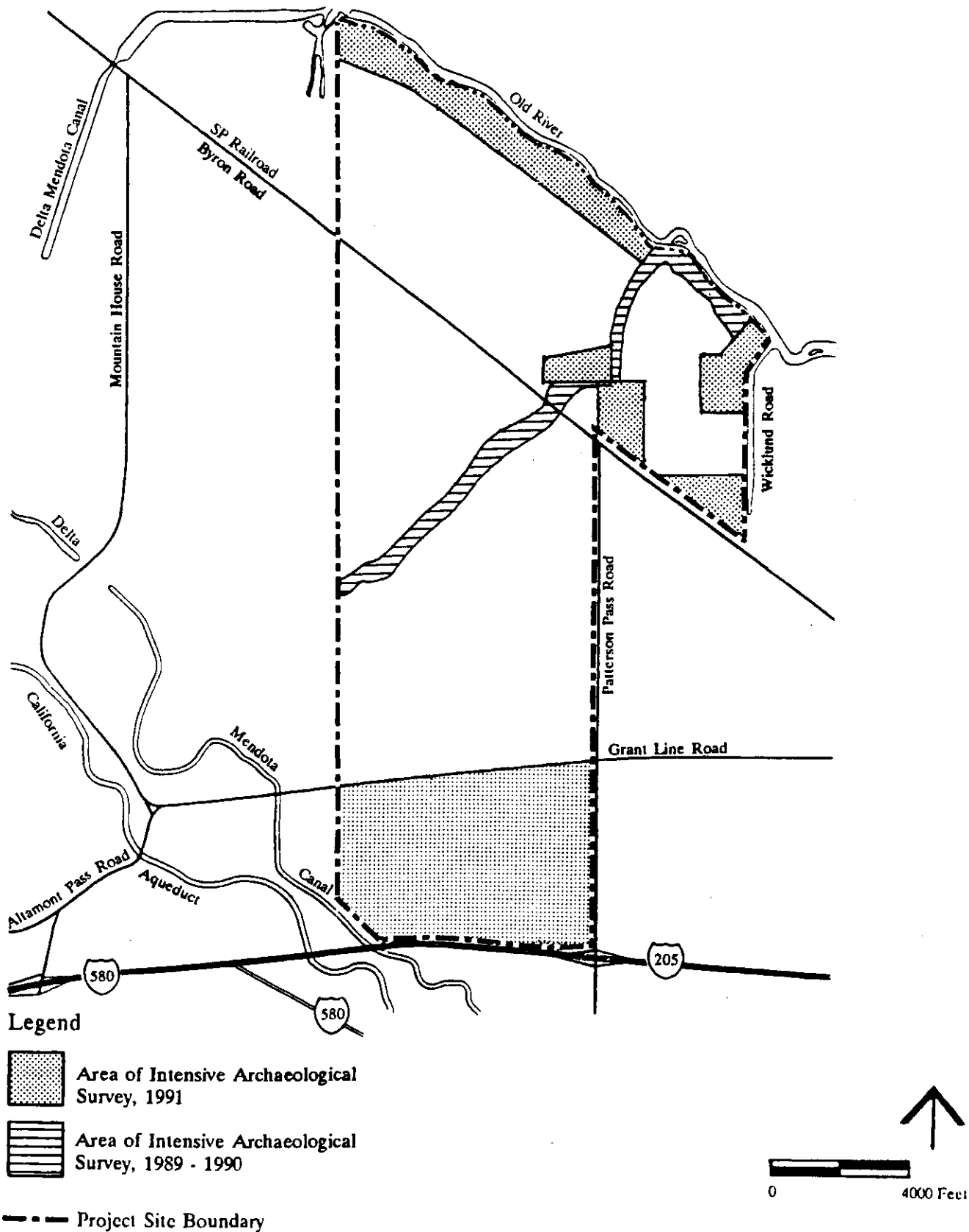
The project site contains records or evidence of four prehistoric and historic archaeological sites. These sites could be disturbed during site development. In addition, only portions of the site (Figure 4.5-1) have been the subject of archeological surveys; therefore, additional cultural resource sites may be present on the site.

### **Mitigation Measure M4.5-1**

*The following measures should replace Implementations a) and b) in ~~Cultural Resources, Land Use under Objective 8 In Development Standards (Appendix C).~~*

# AREA OF INTENSIVE ARCHAEOLOGICAL SURVEY

Figure 4.5-1



#### 4.5 CULTURAL RESOURCES

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"a) When specific land use and development plans are formulated as part of a specific plan, additional archaeological surveys shall be conducted in areas of development that have not been subjected to intensive archaeological reconnaissance. This shall include areas outside the specific plan area that are proposed for interim or permanent wastewater treatment or reuse.

"b) Because of the possibility that a buried site, Ca-SJo-136, may be located in the vicinity of Mountain House Creek, construction activity in the Mountain House Creek area **near that site** shall be monitored by an archaeologist.

"c) Because of the potential historic significance of Ca-SJo-229H, the site of the village of Wicklund, and because of the potential for buried features or artifact deposits in that area, an archaeologist shall monitor any construction work.

"d) If, during the course of construction, subsurface historic archaeological features were identified on sites Ca-SJo-230H and Ca-SJo-231H or anywhere within the project site, excavation shall cease and an archaeologist shall be contacted to evaluate these materials.

"e) If, during the course of any construction activity, buried prehistoric cultural resources were found, excavation shall cease and an archaeologist shall be contacted immediately to evaluate these resources. Such evaluation may entail archaeological test excavation and/or mitigative data recovery.

"f) A demolition permit, to be approved by the Planning Division of the Community Development Department, shall be required prior to destruction of any building in excess of 50 years of age."

#### **Impact M4.5-2**

**Development of the proposed project could disturb previously unknown human prehistoric burial sites.**

The project site is within the ethnographic territory of the Cholbon tribelet. It is unknown whether the site may contain prehistoric burial sites that have not been identified during previous archaeological site surveys.

#### **Mitigation Measure M4.5-2**

*The following should be added as an Implementation in ~~Cultural Resources~~ ~~Land Use~~ **Development Standards** (Appendix C):*

"g) *The County Coroner, the Native American Heritage Commission, and an archaeologist shall be informed and consulted if a human prehistoric burial site were discovered during site construction. An agreement shall be formulated between the Native American representative, the archaeologist, San Joaquin County, and the developer with regard to the proper treatment*



*and disposition of human remains and associated artifacts in individual specific plans. Such treatment and disposition may require archaeological excavation and reburial."*

### **Impact M4.5-3**

**The proposed project could destroy structures over 50 years of age which may have significant historical value.**

A number of structures over 50 years of age have been identified on the site. The architectural significance or structural integrity of these structures have not been identified as part of previous surveys conducted on the site.

### **Mitigation Measure M4.5-3**

*The following Implementation should be added under ~~Cultural Resources~~ **Development Standards** (Appendix C):*

*"h) Each specific plan shall contain a determination by a qualified architectural historian as to whether any of the structures that are more than 50 years old would be affected by specific plan implementation. If specific plan implementation were determined to affect the structures, recommendations by the qualified professional shall be implemented; such mitigation measures could consist of avoidance of impacts by incorporating the structure into planned developments, detailed architectural documentation and history, or removal of a structure to another location. Each specific plan shall map the location of all structures 50 years of older that have been determined by a historian to be of historic significance, **except for Specific Plan I.**"*

### **SPECIFIC PLAN**

Specific Plan I does not contain any provisions for ensuring that impacts to cultural resources within the Plan subareas do not occur. Some identified prehistoric and historic sites are known to occur within the subareas, and unknown or undiscovered sites may be identified during site development. Implementation of the mitigation measure below, in combination with the Draft Master Plan implementation measures, would reduce the cultural resources impacts to non-significant.

### **Impact S4.5-1 (C,O,M)**

**Historic and prehistoric resources may be impacted by Specific Plan I development.**

The three Specific Plan I subareas contain resources, either historic or prehistoric, as identified in intensive archaeological surveys conducted in portions of the subareas. In the Old River Business Park subarea, CA-SJo-229H, the former location of the town of Wicklund, may contain buried artifacts; in the southern portion of the subarea, CA-SJo-231H may also be affected by construction; this area contains a dense scatter of historic artifacts. In Central Mountain House, prehistoric resources may be located along Mountain House Creek, and a house on West Byron Road may have historic significance. The Mountain House Business Park subarea has been subjected to intensive surveying and no historic or prehistoric resources have been identified.

#### 4.5 CULTURAL RESOURCES

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The proposed water treatment plant location contains a building that may have historic significance. None of the alternative locations for wastewater reuse or alternative raw water pipeline alignments from the California Aqueduct has been intensively surveyed for prehistoric archeological sites.

##### **Mitigation Measure S4.5-1 (C,O,M)**

*Specific Plan I should include a section on cultural resources, containing the following Objectives, Policies, and Implementations, at a minimum:*

*"Objective: To preserve and enhance significant cultural resources.*

*"Policy: Significant historic and prehistoric resources shall be located and either integrated into new development, recorded, or relocated.*

*"Implementation:*

*"a) Areas proposed for development, wastewater treatment and reuse, water treatment, and the alternative raw water pipeline alignments not previously subject to intensive archaeological surveys shall be surveyed and the results shall be submitted with the first Development Permit, including those required for the water and wastewater treatment plants and related facilities. The recommendations of the archaeologist regarding preservation, recordation, or relocation shall be implemented ~~—Mitigation~~ **to the greatest extent possible, and shall, at a minimum, contain the measures in Appendix K of the CEQA Guidelines.***

*"b) Potential historic structures shall be evaluated for the entire Specific Plan I area by an architectural historian and recommendations regarding incorporation into the project development, recordation, or relocation shall be implemented prior to submittal of the first Development Permit.*

*"c) If, during construction activities, buried prehistoric cultural resources and/or human remains were found, excavation shall cease and an archaeologist shall be contacted immediately to evaluate these resources.'*

## 4.6 GEOLOGY, SOILS, AND SEISMICITY

### SETTING

The project site is located on the western side of the central portion of the San Joaquin Valley in the Great Valley Geomorphic Province of Central California. **The project location is near the Coast Range - Sierran Block Boundary (CR-SBB) Zone, a significant regional geological boundary which separates basement rock of the Coast Range structural block to the west from the Sierran block underlying the Great Valley to the east.** Regional geologic mapping (Reiche 1950; Clark 1955; Atwater, 1982; Page, 1986; Sowers et al, 1993) indicates that the project site is underlain by non-marine sediments. Most of these sediments were deposited by streams (alluvial deposits) draining the uplands area east of the project site.

Subsurface investigations at the site indicate that the majority of the near-surface sediments consists of silt and clay. Groundwater was encountered at depths varying from 5 to 16 feet below the ground surface at most of the locations of on-site investigations. Thin layers of sand and gravel deposits were encountered at shallow depths in the southern portion of the site (Earth Systems Consultants, 1990). These deposits were apparently saturated and medium dense to dense. Sandy silt and sand deposits at depths below the groundwater table were reported from data collected from borings made in the northern portion of the site (Kleinfelder and Associates, 1989). Subsequent drilling and sampling near these locations did not corroborate the presence of these deposits (Earth Systems Consultants, 1990) which may indicate that the silty sands are of limited extent. The saturated fine-grain deposits may be subject to liquefaction. If liquefaction were to occur, it would be localized in nature and would not occur on a regional level (Earth Systems Consultants, 1990).

The youngest alluvial sediments are the deposits along the present stream channels. Recent sediments have been mapped along Old River and are described as floodplain and flood basin deposits (Atwater, 1982; Page, 1986). The upper ten feet of these deposits include clays with high water content, low density, and thin layers of organics (Earth Systems Consultants, 1990).

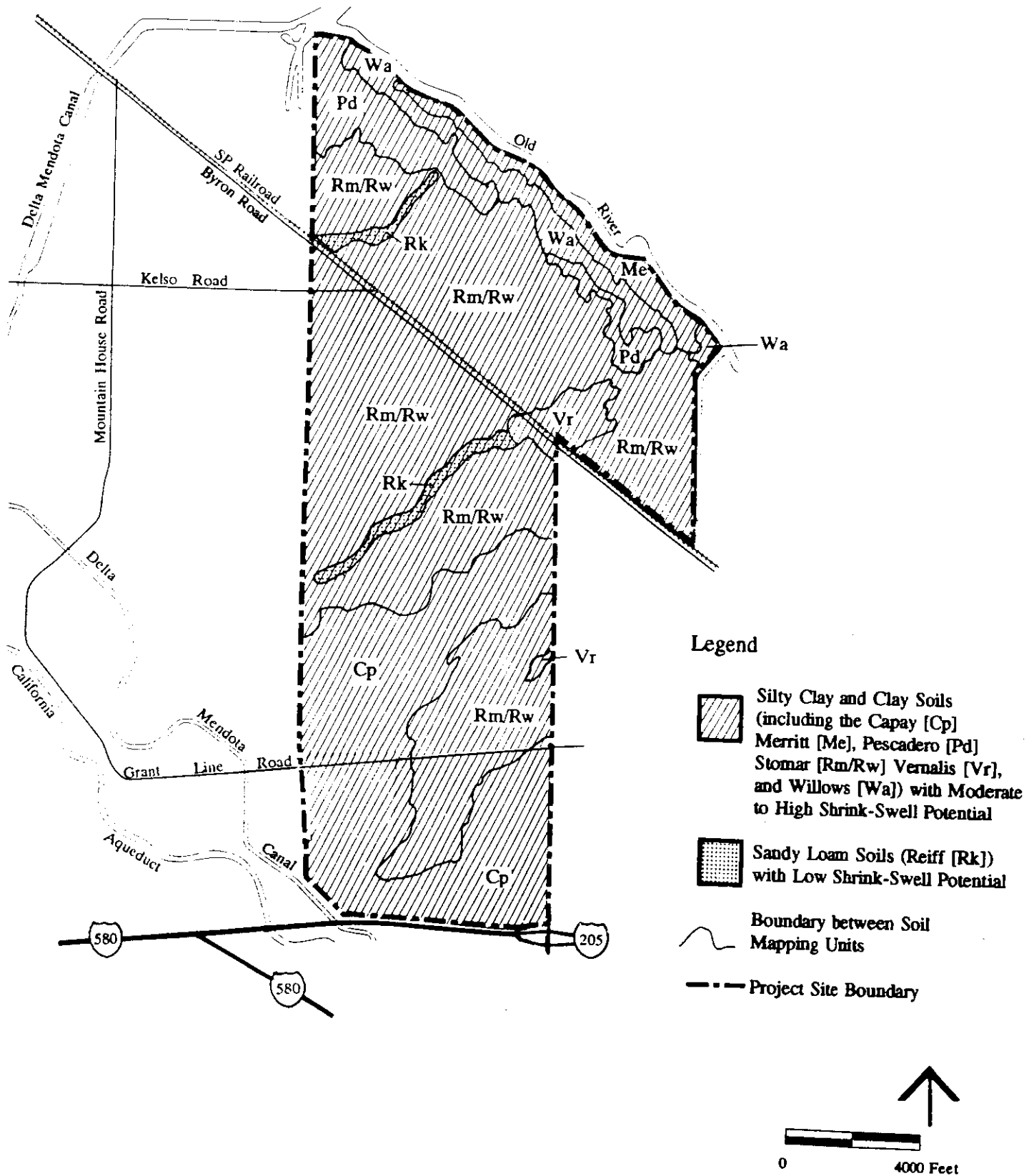
The gentle hill slopes in the southwestern portion of the site do not show evidence of significant landsliding. The project site is located outside areas of southwest San Joaquin County identified as susceptible to landsliding (San Joaquin County, 1973). Swales filled with slope-derived sediments (colluvium) have been identified in this area (Nilsen, 1975). While failure of similar geomorphic features during high precipitation periods (creating mud flows or landslides) is possible even on gentle slopes, evidence of such failures has not been mapped within or immediately adjacent to the project site.

### Soils

The U.S. Soil Conservation Service (SCS) has mapped seven distinctive soil types at the site (U.S. Department of Agriculture, 1988) (Figure 4.6-1). Six of these soil types have similar characteristics.

# SITE SOILS

Figure 4.6-1



Source: U.S. Department of Agriculture, SCS, 1990.

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**BASELINE**

These surface soils, which include the Capay (Cp), Merritt (Me), Pescadero (Pd), Stomar (Rm/Rw), Vernalis (Vr), and Willows (Wa) soils, are predominantly silty clay and clays developed on the gently sloping alluvial fan sediments. The soils are characterized as being deeply developed and moderately well drained, with low permeability and moderately-high to high shrink-swell potential. These soil types at the project site are considered by SCS to be Class I or II soils which have few limitations for agricultural use. The seventh soil type, Reiff mapping unit (Rk), is a sandy loam with low shrink-swell potential.

Soils that have characteristics reflecting development within the hydrological and ecological environment of wetlands are referred to as hydric soils. Although wetlands have been identified within the project site, none of the mapped soil units in the project site are classified as hydric soils (U.S. Department of Agriculture, 1986). Hydric soils, if present at the site, may be localized in extent and would not be identified by SCS mapping techniques.

The northern portion of the project site is close to the Delta lowlands region of the Sacramento-San Joaquin Delta. Within the Delta lowlands, soils are high in organic content and in some cases include peat deposits. Historic drainage of the organic soils has allowed oxidation of the organic material, resulting in land surface subsidence. The mapped soils within the project site do not have high organic content.

### **Seismicity**

The project site is located within a seismically-active region of west-central California. The seismicity of this region is primarily related to the San Andreas Fault system. The San Andreas Fault system contains several major faults and fault zones including the San Andreas Fault Zone and the San Gregorio-Hosgri Fault Zone, west of San Francisco Bay, and the Hayward, Calaveras, Concord, and Greenville faults in the East Bay hills and the Diablo Range. Relatively lower seismic activity characterizes the eastern flank of the Coast Ranges and the area within the San Joaquin Valley. The faults in this area have less well defined surface expression and the seismic risk posed by these faults has not been clearly identified. A description of seismicity and associated terminology is summarized in Appendix G.

The active and potentially active faults located within about 50 miles of the boundaries of the project site are shown in Figure 4.6-2. These faults and their seismic potential are listed in Table 4.6-1, which presents estimates of the magnitude of the largest expected earthquake generated by each of the faults (Wesnousky, 1986; Mualchin and Jones, 1992). No active faults have been identified within the project site.

### **Liquefaction**

The project site is underlain by young alluvial deposits. Some of these deposits consist of silty sands, particularly along Mountain House Creek and Old River. Where loose and well-sorted sands are saturated by high groundwater conditions, soils may be prone to liquefaction during seismic shaking. The distribution of soils susceptible to liquefaction has not been identified at the project site.

# REGIONAL FAULTS

Figure 4.6-2

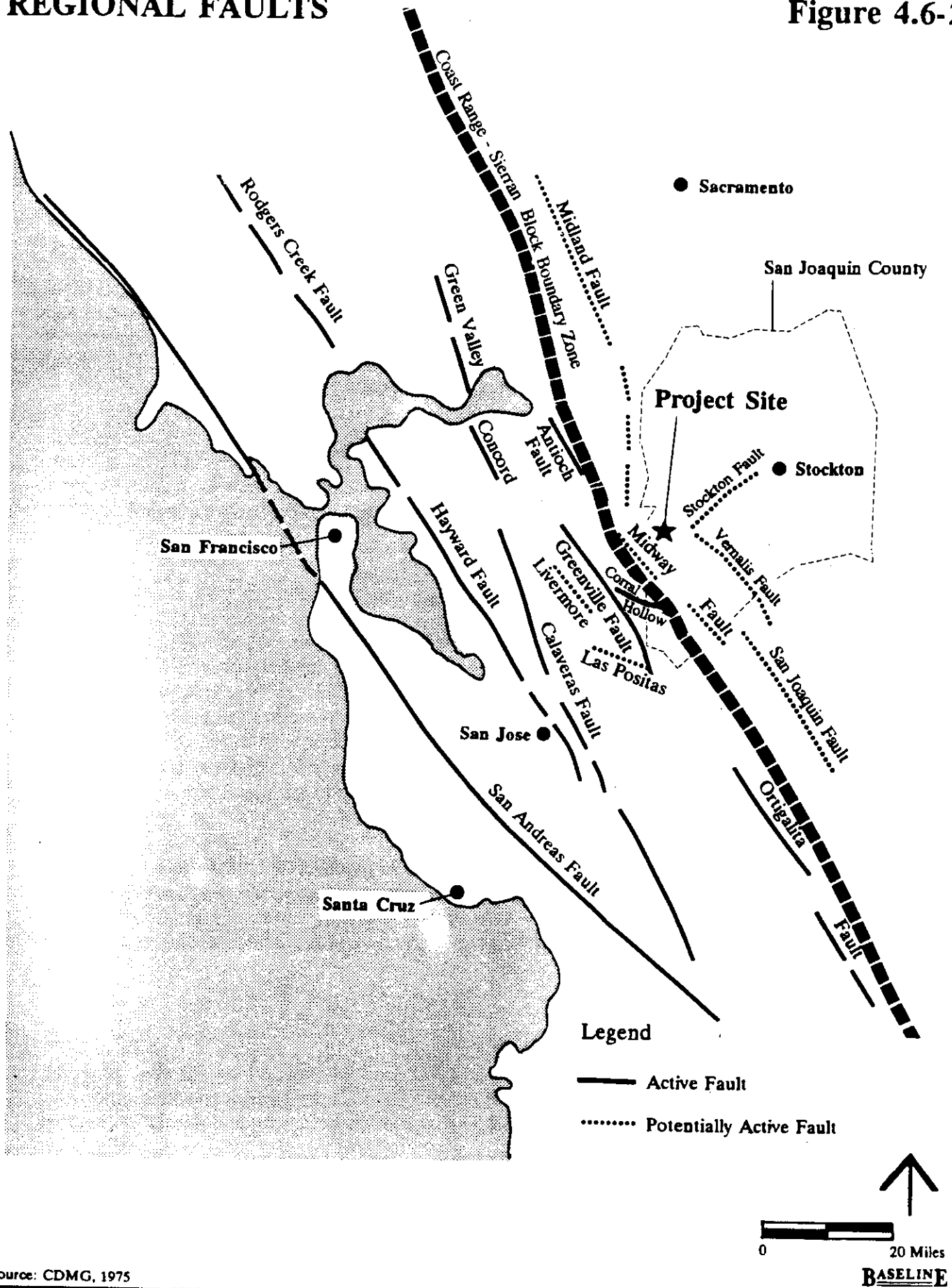


TABLE 4.6-1

**MAJOR FAULTS POTENTIALLY AFFECTING  
THE PROJECT SITE**

Fault	Distance from Project (miles)	Maximum Credible Earthquake <sup>1</sup> (MW) <sup>3</sup>		Recurrence Interval <sup>2</sup> (years)	Years of Historic Damaging Earthquakes	Expected Maximum Peak Ground Acceleration at Site during MCE (g) <sup>4</sup>	Expected Ground Shaking Intensity at the Site (MMI)
<b>Active:</b>							
Antioch	16	6.6	(6.75)	N/A	1889?, 1965	0.17	VIII
Calaveras	21	6.3	(7.5)	150	1861	0.19	VIII
Coast Range-Sierran Block Boundary Zone	0	--	(7)	NA	1892, 1983	0.63	IX
Corral Hollow	7	6.5		N/A	None known	0.28	VIII
Green Valley-Concord	27	6.9	(6.75)	424	1955	0.12	VII
Greenville	8	6.8	(7.25)	3,585	1980	0.50	IX
Hayward	27	7.1	(7.5)	264-556	1836, 1868	0.16	VIII
Ortigalita	35	6.7	(7.0) <sup>5</sup>	10,000		0.08	VII
San Andreas (North Coast Segment)	46	7.8	(8.0)	300	1833, 1906	0.18	VIII
<b>Potentially Active:</b>							
Antioch	16	6.6	(6.75)	N/A	1889?, 1965	0.17	VIII
Las Positas	12	N/A	4.3	872	None known	0.07	VII
Livermore	13	N/A	6.2	N/A	None known	0.13	VII
Midland	10	N/A	7.0 <sup>5</sup>	N/A	1889?	0.37	IX
Midway	2	6.3	N/A	2,651	None known	0.38	IX
San Joaquin	5	N/A	6.6	1,083	None known	0.37	IX

**Notes:** MW = Moment Magnitude  
MMI = Modified Mercalli Intensity Scale; see Appendix G

- <sup>1</sup> The maximum credible earthquake (MCE) is the largest earthquake expected under the present geologic framework. The sources for MCE estimates are Wesnousky (1986) and (shown in parenthesis) Mualchin and Jones (1992), unless otherwise noted.
- <sup>2</sup> Recurrence interval, or repeat time, is the estimated interval of time between maximum credible earthquakes. The sources for recurrence intervals are summarized in Wesnousky (1986).
- <sup>3</sup> The estimated magnitude of future earthquakes can be made using the Moment Magnitude method. The magnitude of potential earthquakes on such faults is made by calculations based on the earth materials in the area of the fault and measurement or estimation of the length of the fault and previous displacement along the fault.
- <sup>4</sup> Expected maximum peak ground accelerations are estimated by distance-magnitude relationships developed by Mualchin and Jones (1992).
- <sup>5</sup> Source of estimated magnitude: Greenfelder, 1974.

## **IMPACTS AND MITIGATION MEASURES**

Under CEQA, exposure of people or structures to major geologic hazards is considered a significant adverse impact. For the purpose of this DEIR, significant geologic hazards would pertain to soil and/or seismic conditions so unfavorable that they could not be overcome by reasonable design, construction, and maintenance practices; in addition, exposing an increased number of people to risk of injury would constitute a significant impact.

The potential geologic hazards associated with the proposed project were evaluated based on the Preliminary Geotechnical Study (Earth Systems Consultants, 1990), various documents, and a site visit. Since the site is relatively flat, slope stability is not considered a significant potential impact.

### **MASTER PLAN**

The proposed project contains objectives, policies, and implementation measures to address adverse soil conditions and seismic hazards at the project site (Objectives 4 and 5 in the Potential Site Hazards section of Public Health and Safety in Appendix C). Impacts of adverse soil conditions on proposed facilities at the site would be addressed in preliminary soil reports required by the adoption of the provisions of the State Subdivision Map Act by the San Joaquin County Development Title. Objective 1 in Development Standards (Appendix C) addresses erosion and sedimentation impacts associated with grading.

Deep excavations for foundations, trenches for utility lines, and other topographic alterations (for landscape and/or levees) could increase erosion hazards. The project includes major modification of the Mountain House Creek channel, which would require significant excavation. Eroded soils could enter surface water systems, causing a reduction in water quality. Sedimentation in storm drains could adversely affect storm drain capacity. Potential impacts of grading and excavation are addressed in the Draft Master Plan by compliance with the State permitting requirements for control of runoff during construction activities, development of Storm Water Pollution Prevention Plans for each construction project, and control of discharges of sediment to drainage channels.

The Draft Master Plan specifies that preliminary soils reports (required by the San Joaquin Development Title) for all subdivisions of land within the project site which would provide recommendations for appropriate structural design values for construction on those soils. The preliminary soils reports for the subdivisions within the project site should specifically address the potential presence of low-density clay and high shrink swell soils and liquefaction potential. If these conditions are identified, the preliminary report should specify recommendations for structural design values.

If ground settlement is not considered in foundation design and building load calculations, structural damage may occur in the future. Settlement can also cause warping and cracking of roads and sidewalks and rupture of utility lines.



The Draft Master Plan specifies that preliminary soils reports prepared for subdivisions of land within the project site identify areas of low density clays; adequate foundation designs for structures constructed within areas underlain by low density clay soils; the extent of low density clay; and other appropriate land uses for areas where suitable building foundations cannot be designed.

The existing levees along Old River and Wicklund Road on the project site are constructed of unengineered fill. These flood control structures were not designed to withstand forces caused by strong ground shaking. Expected moderate to strong ground shaking could cause levee failure and flooding of a portion of the project site.

Objective 1 and associated Policies and Implementations under Flood Protection in Storm Drainage and Flood Protection (Appendix C) propose to protect people and property in the Mountain House community from flood hazards, including flooding caused by levee failure and the 100-year flood event, by implementation of a Flood Protection Plan. The Plan would include the construction of a second set of levees landward of the existing levees prior to development in the 100-year flood hazard zone; the levees would be designed to minimally meet the requirements of the National Flood Insurance Program (NFIP). Failure of the existing levee prior to construction of the new levee system would result in flooding of agricultural land in the designated 100-year flood hazard zone and would not expose people or structures to hazards. Construction in the current 100-year flood plain would not occur until levees had been constructed. Implementation of these requirements would reduce the potential for levee failure to a less-than-significant level.

#### **Impact M4.6-1**

**Strong ground shaking during an earthquake could cause structural damage to improvements and injuries to residents of the proposed project.**

Structural damage at the site during an earthquake on regional faults may include damage to buildings and infrastructure (roads, bridges, and utilities). A disrupted infrastructure could inhibit disaster relief efforts, cause water and power supply shortages, and limit communications and transportation. This would be an unavoidable adverse impact that cannot be mitigated to a less-than-significant level.

Several California laws are designed to minimize the potential adverse effects of an earthquake. These include the Hospital Seismic Safety Act of 1972, Essential Services Buildings Seismic Safety Act of 1986 (concerning construction of buildings for police, fire, emergency services), and the Field Act of 1933 (concerning construction of schools). In addition, the Uniform Building Code (UBC) provides construction guidelines for residential, commercial, and industrial buildings. UBC has divided the United States into zones based on seismic risk. Zone 1 is likely to experience the least amount of ground shaking; Zone 4 the most. The site is located in seismic Zone 3, and is adjacent to Zone 4 in Alameda County and southern San Joaquin County. Implementation of the above mentioned laws would significantly reduce the earthquake hazards associated with building collapse and infrastructure disruption. However, the potential for associated hazards such as injuries related

to falling objects, fire, and repairable structural damage remain a significant unavoidable adverse impact.

The residual impacts associated with seismic hazards can be reduced through effective distribution of appropriate information on earthquake preparedness. The Draft Master Plan proposes that the Community Services District develop and implement a community earthquake preparedness plan to promote public awareness and education on earthquake hazards.

### **Mitigation Measure M4.6-1**

*The preparation and distribution of a Community Earthquake Preparedness Plan, proposed in the Draft Master Plan, would reduce this impact. This remains an unavoidable adverse impact. Implementation a) under Objective 5 of Potential Site Hazards (Appendix C) should be amended to ensure that the Plan be prepared prior to submittal of the first Development Permit. No further mitigation is possible.*

### **SPECIFIC PLAN I**

Specific Plan I does not specifically address impacts associated with adverse soil conditions or seismic hazards within the Plan subareas. The provisions of the Draft Master Plan require that a preliminary soils report be prepared prior to the approval of the final map for any subdivision of land within the Mountain House community. This requirement would apply to any and all development projects proposed within the area covered by Specific Plan I. Seismic hazards would be mitigated by existing requirements of the ~~1991~~ **1994 (or more current)** Uniform Building Code and recommendations for special conditions, such as liquefaction hazards, presented in the required preliminary soils report. Specific Plan I defers to the Draft Master Plan for objectives, policies, and implementations in addressing flood protection. The Master Plan, as amended by Mitigation Measure M4.6-1, would provide mitigation of the seismic hazards to the extent possible. No further significant impacts have been identified.

## 4.7 HYDROLOGY AND WATER QUALITY

### SETTING

#### Climate

The San Joaquin Valley is bounded to the east by the Sierra Nevada and to the west by the Diablo Range. The Diablo Range forms a rain shadow and average annual precipitation decreases markedly east of the crest of the mountains. The majority of the annual precipitation falls as rain during the winter rainy season from November through April. The mean annual precipitation at the project site is between 10 and 12 inches per year (Rantz, 1971).

#### Surface Water

The project site is located on a gentle, northeastward sloping alluvial surface at the base of the eastern flank of the Altamont Hills. The elevation of the site ranges from approximately 160 feet above mean sea level (msl) along the central portion of the western boundary to less than five feet (msl) along the northern boundary. The eastern flank of the range is drained by northeastward flowing streams that discharge to the Sacramento-San Joaquin River Delta system, including Old River, which forms the northern boundary of the project site. The levee on the project site protects the site from flooding.

The Delta is one of the largest protected waterways in the western United States and one of the most valuable freshwater resources in California. Export of water from the Delta to other areas of California has been occurring since the completion of the Contra Costa Canal in 1940. The two major water export projects, the Central Valley Project and the State Water Project, control operations of the Delta-Mendota Canal and the California Aqueduct. The California Aqueduct ~~drains~~ **diverts** water from the Clifton Court Forebay facility in the southwest portion of the Delta. The Delta-Mendota Canal receives water pumped from intakes located near the northwest corner of the proposed project.

Several major modifications of the Delta water supply network are proposed for improving circulation within the Delta and increasing operational flexibility of the State Water Project (California Department of Water Resources, 1987). These modifications include channel widening in the north Delta and installation of proposed flow control barriers, or "tide gates," on Grant Line Canal, Middle River, and Old River. The temporary barrier on Old River has been installed within that reach of Old River forming the northern boundary of the project site. The barrier allows eastward flow during the rising tide and prevents westward flow during the falling tide to maintain increased water elevation within Old River. The barrier is operated primarily during the irrigation season when increased water surface elevation is most advantageous.

## 4.7 HYDROLOGY AND WATER QUALITY

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A 5,400-foot long dredged canal (Westside Irrigation District Canal) along Wicklund Road forms the eastern boundary of the northeast corner of the project site (Figure 4.7-1). Levees on the western and eastern banks contain this canal which is open to Old River. West of the northwest corner of the project site, a levee has been constructed along the eastern margin of a small marina (Del's Harbor as shown in Figure 4.1-1).

### Mountain House Creek

Mountain House Creek, which trends northeast-southwest through the central portion of the project site, is one of two northeastward flowing stream channels that traverse the project site (Figure 4.7-1). Two small earthen dams have been constructed off-site to create small ponds (Figure 4.7-1). Mountain House Creek is siphoned beneath two irrigation canals that are operated by the Byron-Bethany Irrigation District (BBID). The canals trend northwest-southeast, approximately parallel to the contours of the ground surface at elevation of 155 feet and 120 feet msl. "Canal 155" and "Canal 120" cross the southwestern corner of the project site (Figure 4.7-1).

Within the project site, the creek channel is wide with banks typically less than three feet high. Levees have been constructed by the farmers to minimize bank overtopping. The Creek flows under BBID Canal 70 at the approximate center of the project site (Figure 4.7-1). Downstream of this crossing, Mountain House Creek has a poorly defined channel to Byron Road. The creek flow is conveyed under Byron Road through three 36-inch culverts and under the small trestle for the Southern Pacific railroad.

Downstream of Byron Road, Mountain House Creek flows through a narrow irrigation ditch to a dredged cut at Old River. No natural channel exists through this area. With irrigation ditches not able to contain storm water flows, the area north of Byron Road has flooded during prolonged storms. The terminus of Mountain House Creek at Old River consists of an 800-foot long dredged cut that serves to collect low flow from the Creek. Water is pumped from the dredged cut and distributed by an irrigation system. Flow out of the cut is controlled by two 18-inch pipes into a channel connected to Old River. During dry periods, water is pumped from the channel to the dredged cut to supply irrigation water or is pumped from the channel into Old River. Levees contain the channel and pumping facility (Figure 4.7-1).

**BBID and Mountain House entered into a Water Services Option Agreement on August 31, 1993 in which BBID in part agreed to continue to provide agricultural drainage as required by law, to lands within Mountain House which remain under agricultural irrigation provided that the Bankhead agreement belonging to BBID would be assigned to and become the responsibility of the Mountain House Community Services District (CSD) as of the date of executing the Water Services Option Agreement made effective on August 31, 1993. To the extent that the development and/or development activities within CSD increased the burden upon BBID to maintain the level of drainage services provided by BBID prior to execution of the Water Services Option Agreement, CSD agreed to provide the additional services required. CSD granted to BBID the right to use Mountain House Creek from Alameda County to Old River, or an alternate water course as determined mutually by CSD and BBID, for discharge of agricultural drainage water and current flood flows. CSD agreed to reasonably maintain**

**Mountain House Creek within San Joaquin County as a natural drainage channel as required by the above purposes.**

**Dry Creek**

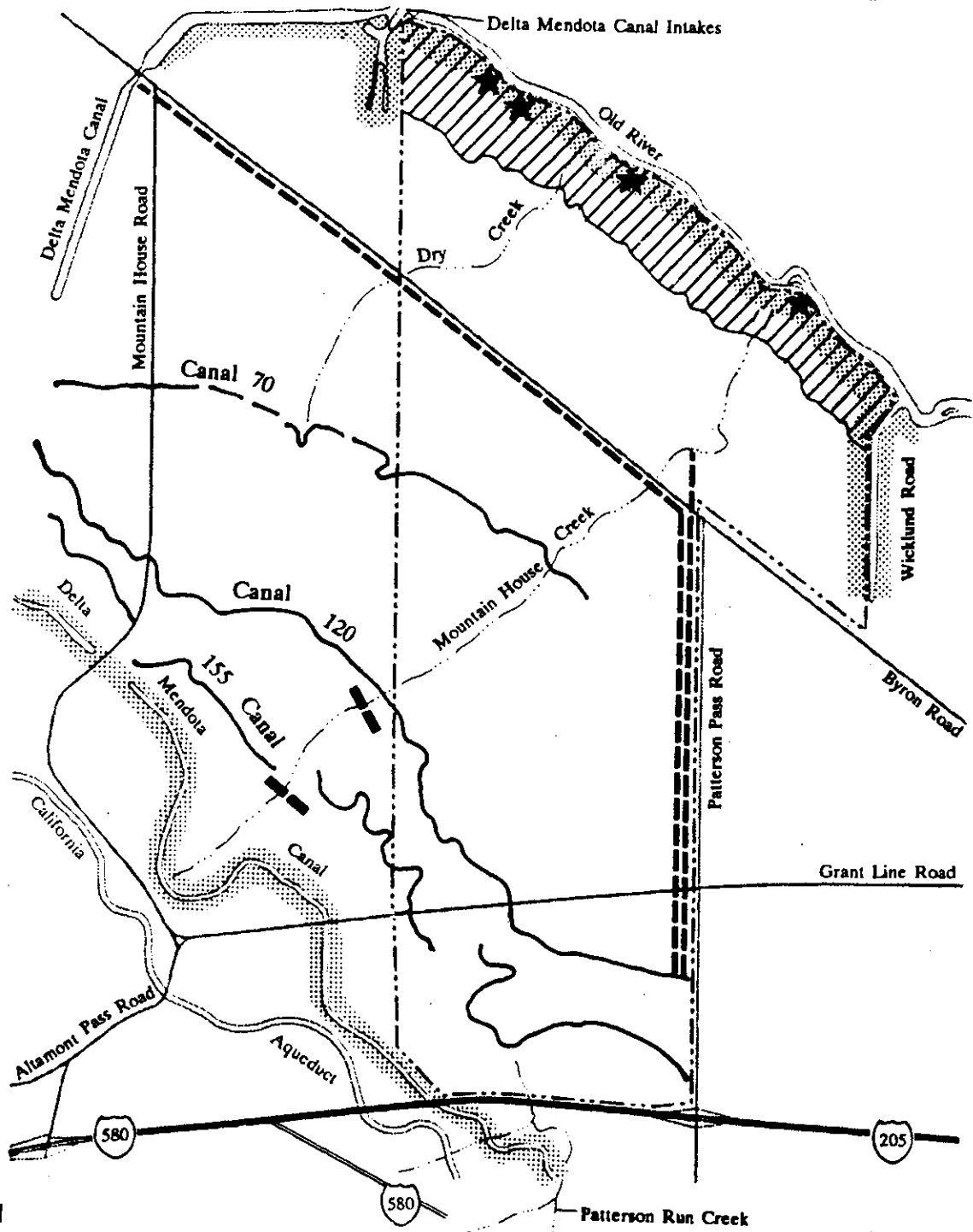
Dry Creek is located parallel to and approximately 8,000 feet northwest of Mountain House Creek (Figure 4.7-1). Dry Creek has a drainage area of about 6.8 square miles, extending into the foothills to the east. The natural creek channel has been significantly modified by agricultural practices downstream of the crossing of the Delta-Mendota Canal.

**Internal Drainage**






A network of numerous small ditches provides drainage of the interior of the project site. These ditches collect the majority of the site's surface water flow and also intercept shallow groundwater in some areas of the site. South of Byron Road, the majority of runoff is directed by the drainage




# SITE DRAINAGE FEATURES

Figure 4.7-1



**Legend**

-  Area Subject to Flooding during 100-Year Event
-  Drainage Channel
-  Irrigation Canal
-  Earthen Dam
-  Farm Drain

-  Levee Slope
-  Pump Station
-  Project Site Boundary



**BASELINE**

ditches to three farm drains along Patterson Pass Road and Byron Road (Figure 4.7-1). Only minor amounts of runoff are directed into the Mountain House Creek channel. Northwest of Mountain House Creek, the ditches discharge to a 24-inch farm drain that runs parallel to and southwest of Byron Road (Figure 4.7-1). Water collected in this "Byron Road drain" is pumped northwestward and discharged to the Delta-Mendota Canal, located approximately 1.5 miles northwest of the western boundary of the site (Figure 4.7-1).

Runoff from the area southeast of Mountain House Creek is directed eastward to two parallel farm drains, parallel to and west of Patterson Pass Road. The most easterly of these drains is buried at a shallow depth and drains through a culvert under Byron Road and the Southern Pacific railroad track. Runoff collected by this drain discharges into the drainage ditches that define the modified channel of Mountain House Creek north of Byron Road. The other farm drain is perforated pipe set at a greater depth. The pipe functions as a shallow groundwater drain that discharges collected water to the Byron Road drain.

North of Byron Road, the farm fields are drained by ditches that direct runoff northward toward Old River. The runoff collects in ditches along the base of the Old River levee where it is pumped into Old River by four private pump stations (Figure 4.7-1).

### **Flooding**

Levees within the Delta are constructed and maintained for Federal flood control projects ("project levees") or constructed and maintained by private landowners or local agencies ("nonproject levees"), such as reclamation districts. The levees at the project site along Old River and the Westside Irrigation District Canal are nonproject levees. Failure of nonproject levees is generally considered more likely because of uncertainty about the quality of construction.

The stability of Delta levees could be impacted by the raised water levels caused by sea level rise (Logan, 1990). Marginally stable levees may also fail during moderate to strong ground shaking expected within the Delta during large earthquakes on active regional faults (Finch, 1985).

The northern portion of the project site is identified by the Federal Emergency Management Agency (FEMA) as being within the 100-year floodplain of Old River (Federal Emergency Management Agency, 1988) (Figure 4.7-1). The flood zone forms a band, approximately 1,500 to 2,000 feet wide, along the base of the levee at the north end of the project site. Although the levee provides flood protection for the site during lesser storms, potential failure or overtopping of the levee during a 100-year event is implied by the inclusion of this protected area in the flood zone. The northern portion of the site may also be inundated by flood waters generated by failure of the dams impounding New Melones and San Luis reservoirs, large reservoirs outside the project area (San Joaquin County Office of Emergency Services, 1977).

The existing stream channels of the lower reaches of Mountain House and Dry creeks, including areas within the project site, are not able to contain storm flows during periods of intense precipitation. This problem has been exacerbated by increased sedimentation of these stream

channels and their limited size in relation to the volume of water to be carried. The majority of runoff is currently conveyed by farm drains that prevent flow into the creek channels. The runoff is carried by the drains and removed from the site by pumps that direct the runoff to Old River and the Delta-Mendota Canal. Flooding occurred within the project site and along the base of the levee at Old River during storms in 1982 when runoff exceeded the pumping capacity of the existing pump stations.

### **Subsurface Water**

The depth to significant water-bearing zones, the direction of groundwater flow, and the potential aquifer yields in the area of the project are not well known. Available subsurface information suggests that the hydrogeologic conditions are complex in this area (Iwonima, 1991). Groundwater has been encountered at shallow depths (4 to 16 feet below ground surface) in borings drilled at the site for geotechnical investigations (Earth Systems Consultants, 1990). Although the project is not located in an area recognized as a significant recharge zone (San Joaquin County Flood Control and Water Conservation District, 1988), the shallow groundwater table is probably recharged from surface streams and overland flow during storms and irrigation.

The quality of the groundwater resources in the area of the project site is marginal. Water from wells in the area typically have relatively high total dissolved solids (TDS) concentrations (Miller, 1991). The high TDS is possibly related to salt water intrusion from the Delta or saline formation water. Relatively high concentrations of nitrates and sulfides have also been reported from wells in the area (Kaufman, 1991). High nitrate concentrations may be caused by livestock management at dairies or releases from household septic systems.

## **IMPACTS AND MITIGATION MEASURES**

Significant impacts related to hydrologic conditions are those that cause substantial flooding or erosion; substantially degrade water quality; contaminate a public water supply; or interfere substantially with groundwater recharge. Although the implementation of the project would result in a significant increase in impervious cover at the project site, groundwater recharge would not be significantly reduced because the area is mantled by low permeability soils.

### **MASTER PLAN**

Flooding caused by overtopping or failure along Old River could result in human injury and property damage within the northern portion of the project site. Flood protection in the Draft Master Plan is proposed by the construction of new levees parallel and landward of existing levees at the site. The new levees would be constructed in compliance with minimum Federal standards (44 CFR Chapter 1) and would provide protection from 100-year flood hazards. Construction of the new levees would allow preparation of a Letter of Map Revision by FEMA, which would revise the flood hazard designations within the project boundaries from within the 100-year flood zone to between the limits of the 100-year and 500-year floods.



Surface water quality within Old River and streams within the project site could be adversely affected by erosion and sedimentation related to site development. The Draft Master Plan proposes to minimize the deposition of sediment from Mountain House Creek into Old River through widening and deepening the channel to cause a reduction of flow velocity in the lower reach of the Creek. In addition, wetland check berms along the channel are proposed to reduce sediment transport to the terminus of the Creek. A reduction of sediment transport would also be caused by the incorporation of detention basins as an implementation proposed under the discussion of the Primary Storm Drain Collection System (Appendix C).

Proposed structures and facilities on the project site could be inundated by flooding within the 100-year floodplain. The 2,000-foot wide flood zone along the base of Old River levee is expected to be inundated by flood waters during a 100-year flood and possibly in the event of a dam failure outside and upstream of the project site. Flooding of the area may be caused by overtopping of the levee or levee failure. Levee failure could occur as the result of structural collapse of potentially weak sections of the levee during periods of high flow in Old River or during strong seismic shaking caused by a large earthquake on one of several regional faults. Proposed development within the flood zone includes residential uses in the northern portion of the project site. Flooding of this area could result in human injury and property damage.

The Draft Master Plan proposes construction of a new levee system to meet FEMA flood protection requirements for areas of the site currently identified as within 100-year flood hazard zones. The Draft Master Plan also proposes monitoring of the levee system to allow identification of developing problems. The project would provide adequate mitigation of the 100-year flood hazard.

At project buildout, almost all runoff would be carried by Mountain House Creek to Old River. Development of the project would result in the construction of areas of impervious cover that would increase the estimated discharge to Mountain House Creek during the 100-year event at the discharge point by Old River.

The proposed project includes modifications of the Mountain House Creek channel, including deepening and widening the existing channel. Without channel bed stabilization or specific velocity dissipation design, erosion of the bed and banks of the Mountain House Creek channel would be expected. Increased discharge and increased erosion would cause increased sediment loads in Mountain House Creek and possibly destabilize stream banks and stream crossing structures.

The project includes measures to minimize erosion and sedimentation in the Mountain House Creek channel and Old River through control of flow velocity, construction of berms, and structural streambank modifications.

#### **Impact M4.7-1**

**Increased sedimentation within Old River would be caused by runoff from Mountain House Creek and operation of the proposed marina.**

#### 4.7 HYDROLOGY AND WATER QUALITY

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The proposed project would concentrate runoff into Mountain House Creek and allow direct discharge into Old River during high flow events. The runoff from the lower portion of the Mountain House Creek watershed during low flow events currently does not flow directly into Old River. The sediment load carried by the runoff is currently deposited in the drainage channel on the site and in fields where ponding of storm water occurs. Implementation of the project would result in increased discharges of storm water runoff and sediment load at the terminus area along Old River.

During high flow events, sedimentation could possibly result in the formation of a sand bar in Old River at the discharge point of Mountain House Creek. Formation of a bar would decrease the depth of Old River and possibly cause changes in the hydraulics of the River. The discharge of sediment-laden water could also result in localized increase in the turbidity (suspended sediment load) in Old River. The quality of water entering the Delta-Mendota Canal may be degraded by the increased turbidity. The Canal supplies water for a large number of users throughout Central California.

Development of the proposed on-site marina could result in increased sedimentation in Old River. Shoaling at the outlet to marinas within the Delta is common. Sediment accumulation would ultimately interfere with operation of the marina and could cause changes in the hydraulics of the River. It is expected that periodic dredging may be necessary to remove accumulated sediment from the River. Suction dredging is commonly used for the expected scale of sediment removal. Increased turbidity during dredging could result in temporary degradation of water quality in Old River.

The dredged sediments may contain residual levels of salts, pesticides, herbicides, and metals. These materials have been used throughout the Delta for levee construction and other types of fill. These materials, if used in urban areas, could result in the exposure of people, particularly children, to health effects associated with the potential presence of toxins within the sediments. The disposal of dredged materials would be an impact associated with the dredging operation. A suitable disposal area would be required.

The Draft Master Plan does not directly address the potential impacts related to sedimentation caused by construction and operation of the proposed marina.

##### **Mitigation Measure M4.7-1**

*The Draft Master Plan should include the following Objective, Policy, and Implementations under Parks and Recreation (Appendix C) as mitigation measures for reduction of sedimentation impacts related to construction and operation of the proposed marina:*

*"Objective:*

*"To ensure that the design and operation of private recreation areas do not adversely affect water resources.*

*"Policy:*

*"The marina on Old River shall be designed, constructed, operated, and maintained to minimize the accumulation of sediment within the marina and the Old River Channel.*

*"Implementation:*

*"a) A dredging plan shall be developed at the specific plan stage for the Marina portion of Neighborhood K along Old River for removal of accumulated sediment from the Old River channel in the area of the proposed marina outlet. This plan shall comply with the requirements of dredging permits issued by the U.S. Army Corps of Engineers and shall have provisions for controlling turbidity during dredging.*

*"b) Prior to obtaining a dredging permit, a disposal area for the dredged sediments shall be established by the applicant and approved by the Central Valley Regional Water Quality Control Board. The disposal area shall be identified in the recommended dredging plan. The characteristics and design of the dredge disposal area shall minimize the potential discharge of sediments to surface water and potential discharge of contaminants to the surface water or groundwater. A sampling plan to evaluate the potential levels of contaminants within the sediments shall be incorporated in the recommended dredging plan. The collected samples shall, as a minimum, be analyzed for trace metals, salts, pesticides, and herbicides."*

**Impact M4.7-2**

**Inadequate water circulation would potentially create water quality problems within the proposed on-site marina.**

Modeling of water circulation within the proposed marina, performed for the FEIR (BASELINE, 1992a), has indicated that the maximum residence time for water in the marina would be 10 to 12 days. The relatively long residence time and low flow velocity within the marina could lead to stagnation and thermal stratification of the water. These conditions could cause prolific algal growth "blooms," particularly during summer and fall. The algal blooms would create increased marina maintenance requirements to control adverse odors and visual effects. Improper waste disposal practices, such as discharges of human waste, bilge water, or garbage, at the marina could increase the potential for degradation of water quality at the marina.

The Draft Master Plan does not address potential water quality impacts associated with the design and operation of the proposed marina on Old River.

**Mitigation Measure M4.7-2**

*The following Objective, Policy, and Implementations are recommended for inclusion under Parks and Recreation (Appendix C):*

*"Objective:*

*"To minimize the potential for water quality degradation at the marina on Old River.*

## 4.7 HYDROLOGY AND WATER QUALITY

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*"Policy:*

*"The marina shall be designed and operated to minimize the potential for water quality degradation associated with inadequate water circulation or waste discharge at the marina.*

*"Implementation:*

*"a) The design of the marina shall include, if necessary, a forced circulation system capable of reducing the residence time of water in the marina to less than five days. The marina design and operation plan shall be presented at the specific plan stage for Neighborhood K, which includes the marina.*

*"b) Convenient and adequate waste disposal facilities for human waste, bilge water, engine fuels and lubricants, and garbage shall be incorporated in the marina design and operation plan."*

### **Impact M4.7-3**

**Water quality in Old River could be impacted by increased turbidity caused during construction of the proposed marina.**

The construction of the proposed marina would require excavation and construction of levees. If the construction area is opened to water flow from Old River, increased turbidity and sedimentation within Old River could affect water quality and wildlife habitat.

The Draft Master Plan indirectly addresses potential water quality impacts of marina construction. The project proposes that grading operations adjacent to Old River be conducted in a manner to ensure that soil does not spill into Old River.

### **Mitigation Measure M4.7-3**

*The following Implementation should be included under the Objective and Policy proposed by Mitigation Measure M4.7-2:*

*"c) Construction of the marina shall be staged to delay breach of the Old River levee until construction of the marina basin is completed and stabilized. The Storm Water Pollution Prevention Plan for marina construction shall specifically require construction techniques to minimize erosion and sediment transport during and after breaching of the levee."*

### **Impact M4.7-4**

**Shallow groundwater at the project site could present adverse conditions for construction of foundations and detention/retention basins. Ultimate development of the project site could cause a rise in shallow groundwater levels as a result of removal of subsurface drains.**

Groundwater levels throughout the project site range from 4 to 16 feet below the ground surface. The eastern farm drain along Patterson Pass Road is perforated and serves to locally lower

groundwater levels. Removal of the drain during development of the project would result in a rise in the groundwater level. Higher groundwater levels could reduce the strength and increase the shrink-swell potential of soils underlying foundations and pavements. High groundwater levels could result in partial filling of proposed detention/retention basins excavated below the groundwater level, causing a reduction in the design capacity of the affected basins. Other subsurface drains may also be present in other areas of the site and may be removed or disturbed during project construction.

The Draft Master Plan does not address the potential impacts of high groundwater levels or increased groundwater levels caused by disruption of subsurface drains within the project site during project development.

#### **Mitigation Measure M4.7-4**

*The following Implementation is recommended for inclusion under Objective 3 in Primary Storm Drain Collection System (Appendix C):*

*"e) Preliminary Soils Report. The soils report required for each subdivision shall identify the seasonal high groundwater level at the site of any detention/retention basins proposed as part of the stormwater management system. The report shall provide recommendations for appropriate design elevations for the detention/retention basins that would avoid saturation or partial filling by groundwater. The report shall specifically address the potential for increased groundwater levels caused by removal or disruption of existing subsurface drains. The report will provide recommendations for subsurface drains for all newly constructed structures or facilities. These recommendations all include provisions for routing and disposal of drain discharges that will not result in adverse flooding or saturation hazards within other areas of the project site."*

#### **Impact M4.7-5**

**Increased boating within Old River and the South Delta waterways, expected as the result of the operation of the proposed marina, would contribute to the erosion of levees by waves generated as boat wakes. Erosion could result in adverse sedimentation within the waterways and levee instability.**

The operation of boats within the leveed channels of the South Delta waterways, such as Old River, create boat wakes. These boat wakes have sufficient energy to present a significant contribution to the processes that cause erosion of the levee slopes. Erosion of the levee slopes can potentially cause significant reduction of the stability of levees and increase levee maintenance costs.

The Draft Master Plan does not directly address the potential increased erosion of levees caused by increased boating activities.

#### 4.7 HYDROLOGY AND WATER QUALITY

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##### **Mitigation Measure M4.7-5**

*The following Implementations should be added to the Draft Master Plan under Objective 1 in Flood Protection (Appendix C):*

- "g) *The design of the levee improvements shall consider and mitigate the potential causes of erosion, including boat wakes. Possible design components for the prevention of erosion could include rock revetment structures, such as riprap. The erosion controls shall, to the extent possible, be designed to provide protection of existing riparian vegetation. Specific design components for erosion abatement shall be required as a condition of levee design approval.*
- "h) *Boat speed limits to reduce the generation of potentially damaging boat wakes shall be established and enforced by the San Joaquin County Sheriff's Department, Boating Safety Division, in conjunction with other Delta area law enforcement agencies."*

##### **Impact M4.7-6**

**The sediment load transported by Mountain House Creek could be deposited within the project site, potentially interfering with flood control and the enhanced habitat function of the Mountain House Creek corridor.**

The narrow, shallow channel of Mountain House Creek within the northern portions of the project site indicate that significant sedimentation is currently occurring. The sedimentation is expected given the low slope of the channel and the restricted outlet at Old River. The transport of the sediment load would be improved by creek channel modifications proposed by the project. However, the sediment could be transported to the northern end of project site and discharged to Old River, potentially degrading water quality. Alternatively, the sediment would be deposited in the proposed "flow reduction" lower reach of Mountain House Creek. Removal of sediments deposited in this reach would increase maintenance activities.

##### **Mitigation Measure M4.7-6**

*The following implementation should be added to the Draft Master Plan under Objective 2 in Mountain House Creek Improvements (Appendix C):*

- "• *A sedimentation basin or other effective sediment control structure shall be designed and constructed near the point where Mountain House Creek crosses the western project boundary. The basin shall be designed to effectively remove sediment from the creek flows entering the project site. The basin maintenance shall be the responsibility of the CSD. The basin design and maintenance program shall minimize the potential for wetland development in the basin which could hinder the function or maintenance of the structure."*

#### **SPECIFIC PLAN I**

Issues related to hydrology and water quality are addressed in several sections of the Draft Specific Plan I. Development under Specific Plan I would include modification of portions of Mountain

House Creek within the Central Mountain House subarea. The Creek modifications would include the construction of small earthen check dams within the Mountain House Creek channel to protect and enhance wetlands along the Creek. Policies and implementations that address the design, operation, and maintenance of proposed temporary retention basins are presented in the discussions of Primary Storm Drain Collection System and Best Management Practices in the Draft Master Plan (Appendix C).

**Impact S4.7-1 (c)**

**Specific Plan I is inconsistent with the Master Plan regarding timing of development of streambed modification plans.**

The Draft Master Plan requires that streambed modification proposals be presented in each specific plan. Specific Plan I defers such action until submittal of the first Development Permit. At such time, the applicant would submit a full Creek modification design to ascertain if the segment in Specific Plan I would function as a whole.

**Mitigation Measure S4.7-1 (c)**

*The Draft Master Plan should be revised to require streambed modification proposals to be submitted to the County prior to submittal of the first Development ~~Agreement~~ Permit*

## 4.8 VISUAL QUALITY

### SETTING

The project site is located at a major visual gateway to San Joaquin County, north of I-205, at the County's western border. Rural agricultural images are the predominant visual characteristics of the project site, which has a relatively level topography and limited built features. Long-distance views across open agricultural fields are dominant from a variety of local roads. Except for clusters of trees around on-site residences, tree cover is generally limited to the edges of roadways, which creates a visual corridor for the motorist. Two power lines traverse the site, including the Rio Oso-Tesla 230-kV line running in a generally southwest to northeast alignment, and the smaller Weber-Herdlyn 60-kV line that runs parallel to Old River.

### Views from Public Roads

The project site is visible from a number of public roads that adjoin and/or pass through its boundaries. These roads include: I-205, Patterson Pass, Von Sosten, Grant Line, Byron, Kelso, Wicklund, and Henderson. These roads are not designated as Scenic Corridors in the County General Plan 2010. The project site is visible from roads in the eastern, southern, and northern portions of the site. Close-up views of the western edge of the project are not possible from nearby public roads.

### Views from Patterson Pass Road

Patterson Pass Road, a two-lane arterial, forms the site's eastern boundary from which long distance views are possible looking west toward Mt. Diablo and the Mt. Diablo Range. From Patterson Pass Road near the I-205 interchange, one can look west across a large agricultural field towards the foothills. At the southeastern corner of the site, trees lining Patterson Pass Road limit views towards the site's interior. At one point along Patterson Pass Road, where a major entrance to the project is proposed (Mascot Drive), an electrical transmission line creates a dominant foreground element. At the northern end of Patterson Pass Road near Byron Road, one looks westward across agricultural fields on the site toward Mt. Diablo in the background.

### Views from Byron Road

From Byron Road, a major two-lane arterial, views are available looking both north and south into the project site. When looking north, the Southern Pacific (SP) railroad line is a strong horizontal foreground element that partially screens agricultural fields in the background. When looking south from this location, an agricultural field is visible in the foreground and windmills, dispersed across the foothills near Altamont Pass, are visible in the background.



### **Views from Kelso Road**

Kelso Road is a narrow two-lane road that crosses the northwestern portion of the project site and provides access to residences located along Old River. Kelso Road provides views west across an existing 10-acre wetland in the foreground toward Mt. Diablo in the background.

### **Views from Grant Line Road**

Grant Line Road, a major arterial that crosses the southern portion of the site, provides open views to both the north and south. Near its intersection with Patterson Pass Road, the view is partially framed to the south by a continuous row of deciduous trees that line both sides of Grant Line Road. An agricultural field and distant foothills can be seen to the north from this location. At the eastern edge of the site are uninterrupted views northward from Grant Line Road. Looking south from this same location, a number of scattered residences are visible.

### **Views from Areas near Waterways**

Waterways are a major scenic and recreational element in San Joaquin County. Old River, which is used by boaters, fishermen, and waterskiers, is a major scenic element at the northern edge of the project site. Another major waterway just west of the project site is the Delta-Mendota Canal. Both of these waterways are protected by levees that limit views to and from the water to the immediately adjacent area.

The levee adjacent to Old River is accessible from Kelso Road along a private road. At this location, one can look out over large areas of the site due to the elevation of the levee, which is approximately 12 feet above surrounding areas. Thick riparian vegetation along the banks of the River forms a strong visual element that contrasts with the smooth water surface.

## **IMPACTS AND MITIGATION MEASURES**

The CEQA Guidelines indicate that a project will normally have significant adverse visual impacts if it would have a substantial, demonstrable, negative aesthetic impact. This determination is based on several criteria, including observer position, view corridors, current and proposed screening, backdrop, and characteristics of the proposed development. The existing visual character of the surrounding area is also taken into account in applying this definition. There is no quantitative method for assessing visual quality and aesthetic impacts; accordingly, judgments of the significance of a particular effect may be expected to differ among viewers.

Factors considered in this DEIR in identifying potentially significant visual impacts include: development that blocks existing significant public views and view corridors; substantial inconsistency with the character, scale, massing, bulk, and form of surrounding development; substantial terrain modifications; reductions in sunlight or creation of shadows in areas used extensively by the public; and substantial increase in nighttime light levels and glare.

For this analysis, views are determined by visual access to an important element or elements in a viewshed. A viewshed often includes a wider range of visual elements and a more general perspective than does a view corridor. At the project site, viewsheds are more prominent than view corridors that require strong building or landscape edges to define the corridor. Potential visual impacts are determined with regard to places of public access (e.g., open space and roadways) rather than private locations or buildings.

### **MASTER PLAN**

The Draft Master Plan contains numerous objectives, policies, implementations, and conceptual drawings that describe the landscaping treatment proposed for all of the project boundaries (Table 4.8-1). Additional policies describe landscaping and setback treatment for the roadways that are adjacent to or within the new community.

#### **Impact M4.8-1**

**The proposed project would significantly alter the existing rural visual quality of the site as seen from local roads, regional freeways, and proposed public pathways.**

The proposed project would result in the construction of new buildings in the foreground of many views of the site, as seen from public roads such as I-205, Patterson Pass Road, Grant Line Road, Byron Road, and new on-site roads. The new buildings would range in height from 25 to 45 feet. From I-205, the project would be the first urban development visible to motorists driving east toward Tracy and Stockton. As it is located on the County line, the proposed development adjacent to I-205 would create the northern half of the "gateway" to San Joaquin County. The southern half of the gateway, the land south of the I-205 freeway, is currently in agricultural use.

Views from other existing roads adjacent to the project, such as Patterson Pass Road, Grant Line Road, and Byron Road, would include close-up views of buildings at the road edge due to the site's level topography, unless buffer areas, setbacks, thick vegetative screening, or berms were located in the foreground.

For the southern boundary of the project, the original land use plan adopted in February 1993 (Figure 3.3) designated only commercial and industrial uses along the I-205 corridor frontage of approximately 6,500 feet (1.25 miles). A mitigation measure included in the FSEIR required that a buffer area no less than 200 feet be established along I-205 with a continuous row of evergreen trees, or other landscaping combination to achieve the same effect, to be detailed in the applicable specific plans. The revised project land use plan now proposes that commercial/industrial uses occupy approximately 4,800 feet of I-205 frontage, with 800 feet of frontage designated as a Community Park and the remaining 900 feet designated for residential uses as part of Neighborhood A (Figure 3.4).

The Draft Master Plan proposes that the commercial and industrial areas along the I-205 freeway be separated from the freeway by a minimum 40-foot landscaped buffer area (Figure 4.8-1). The plan

TABLE 4.8-1

**PROPOSED LANDSCAPING AND SETBACK TREATMENTS  
ALONG THE PROJECT BOUNDARIES AND MAJOR INTERNAL ROADWAYS**

Boundary/ Roadway Area	Treatment
<b>Southern Boundary/I-205</b>	
	<ul style="list-style-type: none"> <li>• The buffer treatment shall serve as the visual edge of the community and help establish the sense of arrival and identity from the freeway.</li> <li>• A buffer area adjacent to the business park and commercial uses shall occur within the development area and shall include the following:               <ul style="list-style-type: none"> <li>• A 40-foot minimum landscape setback adjacent to the freeway right-of-way, separating parking areas, drives and buildings.</li> <li>• A security fence along the right-of-way.</li> <li>• Groves of trees planted within the setback and extending through parking areas or other landscape areas within the parcel.</li> <li>• A broad, low berm to partially screen parking areas, yet allow views to buildings.</li> </ul> </li> <li>• In the western portion adjacent to residential areas, the buffer shall be expanded to include berms and landscaping which, combined with the existing topography at the site, will help to mitigate noise impacts on nearby homes.</li> <li>• Grading and landscaping shall be used to the extent possible to avoid sound walls along the freeway edge.</li> <li>• A monument identifying San Joaquin County shall be incorporated into the edge treatment.</li> </ul>
<b>Eastern Boundary/Patterson Pass Road</b>	
From I-205 to Byron Road	<ul style="list-style-type: none"> <li>• A multiple lane, divided arterial roadway replacing the existing Patterson Pass Road.</li> <li>• An open rail fence planted with vines along the property boundary.</li> <li>• Large, evergreen screening shrubs planted along the fence line.</li> <li>• An easement (width varies from 30 to 100 feet) for storm drainage paralleling the property line.</li> <li>• A single row of trees along both sides, a double row of trees in the median, and other landscaping.</li> <li>• A multi-use path along the eastern right-of-way line.</li> </ul>
North of Byron Road	<ul style="list-style-type: none"> <li>• A landscape buffer planted with tree windrows and large screening shrubs west of the Irrigation Canal near the wastewater treatment plant.</li> <li>• A fence along the property boundary by the treatment plant.</li> <li>• Extension of Old River Regional Park south from Old River to the open space wetlands north of the wastewater treatment plant.</li> </ul>
<b>Northern Boundary</b>	
	The Old River will be bordered by a linear park.

Table 4.8-1 Proposed Landscaping and Setback Treatments - continued

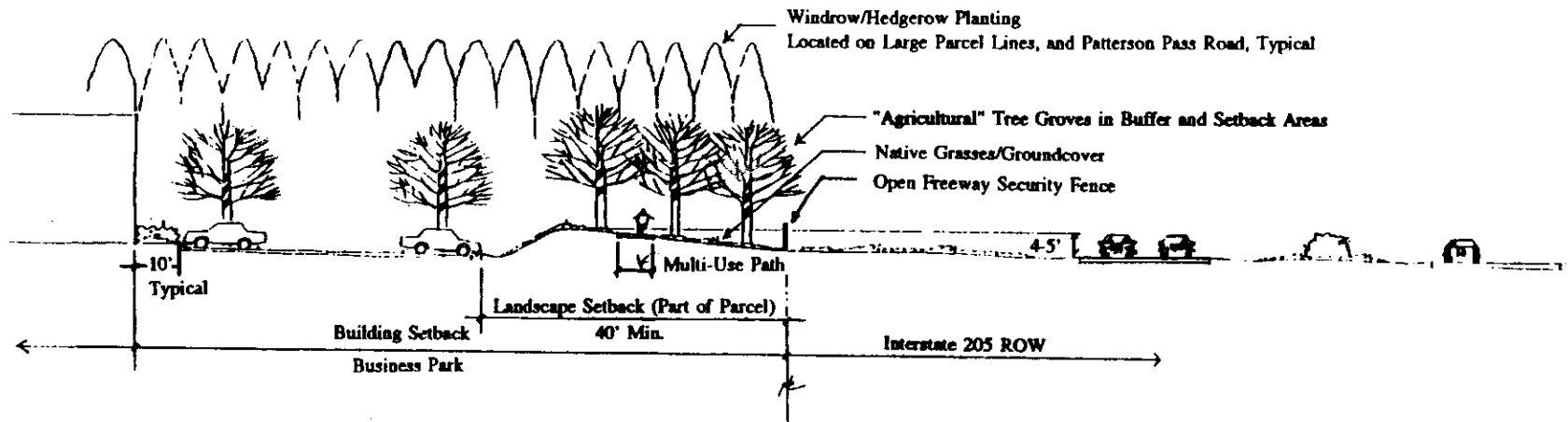
Boundary/ Roadway Area	Treatment
Grant Line Road	
	<p>The landscape treatment of Grant Line Road shall create a formal, tree-shaded rural highway, flanked by flowering tree masses and hedges screening parking areas, and shall consist of the following:</p> <ul style="list-style-type: none"> <li>• Large, spreading, evergreen canopy trees planted on both sides of the roadway and in the median: one or two rows in each parkway, and one row in the median.</li> <li>• Low, spreading, drought tolerant shrubs planted in the median and in the setback areas of commercial and industrial uses.</li> <li>• Alternating bands of flowering shrubs and gravel mulch between the paths and right-of-way (west of De Anza Boulevard).</li> <li>• Grasses planted in both parkway strips.</li> <li>• Vines planted along the right-of-way adjacent to the sound wall.</li> <li>• A multi-use path on both sides of the roadway.</li> <li>• Community walls along the right-of-way at rear property lines, intermittently broken at cul-de-sac ends and pedestrian connections, with masses of small, flowering, neighborhood accent trees at these points.</li> </ul>
Byron Road	
	<p>The landscape treatment of Byron Road shall create the image of a rural highway with tall, evergreen windrows lining the roadway and consist of the following:</p> <ul style="list-style-type: none"> <li>• Tall, vertical evergreen tree windrows planted on both sides of the roadway and in the median: two rows planted on each side and one row in the median.</li> <li>• Low, spreading, drought tolerant shrubs planted in the parkway strips and median.</li> <li>• Grasses or groundcovers outside the parkway strips.</li> <li>• A multi-use path on the north side of the roadway.</li> <li>• A sound wall planted with vines on the south side of the roadway and a security fence planted with vines adjacent to the railroad right-of-way.</li> </ul>

Source: The SWA Group, 1994a.

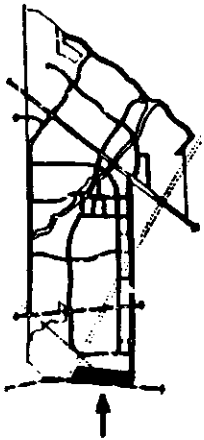
# I-205 BUFFER AND LANDSCAPING PLANS

## I-205 Edge at Business Park

Figure 4.8-1



4.8-6



Source: The SWA Group, 1994a.

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BASELINE

does not specify a minimum setback distance from the buffer, so the closest building would be set back a minimum of 40 feet from the freeway. In the western portion of the project site along I-205, where residential uses in Neighborhood A are proposed, the buffer area would be expanded to a minimum width of 100 feet (Figure 4.8-2). Sound walls are not proposed for construction along the I-205 freeway; instead grading, landscaping, and the existing topography would be used to mitigate noise impacts along the freeway edge (Table 4.8-1). A monument identifying San Joaquin County would be placed at the western community border adjacent to the freeway, although the Draft Master Plan does not specify when the monument would be constructed.

At the eastern site boundary along Patterson Pass Road, the landscaping treatment would consist of a new four-lane arterial road with a landscaped median, a drainage easement 30 to 100 feet wide, a multi-use trail, multiple rows of trees, and a fence planted with vines along the property line (Table 4.8-1 and Figure 4.8-3). Along the portions of Grant Line Road and Byron Road that are within the project site, the landscaping treatment would include rows of deciduous or evergreen trees on both sides of the roadways and one row in the median, accompanied by shrubs and other groundcover (Table 4.8-1 and Figure 4.8-4). A multi-use path would be constructed on both sides of Grant Line Road and on the north side of Byron Road. Community walls along both roadways would be planted with vines.

Near the Patterson Pass Road/I-205 interchange, development of freeway commercial uses and their associated signs could dominate the foreground of the view from the freeway and from Patterson Pass Road. Roadway signs could also partially block views of the foothills in the background. Without adequate controls on the number, size, and height of signs, these signs could become the dominant visual element in the view corridor.

The County Development Title regulations for Freeway Service Commercial districts require the preparation of a comprehensive sign plan and limit pole signs to 40 feet in height and 75 square feet in sign area per face (Sections 9-1710.3 and 9.170.4). The Draft Master Plan contains a policy that requires the preparation of comprehensive sign programs for each area within a Specific Plan and also states that "All signs shall conform to the County Sign Regulations except as modified in the Mountain House Design Manual or by future Specific Plans."<sup>1</sup>

#### **Mitigation Measure M4.8-1**

*(a) The following two Policies should be added under Landscape Concept and Policies in Development and Design (Appendix C):*

***"Detailed Landscaping plans that include fencing, trails, bikeways, and a conceptual plant and tree palette for both existing and proposed roadways, of collector classification and above, and other edge treatments shall be included in each adopted specific plan, if not already set forth in the Design Manual.***

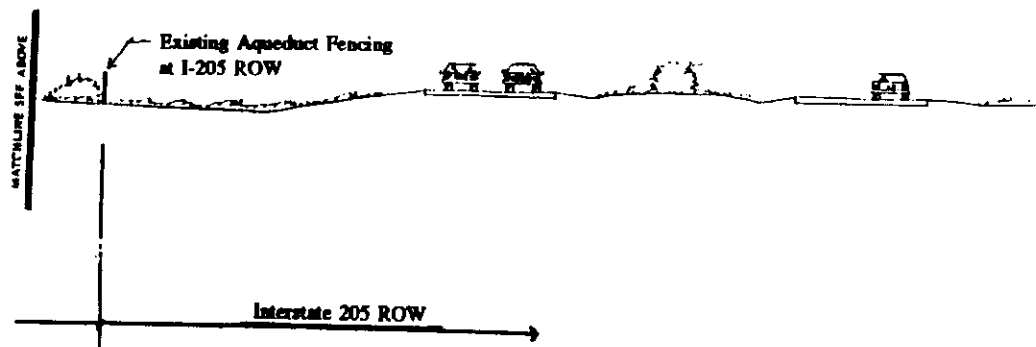
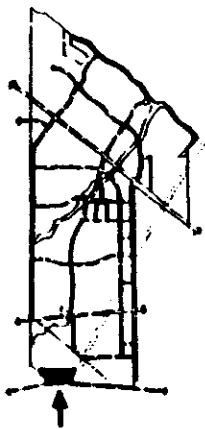
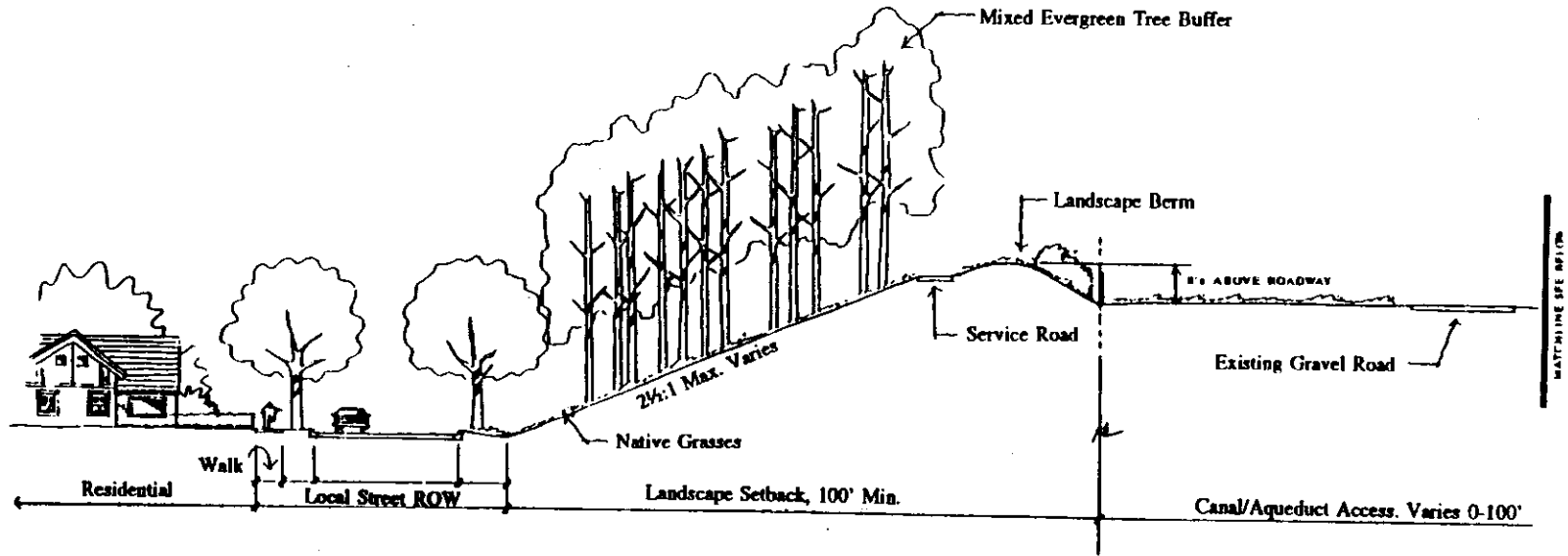
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<sup>1</sup> Mitigation Measures in Section 4.2 (General Plan and Development Title Consistency) recommend adoption of amendments to the County Development Title, or changes to Master Plan regulations, in order to resolve inconsistencies between the two documents.

# I-205 BUFFER AND LANDSCAPING PLANS

## I-205 Edge at Residential

Figure 4.8-2

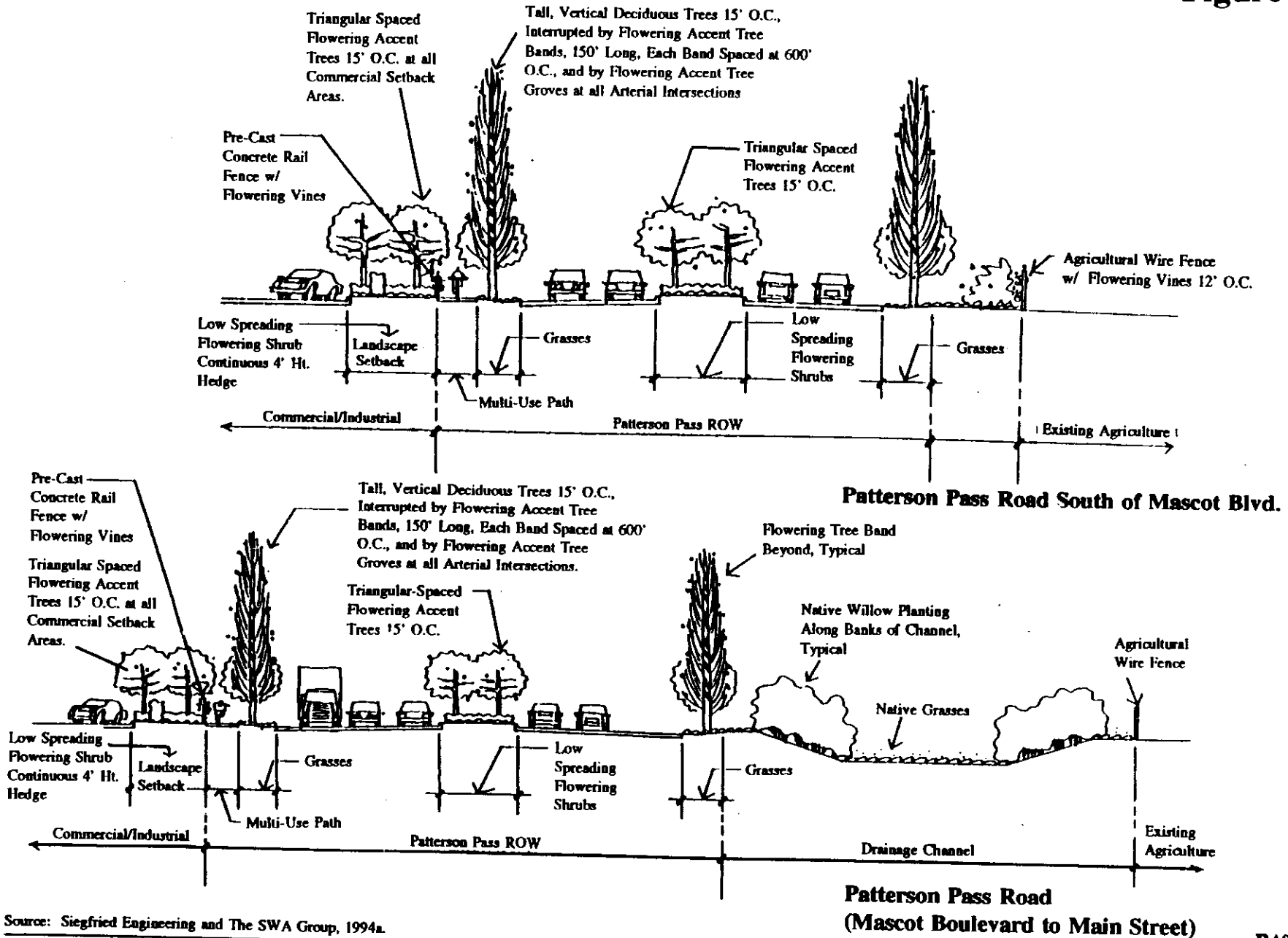


4.8-8

# PATTERSON PASS ROAD LANDSCAPING PLANS

Figure 4.8-3

4.8-9



Source: Siegfried Engineering and The SWA Group, 1994a.

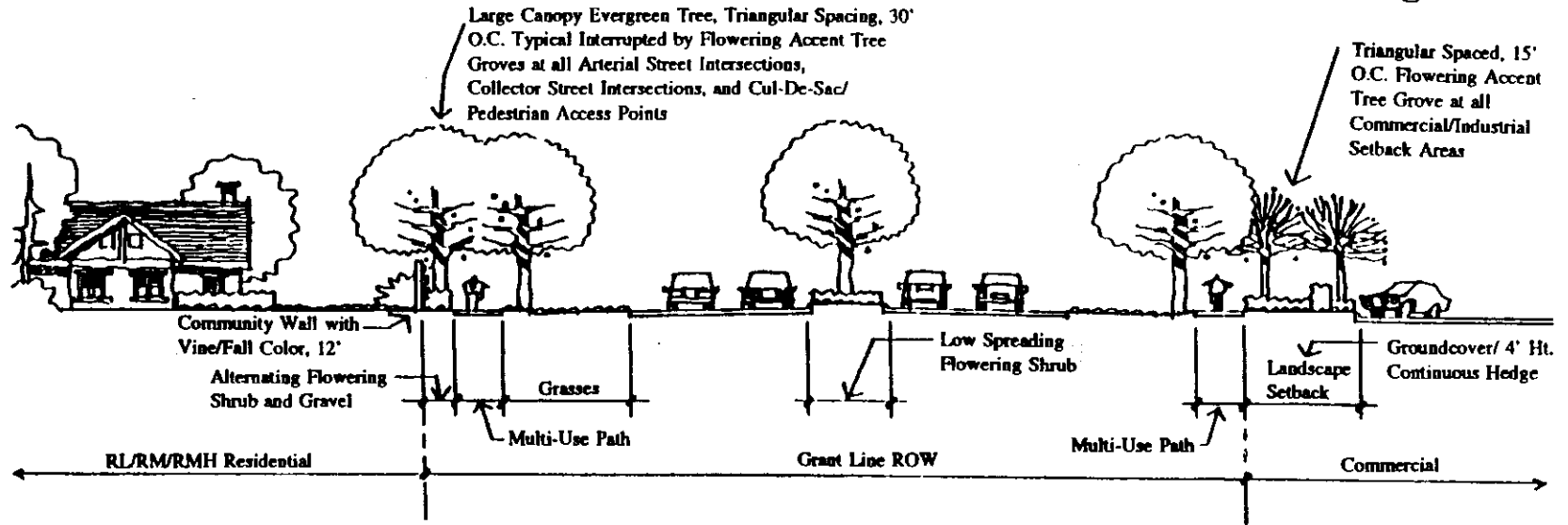
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BASELINE

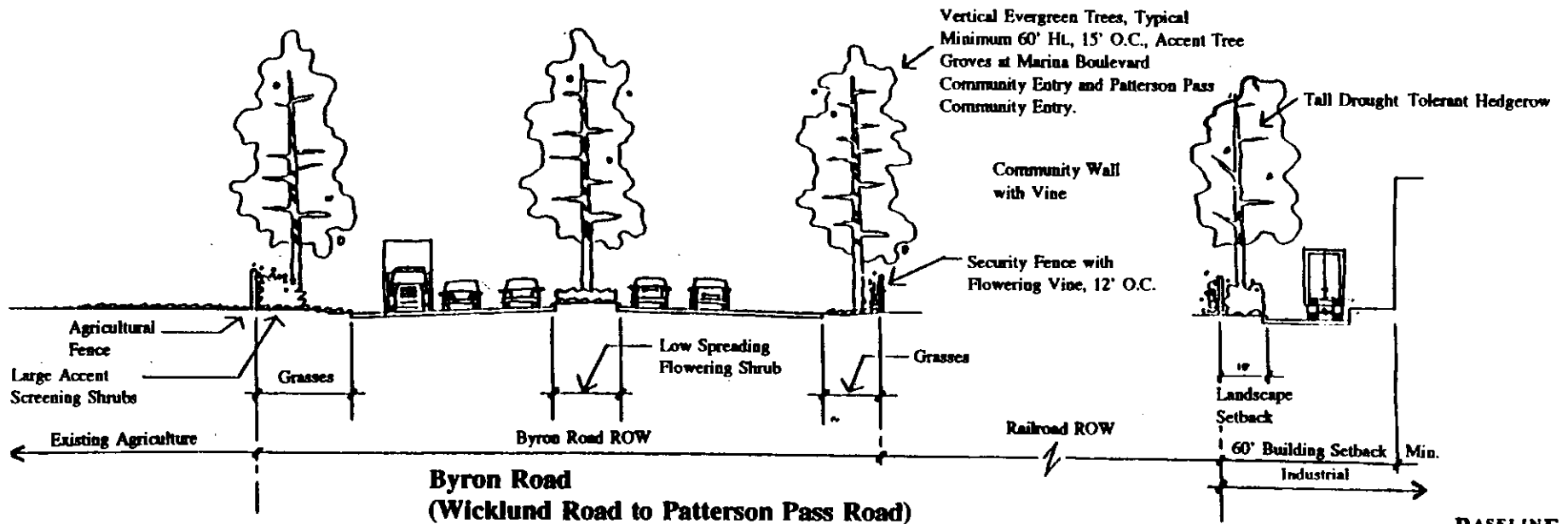


# GRANT LINE AND BYRON ROADS LANDSCAPING PLANS

Figure 4.8-4



Grant Line Road Landscape (West of De Anza)



BASELINE

4.8-10

"The landscaping plans included in each specific plan shall be used as criteria by the proposed Community Review Board to review the design and landscaping plans of all major projects within the community prior to construction."

~~(b) To ensure that a strong visual entrance to the project is defined in the early phases of development, Policy e) under South/Freeway Edge Treatment in Development and Design (Appendix C) and Policy o) under Gateways and Entries in the Design Manual (Appendix 4 A of the Draft Master Plan) should be revised as follows, and the Development Agreement should specify:~~

~~"e) A monument identifying San Joaquin County shall be incorporated into the edge treatment near the western community boundary. The monument shall be constructed during the initial years of the first specific plan by the master developer.~~

~~"o) The gateway at the western property boundary and I-205 shall identify the entrance to San Joaquin County. The gateway treatment shall be constructed during the first specific plan by the master developer, as specified in the Development Agreement."~~

~~(e) (b) The Specific Plan and Special Purpose Plan for Mountain House Business Park should include a comprehensive sign program for the Freeway Service Commercial district which would limit pole signs to a single identifying sign for the Freeway Service area to no more than two locations; height and size restrictions shall be imposed where feasible to lessen the visual impact. The height limits of the one or two pole signs shall not exceed the heights specified in the Development Title for C-FS areas.~~

~~(d) (c) The following Policy should be added under Old River Regional Park (Objective 6) in Recreation and Open Space (Appendix C):~~

~~"j) Additional trees shall be provided along Old River where necessary to screen the project from boaters, while still affording views of the water for people using the regional park. Along Old River, the landscaped area shall be planted with species of trees and shrubs compatible with existing riparian vegetation. Species shall also be chosen to provide effective screening so that the public using the levees for walking or bicycling would have a limited view of development on site. Provisions to accomplish this shall be included in the Park and Open Space Plan."~~

~~(d) The Draft Mountain House Design Review Manual should be amended to define the Community Review Board and describe its typical duties. The Community Review Board could include some members of the larger Community Services District Board of Directors augmented with one or more design professionals. The main purpose of the Review Board would be to review Development Permits of other development applications for their consistency with established design standards in the Draft Master or specific plans. The Community Review Board would also be advisory to the CSD~~

#### 4.8 VISUAL QUALITY

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*Board and the County on design issues that are not directly regulated by master or specific plan policies or implementations (such as the choice for public art in common spaces, minor design details of playgrounds or community parks, and choosing an appropriate gateway monument along the I-205 frontage).*

##### **Impact M4.8-2**

**Views from public roads toward Mt. Diablo and the Mt. Diablo foothills to the west of the site would be screened by new buildings.**

Views of Mt. Diablo and the foothills are now possible from Patterson Pass, Grant Line, and Byron roads as well as from other existing minor on-site roads. These hills form the backdrop to open agricultural fields and provide a sense of distance for the viewer. New development along these roads could significantly interrupt these views. The Draft Master Plan does not include any policies or programs that address this issue. New policies requiring the preservation of view corridors must

take into account the role of windrows planned along the western boundary of the project to block wind, dust, and aerial spraying.

#### **Mitigation Measure M4.8-2**

The following Policy and Implementation should be added under Landscape Concept and Policies in Development and Design (Appendix C):

"Policy:

"View corridors towards the foothills and Mt. Diablo shall be protected and enhanced to the greatest extent possible, without compromising the ability of windrows planted along the western boundary to mitigate wind, dust, and aerial spraying.

"Implementation:

- "a) Critical view corridors shall be identified in the ~~Master and Specific~~ **Parks and Open Space Plans**.
- "b) East-west roadways and pedestrian corridors throughout the project site shall be landscaped with trees to frame views to the west and, whenever feasible, the trees shall be planted at least 40 feet apart to allow open views.
- "c) Periodic breaks in the continuous landscaping plans for north-south arterials and other roadways shall be identified to maximize views toward Mount Diablo and the foothills."

#### **Impact M4.8-3**

**Industrial and high density residential buildings along major view corridors or open space corridors could affect views or create a strong visual contrast to the open space and generate long shadows.**

The regulations of the County Development Title allow industrial buildings to be constructed up to 100 feet in height, and allow High Density and Medium-High Density apartment building heights up to 35 feet. The proposed project includes standards that limit building heights of all commercial, industrial, and High Density residential buildings to a maximum of four stories, with required setbacks based upon a 45 degree drawn from the top of the structure to the property line.

#### **Mitigation Measure M4.8-3**

~~(a) Table 4.1 in the Draft Master Plan (Lot and Structure Standards) should be amended to require that all industrial buildings be set back at least 30 feet from roadways (a minimum 30 foot front yard) and set back at least 100 feet from adjacent residential lots (a minimum 100 foot yard adjacent to housing), if the "45 degree clear" requirements do not already ensure this minimum setback.~~

~~(b) Policy g) under Landscape Concept and Policies in Development and Design (Appendix C) should be added as follows:~~

## 4.8 VISUAL QUALITY

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~~"Industrial buildings shall be screened from roadways and residences by evergreen trees or an effective combination of landscaping."~~

~~(c) Table 4.1 in the Draft Master Plan should be revised to specify minimum heights for all buildings in feet, in place of or in addition to heights measured in stories.~~

~~(d) Table 4.1 in the Draft Master Plan should be amended to note that the High Density Residential area just east of the open space corridor along Mountain House Creek at Byron Road should have a height limit of 40 feet to mitigate impacts of shadows and inappropriate visual massing of buildings. Alternatively, Table 4.1 should be amended to note that any High Density Residential structures in this the High Density Residential area west of the open space corridor along Mountain House Creek must be set back from the lot line adjacent to the creek by at least 50 feet, as already required by a policy in the Draft Master Plan.~~

### Impact M4.8-4

**Project development could result in the removal of mature trees currently visible from public roads; the trees frame views along the public roads.**

Few natural or visibly-significant features, such as riparian vegetation or historic structures, that are within the site are now visible from public roads. However, some roads do include a continuous row of mature deciduous trees that line the roads (e.g., the west side of Patterson Pass Road and both sides of Grant Line Road). Figure 4.11-2 in Biological Resources, Section 4.11, identifies the general locations of trees on the project site. The rows of trees along main roadways could be removed as part of project construction if roads were widened to accommodate the project. The Draft Master Plan contains tree mapping and conservation policies which address the protection of mature trees when designing roadways.

### Mitigation Measure M4.8-4

*Policy a) under Tree Mapping and Conservation Policy (Objective 6) in Recreation and Open Space (Appendix C) should be revised as follows:*

*"a) Existing healthy mature trees, particularly those along Patterson Pass and Grant Line roads, shall be preserved and incorporated to the greatest extent practical into the landscape design of the community. Land uses adjacent to the existing mature trees should be compatible with the preservation program for mature trees."*

### Impact M4.8-5

**The project could generate light and glare that would be visible from major roads, residences within the project, and residences outside the project.**

Light and glare could be created throughout the project site by lighting of parking lots, playing fields, industrial/business park areas, interior building lighting, and the use of exterior building materials which could be reflective. The Draft Master Plan contains several Implementations that

address lighting design standards, but the issue of minimizing light impacts between adjacent land uses is not adequately addressed.

#### **Mitigation Measure M4.8-5**

*Include the following Policy b) and Implementation c) under Lighting (Objective 4) in Development and Design (Appendix C) and make appropriate revisions in the Lighting section of the Design Manual (Appendix 4-A of the Draft Master Plan):*

*"Policy:*

*"b) Lighting throughout the project shall be designed to minimize glare and impacts to adjacent land uses, especially residences.*

*"c) Special Purpose Plans and building plans for significant commercial and industrial structures shall include specific designs to ensure light and glare from the project would be minimized, especially between commercial/industrial and residential uses. Mechanisms such as screening of parking areas with evergreen trees, setbacks from residential neighborhoods adjacent to commercial areas, and a design review process to review development plans shall be included in the Design Manual. The design review process shall include review of lighting proposals and architectural materials for all proposed projects. The proposed Community Review Board, a Design Review Committee, consisting of both architects and landscape architects, shall oversee the design review process."*

#### **Impact M4.8-6**

**The planned relocation of the 60-kV Weber-Herdlyn power line could create additional visual impacts if it is reconstructed aboveground elsewhere on the project site.**

The Draft Master Plan contains text in the Public Health and Safety Chapter that states that the existing 60-kV Weber-Herdlyn electric power transmission line "is being proposed by the master developer for relocation along the railroad right-of-way adjacent to Byron Road." However, there are no policies or implementation measures that discuss this proposal further.

#### **Mitigation Measure M4.8-6**

*A new Policy should be added under Electric and Magnetic Fields in Public Health and Safety (Appendix C) as follows:*

*"f) ~~If the existing~~ **The 60-kV Weber-Herdlyn power line shall be relocated to an alignment that parallels the Mococo SP rail line. The proposed relocation shall be shown in the first residential Specific Plan that is prepared for lands north of Byron Road.** ~~is proposed for relocation elsewhere on the project site, the line shall be constructed underground, if feasible and safe, to minimize potential public health and visual impacts."~~*

### SPECIFIC PLAN I

The Draft Specific Plan I includes more detailed design standards for land uses planned in the Old River Industrial Park; the Central Mountain House Neighborhoods E, F, and G; and the Mountain House Business Park. While some design standards that relate to visual quality and resources are addressed in the Draft Specific Plan I, several key programs (such as buffer areas along I-205 and along major arterials, lighting standards, and sign standards) refer back to the policies and implementation measures in the Draft Master Plan and the Design Manual (Appendix 4-A of the Draft Master Plan).

#### Impact S4.8-1 (C,O,M)

**Potentially adverse visual impacts could occur along the I-205 corridor if signage in the Freeway Service Area, and the design of the entrance monument, is not controlled.**

Overall objectives in the Draft Master Plan call for the protection of visual resources at the community's edges. The Draft Master Plan states that "Each Specific Plan shall describe any additional provisions for signage not covered by the Design Manual and applicable to only that Specific Plan area." One of the most important visual resources is the views from the I-205 freeway toward the project site. The Draft Specific Plan I does not contain any detailed programs that address signage and other potential visual impacts along the freeway.

The area at the southwestern edge of the community is proposed as the site for a large monument and gateway to identify San Joaquin County. Although this area is not included for development in Specific Plan I, construction of the monument and associated landscaping in the initial years of the project would help to mitigate visual impacts, and should be included in the first Specific Plan.

#### Mitigation Measure S4.8-1

*(a) The following Policy should be added to Chapter Four (Development and Design) of the Draft Specific Plan I:*

~~"A Comprehensive Sign Program shall be prepared and included in the Special Purpose Plan that is required prior to development of the Freeway Service Commercial area at the Patterson Pass Road/I-205 interchange. The sign regulations shall limit the use of pole signs to identify each commercial use. Instead, one or two large freeway pole signs shall be coordinated to provide signage for all freeway oriented retail uses at the interchange. The freeway signs shall be limited to no more than 45 feet in height."~~ **The Specific Plan and Special Purpose Plan for Mountain House Business Park should include a comprehensive sign program for the Freeway Service Commercial district which would limit pole signs identifying the Freeway Service area to no more than two locations; height and size restrictions shall be imposed where feasible to lessen the visual impact. The height limits of the one or two pole signs shall not exceed the heights specified in the Development Title for C-FS areas. (M)**

~~(b) Chapter Four of the Draft Specific Plan I should be amended to include detailed policies, standards, and criteria (such as height limits, massing standards, and architectural materials) for the gateway and monument area at the southwestern portion of the project site along I-205. Even though the monument area is not included in lands that are proposed for initial~~



#### 4.8 VISUAL QUALITY

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~~development, the monument and gateway treatment should be implemented with the first phases of development and included in Specific Plan I. The policies and standards should be used by the Community Review Board or a Design Review Committee to choose an appropriate gateway symbol or treatment. The monument and gateway treatment should be constructed during the initial years of Specific Plan I as specified in the Development Agreement. (M)~~

#### **Impact S4.8-2 (C,O,M)**

**Roadways and other development in Specific Plan I could remove significant mature trees, which frame views along public roads.**

The Draft Specific Plan I does not contain any maps or programs that identify the existing mature trees along roadways and elsewhere on the site that would be protected from construction impacts. The Draft Master Plan states that trees to be preserved would be identified in Tentative Subdivision Maps; however, each Specific Plan must identify the protected trees to ensure consistency with subdivision maps that are later approved by the County.

#### **Mitigation Measure S4.8-2 (C,O,M)**

The Parks and Open Space Plan should include a detailed tree survey, as required by Draft Master Plan policy. The specific trees that are proposed for protection and the criteria to be used should be identified. ~~The proposed alignment plans and cross sections of new or reconstructed roadways~~ **Prior to approval of any tentative map or any construction plans for major roadways with existing mature trees, especially Grant Line and Patterson Pass roads, the map or plans shall identify the specific mature trees that would be preserved.** ~~should identify the existing mature trees which would be avoided by construction.~~ Other significant trees that are to be protected in open space, residential, commercial, or industrial areas should be identified in the detailed figures that are included in the Specific Plan.

## 4.9 POPULATION, HOUSING, AND EMPLOYMENT

### SETTING

This section examines impacts related to the project's proposed balance between the number of housing units and the number of jobs that are expected to be created. This section also analyzes the project's Affordable Housing Program to determine its effectiveness in providing housing that is affordable to workers employed on the site.

The jobs/housing concept is used to examine whether a region has a balance between its housing supply and its employment base. A region that has too many jobs relative to its housing supply is likely to experience rapid escalation in housing prices (with a concurrent decline in affordability for the lower-income segments of the community), and intensified pressure for additional residential development. Conversely, if a region has relatively few jobs in comparison to employed residents, many of the regional workers would be commuting to jobs located elsewhere. The resulting traffic patterns can lead to road congestion and reductions in both local and regional air quality. Even if a region has a statistical balance between jobs and housing, there may be sizeable in-commuting and out-commuting due to employment and residential opportunities elsewhere in a region.

The balance between population and employment is measured by a ratio of jobs to employed residents; a ratio of 1.0 indicates a perfect balance between employed residents and jobs. A community can have a statistical balance between jobs and employed residents, yet have none of its housing stock affordable to its work force. The ratio of jobs-to-employed residents is used in this analysis, below, for describing general jobs/housing conditions in San Joaquin County, the Tracy Planning Area, the City of Tracy, and the project site.

#### Jobs/Housing Conditions in San Joaquin County

Employment and housing data compiled by the San Joaquin County Community Development Department indicate that, in 1990, the County as a whole had approximately 158,200 households and 182,100 jobs (San Joaquin County, 1990). Assuming the households contained an average of 1.21 employed persons (based on 1990 data for the Stockton SMSA), San Joaquin County had a total of 191,000 employed residents. The resulting ratio of jobs per employed resident is 0.95, implying that the County has an approximate balance between out-commuters and in-commuters (Table 4.9-1). However, the balanced jobs to employed residents ratio for San Joaquin County does not take into account the type of County jobs contributing to the ratio. San Joaquin County historically has had a strong agriculturally-based local economy. Almost 16,000 workers are employed by the agricultural industry in San Joaquin, with tens of thousands of additional workers employed in other industries, such as food processing, which are also directly tied to the County's agricultural industry. Many of the agricultural jobs are low-paying and seasonal positions.

## 4.9 POPULATION, HOUSING, AND EMPLOYMENT

The City of Tracy's ratio of 0.58 job per employed resident is noticeably lower than the County ratio (Table 4.9-1), which substantiates Tracy's function as a bedroom community for employment centers elsewhere. For the Tracy Planning Area, an area that is much larger than the current City limits, the ratio of jobs to employed residents is higher than the City of Tracy's ratio (because of major employers in unincorporated areas such as the Deuel Prison, the Defense Depot, and Safeway) but lower than the County's ratio (Table 4.9-1). In contrast to San Joaquin County, the jobs to employed residents ratio for the Livermore-Amador Valley of Alameda County (composed of the cities of Dublin, Pleasanton, and Livermore) is greater than 1.0, signifying an overabundance of jobs in relation to the local work force.

TABLE 4.9-1

### EXISTING JOBS/EMPLOYED RESIDENTS RATIO - 1990 San Joaquin County and Tracy Area

	Households	Employed Residents Per Household	Employed Residents	Jobs	Jobs per Employed Resident
City of Tracy	11,208	1.41	15,495	8,965	0.58
Tracy Planning Area	14,903	1.40 <sup>1</sup>	20,864	15,294	0.73
San Joaquin County	158,156	1.21	191,111	182,123	0.95

Sources: 1990 U.S. Census; California Department of Finance; San Joaquin County Community Development Department, 1990; BASELINE.

Note: Tracy Planning Area is bounded by Old River, San Joaquin River, and Alameda and Stanislaus counties.

<sup>1</sup> This is an estimated number, based on the City of Tracy's ratio of 1.41. The other ratios for the City and County are from the 1990 U.S. Census.

## IMPACTS AND MITIGATION MEASURES

Impacts related to jobs/housing balance and affordable housing programs are generally considered as "economic and social information," and the CEQA Guidelines state that "economic or social effects of a project shall not be treated as significant effects on the environment" (Section 15131(a) of the CEQA Guidelines). However, the Guidelines also state that "economic or social effects of a project may be used to determine the significance of physical changes caused by the project" (Section 15131(b)) and "economic, social, and particularly housing factors shall be considered by public agencies together with technological and environmental factors in deciding whether changes in a project are feasible to reduce or avoid the significant effects on the environment identified in the EIR" (Section 15131(c)).

Impacts related to the jobs/housing balance and affordable housing program of the project are not significant impacts in and of themselves, but jobs/housing impacts may contribute directly or indirectly to other significant impacts upon the physical environment. The most obvious connections between jobs/housing and affordable housing programs are with environmental impacts such as traffic levels and air quality. The significant traffic and air quality impacts of the project identified in the "Transportation" and "Air Quality" sections of this DEIR could be lessened or increased depending upon the success or failure of the project's jobs/housing, economic development, and affordable housing programs. If fewer jobs or affordable housing units were created on the project site than anticipated, or the timing of the affordable units or jobs were slower, more auto trips and more air pollution could be generated, as project residents are forced to commute to employment centers in San Joaquin, Stanislaus, Alameda, and other counties.

Thus, the jobs and housing impacts that are considered important because of their relationship with traffic and air quality impacts are those that would result in 1) an imbalance between the planned number and type of jobs and housing units, 2) housing that is not affordable to residents employed on the project site or in the County, and 3) an excessively long rate of development for commercial and industrial land at the project site. Although the "Impacts" and "Mitigation Measures" format is used in this section, the Mitigation Measures listed below are recommended changes to the project's Jobs/Housing and Affordable Housing programs; the listed measures are not required to mitigate any significant impacts, since no significant "Population, Housing, and Employment" impacts have been identified.

**MASTER PLAN**

The Draft Master Plan contains Jobs/Housing and Affordable Housing policies and programs (Appendix C). The programs propose specific jobs/housing goals and affordable housing indices to be measured and evaluated at various project buildout times. The policies also propose the establishment of a Job Creation Program, including the hiring of a full-time job developer by the proposed Community Services District.

The applicant anticipates that the project site would build out over a 25-year period under a High Growth assumption. It is assumed that an average absorption (sales) rate of 800 residential units per year would occur. For non-residential land uses, the applicant projects that an annual average of 30 acres of commercial and industrial development and 25 acres of schools and public uses would be developed.

<b>Buildout of Project (Over 25 Years)</b>	
Average Residential Absorption	800 units/year
Average Commercial and Industrial Land Absorption <sup>1</sup>	30 acres/year
Average Public Land Absorption (Schools, etc.)	25 acres/year

<sup>1</sup> Excludes the two golf courses and the marina.

The proposed project is expecting to attract some of the overflow demand for single-family homes from the Bay Area that is now being met in Tracy, Manteca, and the Modesto area, with the construction of approximately 8,200 Medium Density homes. The applicant estimates that most of

these Medium Density homes (single-family homes on parcels approximately 5,000 square feet in size) would sell for average prices ranging from \$88,000 to \$186,000<sup>1</sup> per unit (Table 4.9-2). Approximately 4,900 Low Density homes at the project site are expected to range between \$205,000 to \$300,000. The project also includes almost 3,000 units of High Density and Medium-High Density apartments, condominiums, and senior citizen housing; most of these units would range between \$300 and \$610 in monthly rents. An additional 643 "extra allowable units" would be included in the \$300-\$390 monthly rental range. These 643 "extra allowable" affordable units are assumed to include 214 "second units" (in-law units), which would be constructed in Low and Medium Density neighborhoods and would be rented out to third parties at affordable prices, and an additional 429 High Density Senior units, which would be located in the Town Center or in High Density designated areas. An additional 643 second units are anticipated to be built.

TABLE 4.9-2

PROPOSED HOUSING DENSITIES AND PRICES

Density	Units	Home Cost/ Rental Rate
Very Low Density	67	\$425,000
Low Density	4,882	\$205,000 - \$300,000
Medium Density	8,232 <sup>1</sup>	\$88,000 - \$186,000
Medium-High Density apartments, condos, and senior housing	1,968 <sup>1</sup>	\$490 - \$610/month
High Density apartments, condos, and senior housing	956 <sup>1</sup>	\$300 - \$390/month
"Extra allowable units" <sup>2</sup>		
• Affordable second units	214	\$300 - \$390/month
• High Density senior units	429	\$300 - \$390/month
• Non-leased second units <sup>3</sup>	643	--
<b>Total</b>	<b>17,391</b>	

Source: The SWA Group, 1994a.

- <sup>1</sup> A small portion of this density total would be priced at higher sales prices or rental rates than are indicated here.
- <sup>2</sup> "Extra allowable units" are units in addition to the 16,105 planned units that are encouraged and permitted in the Town Center and High Density Residential areas, plus second units in the other residential areas.
- <sup>3</sup> These second units are assumed to be constructed, but would be used by the property owner of the main dwelling, and would not be rented to a third party, according to the applicant.

Buildout of the project's commercial and industrial acreage would result in approximately 12.4 million square feet of space. The proposed land use plan would allow development of approximately 4.7 million square feet of commercial space, and 7.7 million square feet of industrial space. Slightly less than half of the total space (5.77 million square feet) would consist of 331 acres of Limited Industrial uses. An additional 1.9 million square feet (110 acres) would be designated for General Industrial uses. The applicant assumes that the proposed project would prove attractive to high technology

<sup>1</sup> The residential sales prices anticipated by the applicant may change by the time that development of the project occurs. Competitive pressures within the region and in the Tri-Valley area (Alameda County), as well as within the project itself, would largely dictate the prices at which new homes were sold or rented.

firms that are searching for lower cost but "high quality image" locations within a reasonable driving distance of Silicon Valley in Santa Clara County.

Commercial space would consist of retail and office facilities. Approximately 783,000 square feet would be used for offices; the remainder would be retail stores and services. The retail uses proposed to serve Mountain House and the population of the surrounding area would consist of six community shopping centers (88 acres); twelve neighborhood shopping centers (25 acres); general commercial shops (63 acres); a 43-acre mixed-use Town Center; and 56 acres of offices. Regional-serving retail facilities would not be provided; demand for the merchandise sold through such outlets is expected by the applicant to be met outside of the project site.

**The applicant estimates that in addition to the jobs created by the on-site commercial and industrial uses, up to approximately 2,000 direct construction jobs would be created annually. The following analysis has not attempted to speculate about where in the State, or outside the State, construction workers for the project may be recruited, or whether the jobs would be unionized or not. The projected construction jobs have not been factored into the jobs/housing analysis in this chapter.**

#### **Impact M4.9-1**

**The proposed project may not attain an adequate balance between jobs and housing, especially during the initial phases of the project.**

The applicant projects that the new community would eventually generate approximately 21,925 jobs (Table 4.9-3). Assuming 1.44 workers per household,<sup>2</sup> the resulting jobs/housing ratio at the project site at buildout would be 0.99, or close to a balance of 1.0. This ratio would represent a significant change from the trend toward out-commuting that is currently occurring in the southwestern portion of the County.

The Draft Master Plan contains a program that requires the evaluation of the jobs/housing ratio goals at specific project buildout intervals. The program proposes minimum jobs/housing ratios that would constitute a target at five milestones of project development: at completion of about 4,000 housing units; 8,000 units; 12,000 units; 16,000 units; and buildout of all job-generating land uses (Table 4.9-4). The jobs/housing ratio performance of the new community would be monitored annually by the County, and at the specified milestone times the County Planning Commission and Board of Supervisors would review the progress of the program goals.

The Draft Master Plan indicates two different jobs/housing ratios that could be met at each milestone: a "minimum" jobs/housing ratio for each milestone, and a "best case" ratio that is four to nine

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<sup>2</sup> San Joaquin County had a ratio of only 1.21 jobs per household according to the 1990 U.S. Census; however, this ratio should rise as the County continues to urbanize. The City of Tracy measured 1.41 workers per household and Alameda County had a ratio of 1.54 jobs per household. The projected workers per household ratio for the project at buildout is based on a regression analysis prepared by the applicant's consultants (The SWA Group, 1994a).

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percentage points higher than the "minimum" ratio. For each 4,000-unit milestone, the required number of jobs to meet the ratios are calculated for "population-serving" (local) jobs and for basic (regional) jobs.<sup>3</sup> The Draft Master Plan anticipates that the minimum ratio for the project at the

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<sup>3</sup> Population-serving jobs are ones that provide services or goods to the on-site population, such as positions in accounting firms, beauty salons, grocery stores, and restaurants. Basic jobs, which include most manufacturing and office positions, are ones that locate on-site but do not necessarily provide services or goods to the local population.

TABLE 4.9-3

**PROJECTED JOBS/HOUSING RATIO AT BUILDOUT OF ALL JOBS**  
**High Growth Assumptions (Year 25)**

Total Employment at Buildout <sup>1</sup>		Projected Number of Units and Employed Residents at Buildout			Jobs/ Housing Ratio <sup>6</sup>
Employment Sector	Jobs	Dwelling Units	Employees per Household	Total Employed Residents	
Commercial	8,881	16,105 <sup>1</sup>	1.44 <sup>3</sup>	22,032 <sup>4</sup>	0.99
Industrial	11,771	17,391 <sup>2</sup>	1.44 <sup>3</sup>	23,791 <sup>4</sup>	0.92
Public	1,273				
<b>Total Jobs</b>	<b>21,925<sup>5</sup></b>				

Source: The SWA Group, 1994a; BASELINE.

- <sup>1</sup> Unit count does not include 1,286 "extra allowable" units. This is the maximum allowable unit count. The minimum allowable is 13,974 units.
- <sup>2</sup> Unit count includes 1,286 "extra allowable" units, one half of which is assumed to be in-law second units that would not be occupied by family members.
- <sup>3</sup> Based on the applicant's estimate.
- <sup>4</sup> Assumes a 5 percent vacancy factor for all built units.
- <sup>5</sup> Does not include approximately 2,000 direct construction jobs created every year.
- <sup>6</sup> Unlike the preceding section, the following analysis calculates the jobs/housing ratio by looking at the "required" amount of housing needed for all employed residents versus the amount of "available" housing, using the following equation:

$$\frac{(\text{Number of projected jobs} / \text{Estimated number of employed residents per household}) \times (1 + \text{a vacancy rate})}{\text{Number of housing units built}} = \frac{\text{"Required housing"}}{\text{Available housing}}$$

Calculating the ratio of projected number of employed residents divided by the number of projected jobs would result in a slightly lower jobs/housing ratio.

completion of Specific Plan I should be 0.70, increasing to 0.80 after 8,000 units had been constructed, and continuing to increase incrementally up to 0.95 by the time all the jobs had been added. The projected schedule of jobs and housing are based upon a High Growth scenario. If the high growth rates for jobs were not realized, or if the housing were absorbed at a lower rate than expected, the measured jobs/housing ratios could be significantly lower for the intervening years of the project.<sup>4</sup> The lack of a range of absorption estimates may make it more difficult for County staff to evaluate the performance of the project during the annual monitoring of the jobs/housing targets.

<sup>4</sup> The project would also create approximately 2,000 short-term construction jobs each year. The Draft Master Plan proposes that direct construction jobs generated solely to support the buildout of Mountain House would be considered as part of the annual program, monitoring the community's jobs/housing balance.



4.9 POPULATION, HOUSING, AND EMPLOYMENT

TABLE 4.9-4

NUMBER OF JOBS REQUIRED TO MEET "BEST CASE"  
AND "MINIMUM" JOBS/HOUSING TARGETS  
At Four Project Milestones

	Approx. 4,000 Units <sup>1</sup>	Approx. 8,000 Units <sup>1</sup>	Approx. 12,000 Units <sup>1</sup>	Approx. 16,000 Units <sup>1</sup>
Housing Built	4,176	8,421	12,095	16,105
Employed Residents	5,713 <sup>2</sup>	11,520	16,546	22,032
Jobs Required ("Best Case" Ratio) <sup>3</sup>	(0.79)	(0.89)	(0.93)	(0.94) <sup>4</sup>
Population-Serving Jobs	2,259	5,068	8,067	11,080
Basic Jobs	<u>2,236</u>	<u>5,159</u>	<u>7,401</u>	<u>9,668</u>
Total	4,495	10,227	15,468	20,748 <sup>4</sup>
Jobs Required (Minimum Ratio) <sup>5</sup>	(0.70)	(0.80)	(0.85)	8
Population-Serving Jobs	2,259	5,068	8,067	11,080
Basic Jobs	<u>1,750</u>	<u>4,171</u>	<u>6,032</u>	<u>8,799</u>
Total	4,009	9,239	14,099	19,879

Source: The SWA Group, 1994a; BASELINE.

- <sup>1</sup> The exact unit counts correspond to the buildout of full neighborhoods, so the number of units is approximate. The unit counts do not include any "extra allowable units." The "housing built" totals assume the maximum allowable number of units are built in each neighborhood.
- <sup>2</sup> Assumes 5 percent vacancy and 1.44 workers per household.
- <sup>3</sup> These are estimates by the applicant (The SWA Group, 1994a) of the number of jobs needed to reach the "best case" jobs/housing ratio.
- <sup>4</sup> Full buildout of all jobs (to 21,925 positions) would occur approximately five years after full buildout of the housing. The jobs/housing ratio would then rise to 0.99 ("best case") or 0.95 (minimum ratio).
- <sup>5</sup> These are estimates by the applicant (The SWA Group, 1994a) of the number of jobs needed to reach the "minimum" jobs/housing ratio.

The Draft Master Plan includes three general policies that address how the project's Jobs/Housing Program will ensure that the goals can be met:

- (1) Job development activities shall target specific types of industry that tend to offer higher salaries, including:
  - biomedical, biotech, bioengineering
  - professional health care services
  - high-tech (i.e., chip manufacturing, software development)
  - voice and data communication hardware and services
  - financial services, real estate, accounting, and legal services

- (2) Non-residential land uses shall generally conform to the minimum job densities presented in Table 3.1: Land Use Program.
- (3) Land use allocations and regulatory controls shall support a jobs/housing balance and land use changes or regulatory changes will not be made without giving consideration to the effects on a jobs/housing balance.

The project proposes a job creation program consisting of passive marketing techniques; fast-track processing for sites ready for development; hiring of jobs development specialists by the Community Services District; and offering various incentives to prospective developers and tenants.

**Mitigation Measure M4.9-1**

(a) *To more realistically plan for a range of absorption rates, a "Low Growth" absorption schedule, as well as a "High Growth" schedule should be included in the Master Plan. The Jobs/Housing Program policies and Tables 3.7 and 3.8 should be revised to indicate the **exact** number of jobs that would need to be created on-site to reach the "minimum" jobs/housing ratio goals for each increment of housing development, under both "High Growth" and "Low Growth" absorption schedules. This additional information will assist County staff in evaluating the project's performance in meeting jobs/housing goals during the annual monitoring process.*

(b) *Implementations d) and e) under Objective 1, Jobs/Housing Program in Land Use (Appendix C) should be revised as follows:*

"d) *Jobs/Housing Reviews. The Jobs/Housing Program shall be monitored by the Review Authority as described in the monitoring and enforcement section below. In addition, the San Joaquin County Board of Supervisors shall hold a Public Hearing to review the progress of the Jobs/Housing Program at the following specified times:*

- *Prior to the approval of any Specific Plan, excluding the first Specific Plan or Specific Plan Amendment.*
- *~~When 4,000, 8,000, 12,000, and 16,000 residential units have been completed,~~ **Every three years after construction begins, but no sooner than after 2,000 residential units have been constructed, provided a ~~Public Hearing on the progress of the Jobs/Housing Program Review~~ has not already been conducted in the previous calendar year; or***
- *At any other times determined appropriate by the Board of Supervisors (e.g., **scheduling a Jobs/Housing Review by the Board to evaluate the circumstances for nonachievement of jobs/housing ratios**).*

*To determine whether the Community is meeting its jobs/housing goals, the following ~~specific jobs/housing ratios~~ will be tracked:*

- *Best Case Ratios: The jobs/housing ratio is estimated to improve over time from 0.79 by the end of the first seven years of Specific Plan I under the "High Growth"*

#### 4.9 POPULATION, HOUSING, AND EMPLOYMENT

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schedule to 0.99 at project buildout. These "Best Case" jobs/housing ratios are presented in Table 3.7: Analysis of Jobs/Housing Balance Over Time; -

- **Minimum Ratios:** The Minimum Ratio averages only 4 percent to 9 percent less than the Best Case Ratio; over time, the Minimum Ratio approaches the Best Case Ratio. Minimum Ratios for years or residential units not shown shall be interpolated. The Minimum Ratios are presented in Table 3.8: Analysis of Various Jobs/Housing Scenarios Over Time; **and**
- **Minimum Job Densities:** Commercial and Industrial land uses designated for each neighborhood should generally conform with the average densities shown in Table 3.1: Land Use Program."

"e) **Enforcement.** The San Joaquin County Community Development ~~Director~~ Department shall prepare a written report and findings and determine through the annual monitoring of the Jobs/Housing Program that the minimum jobs/housing ratios **and minimum job densities (per Table 3.1 of the Master Plan)** have been achieved ~~beginning after the first three years of construction.~~ Annual monitoring shall include an inventory of built and occupied residential units, and gross commercial/industrial square footage built and occupied, broken down by land use category, with estimated number of employees for each land use category. In the event that the minimum jobs/housing ratios **and minimum job densities (per Table 3.1 of the Master Plan)** have not been achieved, the **Board of Supervisors shall decide whether to schedule public hearings** ~~shall be scheduled~~ before the Planning Commission and the Board of Supervisors to evaluate the circumstances for nonachievement, and to develop an appropriate course of action. The County Planning Commission shall make recommendations to the Board regarding the issue. Both the Planning Commission and the Board of Supervisors shall consider the following issues:

- Recent efforts in the job creation program;
- Commitments for future jobs;
- The financial effects that discontinued or interrupted residential development ~~will~~ **would** have on Community Services District operations, and public financing districts in the community;
- The effects of including construction jobs in the calculation of the jobs/housing ratio;
- The types of the jobs created to date (e.g., the wage scale or salary level of the jobs, and what portion are full-time or part-time positions) and how many of the new jobs are in "basic" industries (non-local);
- The relationship of the job creation rate in the project with local, State, and national economic or market trends and financing availability; **and**
- Efforts that have been made by the County to facilitate and encourage job development; **and**

- **Actual job densities (jobs per acre or square foot) that have been achieved for commercial and industrial uses, compared to the average job densities specified in Table 3.1.**

*"Following consideration of all public testimony, written materials and recommendations of County staff and the Planning Commission, the Board shall ~~take one or both~~ decide on a course of action to address the jobs/housing issue. Although the Board may take whatever action it deems appropriate to further jobs/housing goals, the Board shall focus on taking one or more of the following actions:*

- (1) **Find that no action is necessary and direct County staff to continue processing applications for the construction of additional residential units in the project as before; or**
- (+) (2) *Direct County staff to continue processing applications for the construction of additional residential units in the project according to revised jobs/housing targets*

#### 4.9 POPULATION, HOUSING, AND EMPLOYMENT

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*that will ensure that jobs/housing ratio goals will be substantially met in the future; and/or*

- (2) (3) Recommend that certain actions be taken by the Master Developer and/or other developers within the project to increase job creation; and/or*
- (4) Approve future Specific Plans only if it can be demonstrated that the community will reach minimum jobs/housing ratios.**

**"Any proposed action by the Board that would constrain residential development shall require the preparation of a study for Board consideration and action that assesses the impacts on affected parties (e.g., the CSD, CFDs, private developers, bond shareholders, the County). This study shall also consider potential undesirable impacts arising from such Board action (e.g., possible restriction on the creation of population-serving jobs and region-serving jobs due to a reduction in population growth; possible limitation on the operation of existing population-serving and some region-serving businesses)."**

*(c) Guideline (d) under Monitoring and Enforcement should be moved to become an Implementation under Objective 1, Jobs/Housing and Affordable Housing (Appendix C) and should be revised as follows:*

~~"The following controls shall apply to the Jobs/Housing Program:~~

- ~~• Commercial and industrial land uses designated for each neighborhood should generally conform with the average job densities shown in Table 3.1: Land Use Program.~~
- Redesignation and rezoning of commercial and industrial land to non-employment uses (such as residential uses) shall be approved only if the County determines that the proposed redesignation or rezoning will not have a negative impact on the Mountain House Jobs/Housing and Affordable Housing programs."**

~~(d) The following should be added to the Monitoring and Enforcement Guidelines in the Land Use chapter:~~

~~"d) The annual monitoring effort shall identify and consider the actual job densities (jobs per acre or square foot of building) of commercial and industrial uses, in comparison to the average assumed job densities in Table 3.1."~~

#### **Impact M4.9-2**

**The proposed project may not provide a sufficient supply of housing that is affordable to Very Low and Low Income workers employed in the community, especially if 25 percent of the number of planned second units were not occupied by Very Low and Low Income renters.**

The Draft Master Plan includes an Affordable Housing Program, as required by the County General Plan 2010 for all new communities. The Affordable Housing Program can be considered a mitigation measure in and of itself, since without the inclusion of the program in the project some environmental impacts may be greater than without it. The applicant proposes to meet affordable housing goals by: 1) encouraging the construction of second units (also referred to as mother-in-law or granny units); 2) designating land for high density residential uses and pricing the units for low and moderate income households; and 3) creating a Mountain House Housing Trust Fund.

### **Second Units**

The Draft Master Plan indicates that construction of second units would conform to the requirements of the County Development Title, except as modified in the Master Plan or future specific plans. It is proposed that second units would not be considered when calculating maximum and minimum unit counts for neighborhoods or zoning districts, and that at least 6.5 percent of the total number of Residential/Very Low (R/VL), Residential/Low (R/L), and Residential/Medium (R/M) units approved for each neighborhood would be designated to include second units. The second units would be scattered throughout the Very Low, Low, and Medium Density areas of the project. Design standards for second units would be developed as part of the Mountain House Design Manual.

The County Development Title requires that second unit applications be reviewed by the Planning Director using the Staff Review procedure, which is an administrative, non-discretionary action, involving no public notice or formal public hearings. However, the Draft Master Plan proposes that the actual number of second units would be determined on a phase-by-phase basis at the time individual tentative subdivision maps are prepared.

The County Development Title places a number of restrictions on approved second units. The County requires that second units be limited to 1,200 square feet; constructed to observe the same yard and setback requirements as for the main structure; that they not intrude into the front yard; and that the second unit "shall be attached whenever possible, especially on parcels less than ten thousand (10,000) square feet" (Section 9-830.5(e)). This "attached" provision would apply to virtually all of the second units proposed in the project. The Development Title also requires the owner of the property to occupy either the existing single family structure or the proposed second unit structure at least 90 days out of each year.

### **"Extra Allowable Units"**

Up to 1,286 "extra allowable" housing units are proposed in addition to the proposed maximum of 16,105 housing units. The Draft Master Plan defines "extra allowable units" as "the additional residential units permitted and encouraged in the Town Center and Residential High Density areas, plus the second units permitted and encouraged in all neighborhoods of the community that are included in Planned Units but excluded in calculations relative to neighborhood minimum and maximum densities and General Plan densities."

The Draft Master Plan further states that:

"Although Extra Allowable Units have not been directly considered in the overall Master Plan and mitigation programs, it is assumed that the impacts associated with their construction are accounted for by the 5 percent residential vacancy. The 5 percent vacancy reduces impacts associated with schools, water, and sewer facilities, transportation, and other capital facilities and services. These reduced impacts, which also have not been considered in the overall Master Plan and mitigation programs, are a function of the residential densities. In other words, a low density unit generates more

students, more water/sewer usage, more trips, etc., than a high density unit. Consequently, additional R/H units and second units will generate less impact on an average per-unit basis than the impact reduced by a 5 percent vacancy across all residential land uses.

"The purpose of incorporating the extra allowable units into the community is to meet the needs of lower income households without increasing impacts on facilities and services that would exceed the impacts reduced by the 5 percent vacancy. The increased impacts generated by the additional units have been calculated and do not exceed the impacts reduced by the 5 percent vacancy."

The proposed 1,286 extra allowable units would consist of 857 second units and 429 additional High Density units built for senior citizens. Although the Draft Master Plan does not explicitly state it, the underlying assumption regarding the role of second units is that one-quarter of the 857 units (214 units) would be built and rented to low income households, while the remaining three-quarters of the second units (643 units) would be occupied by family members (Freudenberger, 1994).

The Draft Master Plan assumes that 280 additional senior units would be constructed in the Town Center, and 189 units would be included in the already designated Residential High Density areas, representing a 25 percent bonus density. The Draft Master Plan includes specific plan requirements that "The R/H and R/MH sites indicated by the Land Use Plan shall be developed primarily as senior housing, unless the need for such housing is determined not to exist during preparation of the Specific Plan for Neighborhood H," and, "Except for Specific Plan I, Specific Plans shall consider the need for additional senior housing sites, and shall designate sites where such a need is determined." Overall, the Draft Master Plan assumes that 25 percent of all senior citizen housing units would be affordable to Very Low or Low Income households.

### Housing Costs

The projected housing costs for the project range from an approximate monthly rent of \$300 (in current dollars) for a high density apartment to homes priced at over \$400,000 (Table 4.9-2). Housing affordability for Very Low Income households is defined by the U.S. Department of Housing and Urban Development (HUD) as a rent or mortgage level affordable to those earning up to 50 percent of the median household income for the area, which in San Joaquin County translates to families earning up to about \$19,000 annually.<sup>5</sup>

To meet the requirements of **Very Low Income** households, the project is proposing construction of 1,132 affordable units at buildout, including 489 High Density units; 429 "extra allowable" High

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<sup>5</sup> Note that the median household income for San Joaquin County in 1993 was \$38,200 annually, which means the "very low income" category, according to U.S. Housing and Urban Development guidelines, is up to \$19,100 annual income. The applicant's definition of "very low income" is slightly lower, up to \$17,500, or 46 percent of the median income for the County.



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Density units designated for senior citizens; and 214 second units (Table 4.9-5). The second units would be scattered throughout the R/VL, R/L, and R/M residential areas.

To meet the needs of **Low Income** households, the applicant is proposing 1,949 units of High Density and Medium High Density housing, including some of the units designated for senior citizens (Table 4.9-5). These units would have to be priced at a maximum rent level of approximately \$390 to \$610 per month to meet the Federal requirements for Low Income housing (affordable to families with an annual income between 50 percent and 80 percent of the County's median income).<sup>6</sup>

For **Moderate Income** households, earning an annual income between \$27,500 and \$42,500, the affordable apartments or homes would need to be priced between about \$610 to \$960 for rent, or between \$70,000 and \$137,000 as a home or condominium sales price.<sup>7</sup> Approximately 4,139 units of Medium Density and Medium High Density units are proposed for construction to meet this income category (Table 4.9-5).

The remainder of the units to be built within the new community would be priced to be affordable to households earning over 124 percent of the County median income, or over an average annual income of \$47,500. Approximately 9,527 units (57 percent of all units) would be priced at levels above Moderate Income. Overall, over three-quarters (77 percent) of the units planned for construction would be priced for families with annual incomes between \$32,500 and \$87,500.

#### **Mountain House Housing Trust Fund**

The Affordable Housing Program includes the establishment of a Mountain House Housing Trust Fund. The fund would receive per unit and per lot contributions from each housing unit that is constructed, excluding affordable units. Thus, the Housing Trust Fund would be funded by initial fees. Collection of fees would be the only aspect of the Trust fund that would be controlled by the master developer. The collected funds would be administered by a five-member Board of Directors, who would be charged with the responsibility of applying the money to "affordable housing needs in the community." The Board of Directors would consist of the Directors of the County Community Development Department and the County Housing Authority; a member of the Community Services District; and two other members, appointed by the Board of Supervisors, "who have demonstrated expertise and/or commitment to affordable housing as described by the San Joaquin County Affordable Housing Task Force." No specific subsidy programs or land cost "write-down" strategies are proposed in the Draft Master Plan, although background reports prepared by the applicant's consultants suggest that rent subsidies could be offered to Very Low Income households.

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<sup>6</sup> The applicant's definition of "Low Income" households is households with incomes up to \$27,500, which is slightly lower than the Federal definition (up to \$30,600).

<sup>7</sup> The applicant's definition of Moderate Income households is households with incomes between \$27,500 and \$42,500, which is lower than the Federal definition (\$30,600 to \$45,840).

TABLE 4.9-5

**PROPOSED AFFORDABLE HOUSING COSTS AND HOUSING UNITS**  
(In Current Dollars)

<b>Average Annual Household Income</b>	<b>Average Rent/ Housing Cost</b>	<b>Number of Units Proposed</b>
<u>Very Low Income</u> Up to \$17,500 (up to 46 percent of the San Joaquin County median household income) <sup>1</sup>	Up to \$390 rent Up to \$43,000 home sale price	489 R/H units <sup>2</sup> 429 Senior Citizen R/H units <sup>3</sup> <u>214</u> second units <sup>4</sup> 1,132 total units
<u>Low Income</u> Between \$17,500 and \$27,500 (46 to 72 percent of the San Joaquin County median household income) <sup>1</sup>	\$390-\$610 rent \$43,000-\$70,000 home sale price	467 R/H units <sup>5</sup> <u>1,482</u> R/MH units 1,949 total units
<u>Moderate Income</u> Between \$27,500 and \$42,500 (over 72 to 111 percent of the San Joaquin County median household income) <sup>1</sup>	\$610-\$960 rent \$70,000-\$137,000 home sale price	486 R/MH units <u>3,653</u> R/M units 4,139 total units
<u>High Income</u> Over \$42,500 (over 111 percent of the San Joaquin County median household income) <sup>1</sup>	Over \$960 rent Over \$137,000 home sale price	4,579 R/M units <u>4,948</u> R/L and R/VL units 9,527 total units
<b>TOTAL</b>		<b>16,748<sup>6</sup></b>

Sources: The SWA Group, 1994a; BASELINE.

Notes: R/H = High Density Residential (18 units per gross acre)  
R/MH = Medium High Density Residential (12 units per gross acre)  
R/M = Medium Density Residential (7 units per gross acre)  
R/L = Low Density Residential (4.5 units per gross acre)  
R/VL = Very Low Density Residential (1 unit per gross acre)

<sup>1</sup> The applicant's definition of income categories is slightly different from the U.S. Housing and Urban Development Department guidelines, but fall within the HUD range.

<sup>2</sup> This total for High Density units includes 200 units planned in the Town Center. This total may include some senior citizen units.

<sup>3</sup> This total for High Density senior citizen units includes the 429 "extra allowable units" that would be added in the Town Center and in already designated R/H areas.

<sup>4</sup> This total represents one-quarter of the planned second units, which are assumed to be rented out to Very Low Income households.

<sup>5</sup> This total may include some Senior Citizen units.

<sup>6</sup> This total does not include 643 second units which are assumed to be occupied by family members, and not rented out to third parties.

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The Draft Master Plan describes the Mountain House Housing Trust Fund as a non-profit California corporation which will collect affordable housing fees on all new market-rate housing. The fees are set at \$0.48 per square foot of livable area in a residential unit, plus \$0.06 per square foot of lot space. The Mountain House Housing Trust Fund Board of Directors "can use these revenues to supplement or supplant rent subsidies with assistance to affordable housing developers, land purchases, or other programs for lower income households."

Based on projections by the applicant, approximately \$50 million would be generated over 40 years through fee revenues, matching funds, and interest. The average one-time affordable housing fee per property would be about \$1,154.

##### **Affordable Housing Goals**

The Draft Master Plan proposes a Housing Affordability Program, to be monitored annually by the County, that would meet specific affordable housing goals (Table 4.9-6). The goals are a percentage of the total affordable housing requirement by income category to be achieved at about 4,000 unit increments throughout the project's construction. For example, by the time that approximately 8,000 residential units have been completed, the goal of 60 percent of the affordable housing requirement for the Very Low Income category would have been reached.

The approximate number of affordable units that must be reached in each increment and for each income category, based on the applicant's Affordable Housing goal, is calculated in Table 4.9-6. The purpose of the comparison is to quantify the Affordable Housing goals and to ensure that there are enough potential affordable units planned to meet the goals during various stages of project completion.

An adequate number of affordable housing units appear to be planned in the combined High and Medium-High Density and second unit categories to meet the affordable housing goals in the second half of the project (at the 12,000- and 16,000-unit milestones). By the buildout of the project, almost 3,100 affordable units would be required, and over 3,300 affordable units are proposed for construction. However, during Specific Plan I, 1,623 affordable units would be required and only 982 units would be provided. Similarly, at the 8,000-unit milestone, 2,141 affordable housing units would be required to meet the goals, and only 1,846 affordable units are proposed. The affordable housing goals for the various 4,000-unit milestones may be even more difficult to attain if the projected number of affordable second units and senior citizen "extra allowable" units are not constructed as scheduled and leased to Very Low or Low Income families.

Overall, the proposed Affordable Housing Program may rely too heavily on the use of second units and High Density senior citizen units to reach the goals for Very Low Income Households. There are no policies or programs to ensure that the large number of second units would be constructed, that they would be rented to Very Low Income households, or that they would continue to be occupied by Very Low Income households over time. Additionally, there are no policies and programs to ensure that the High Density and Medium-High Density units that are designated for Senior Citizens would be rented and occupied by Very Low and Low Income families over time.

TABLE 4.9-6

## COMPARISON OF AFFORDABLE HOUSING GOALS AND PROPOSED HOUSING BY INCOME CATEGORY

Housing Required and Proposed by Income Category	Approximately 4,000 Units Completed		Approximately 8,000 Units Completed		Approximately 12,000 Units Completed		Approximately 16,000 Units Completed	
	Goal (Units) <sup>1</sup>	Proposed Units	Goal (Units) <sup>1</sup>	Proposed Units (Cumulative)	Goal (Units) <sup>1</sup>	Proposed Units (Cumulative)	Goal (Units) <sup>1</sup>	Proposed Units (Cumulative)
Very Low Income Housing Goal <sup>2</sup>	40% (453)		60% (679)		80% (906)		100% (1,132)	
Proposed High Density Residential <sup>3</sup>		432		632		856		956
Proposed Second Units <sup>3</sup>		54		108		162		214
Proposed High Density Senior Housing <sup>3</sup>		0		0		207		207
Proposed "Extra Allowable" High Density senior units <sup>3</sup>		107		214		321		429
Low Income Housing Goal <sup>4</sup>	60% (1,170)		75% (1,462)		90% (1,754)		100% (1,949)	
Proposed Affordable Medium-High Density Residential <sup>3</sup>		389		892		1,176		1,482
Proposed Medium-High Density Senior Housing <sup>3</sup>		0		0		54		54
Total Goal	(1,623)		(2,141)		(2,660)		(3,081)	
Total Units		982		1,846		2,776		3,342

Source: SWA, 1994a; BASELINE

- <sup>1</sup> The calculation of the units which would meet the affordability goal is based on the "required housing" (taking into account a 5% vacancy factor) for each income category that has been identified by the applicant (see Table 3.10 in the Draft Master Plan).
- <sup>2</sup> Households with annual incomes of up to about 46 percent of San Joaquin County median household income (up to \$17,500 annual income). This equals a monthly rent of up to approximately \$390 or a home price of approximately \$43,000.
- <sup>3</sup> This is the number of units proposed within each density category. These income categories do not conform exactly with the expected cost of the housing in the density ranges, but are a general indication of how densities fit within affordability categories. It is assumed that the affordable second units, the "extra allowable" High Density senior citizen units, and the affordable R/MH would build out proportionately over time.
- <sup>4</sup> Households with annual incomes of about 46 to 72 percent of San Joaquin County median household income (between \$17,500 and \$27,500 annual income). This equals a monthly rent of approximately \$390 to \$610, or a home price of approximately \$43,000 to \$70,000.

### Calculation of Affordable Income Ranges

The amount of affordable housing (Tables 4.9-5 and 4.9-6) that would be required in each income category relied upon the applicant's calculation of the expected income ranges of families that will work and/or reside within the Mountain House community. The applicant's Affordable Housing Program has been developed so that persons who work in Mountain House can potentially afford to rent or buy a home within the community but not to ensure that affordable homes would be available to employed or unemployed persons residing in less affluent parts of San Joaquin County, such as Stockton.

The Affordable Housing Program was developed by taking the income ranges that have been documented for the cities of Pleasanton, Livermore, Tracy, and Manteca and estimating similar income ranges for the Mountain House community. These income ranges were then "adjusted" to set a minimum average household income of \$12,730 for the project, which is the household income for two persons working at the legal minimum wage (\$4.25 per hour). The "adjusted" income categories thus do not reflect the possibility that workers within families may be unemployed, and also do not take into account the possibility that there may be one wage-earner households in the project that will earn the minimum wage.

### Mitigation Measure M4.9-2

*(a) The Affordable Housing Program in the Draft Master Plan should be amended to include policies and an implementation program that ensures qualified Very Low Income and Low Income families can rent or buy the designated affordable housing units. An income test should be applied to all potential tenants and home buyers for the High Density and Medium-High Density units proposed for affordable rents or condominium prices. The Senior Citizen housing units should be subject to the same income tests and restrictions as the other affordable units. **The assumptions for the Affordable Housing Program (Section 3.9.1 of the Draft Master Plan) should be amended to state that only one-quarter of the proposed number of Senior Citizen housing units is assumed to provide Very Low and Low Income housing opportunities.** The income qualifying mechanism could be administered by the Mountain House Affordable Housing Trust Fund, by the County, or by a reputable non-profit housing organization.*

*The Affordable Housing Program should also be amended to include policies and implementation programs to ~~ensure~~ **provide reasonable assurance** that the ~~designated number~~ of affordable housing units remain occupied by qualified Very Low and Low Income tenants or homeowners over time. The income test and verification process outlined above should be applied each time an affordable unit is vacated and re-rented or sold.*

*~~Alternatively, the Affordable Housing Program should be revised so that only one-quarter of the proposed number of Senior Citizen housing units is assumed to provide Very Low and Low Income housing opportunities.~~ **To increase the possibility that an adequate number of affordable housing units would be constructed earlier in the project and would continue to be occupied over time by Very Low and Low Income households, an additional 17 to 22 acres of land should be designated on the Land Use Map for High Density housing (which would create 300-400 units).***

(b) *The Affordable Housing Program goals for each 4,000-unit milestone should be amended so that the number of affordable housing units proposed for the first half of the project corresponds more closely with the proposed goals. The Affordable Housing Program policies and Table 3.12 in the Draft Master Plan should be revised to indicate the exact number of affordable units by income category in each 4,000-unit development increment, which would serve as the adopted Affordable Housing goals for the program.*

(c) *To clarify the assumed role of second units, the Draft Master Plan should be amended by adding a paragraph in the "Assumptions" section of the Jobs/Housing and Affordable Housing discussion. The added paragraph should state the assumption that one-quarter of the 857 planned second units will be affordable to low income households.*

(d) *The Draft Master Plan should be amended with an Implementation that requires that the Design Manual include Second Unit land use, zoning and design regulations (prepared prior to the first Development Permit). The Second Unit regulations should specify development standards such as maximum square footage and lot coverage, required setbacks from the existing primary structure and structures on adjacent lots, maximum height, and the maximum number of units that can be located on any given block within a neighborhood. Table 4.1 (Lot and Structure Standards) in the Draft Master Plan should be revised to include the Second Unit standards, or a reference to where the detailed design standards are located.*

(e) *The Mountain House Affordable Housing and Housing Trust Fund (MHHTF) programs in the Draft Master Plan ~~should provide additional detail. The Affordable Housing Program should not rely solely on rent subsidies. The Housing Trust Fund description in the Draft Master Plan Appendix~~ should include another example of how the MHHTF could be used to ensure the provision of affordable housing. It is recommended that the example provided ~~describe~~ **outline** the possible involvement of the Trust monies in constructing High Density, Medium-High Density, and/or Second Units, **and including** marketing the units at affordable prices. **To illustrate**, the Affordable Housing Program ~~should consider~~ **could include** a plan to construct the High Density housing, and then dedicate and sell the units to an established non-profit housing corporation which can then manage the units. In this way, the independent non-profit corporation can take advantage of Federal tax incentives, and leverage additional funds from other housing programs. The Draft Master Plan should be amended to include policies ~~establishing the relationship between Trust programs,~~ **concerning** the construction, ownership, **and management, and maintenance** of affordable units **using Trust monies, and provide** a projected phasing schedule for the marketing of affordable units and collection of Trust monies.*

(f) *Implementations k) and l) under Objective 2 of Jobs/Housing and Affordable Housing (Appendix C) should be modified as follows:*

"k) *Affordable Housing Reviews. The Affordable Housing Program shall be monitored by the Review Authority as described in the monitoring and enforcement section below. In addition, the San Joaquin County Board of Supervisors shall hold a Public Hearing to review the progress of the Affordable Housing Program at the following specified times:*

- *Prior to the approval of any Specific Plan, excluding the first Specific Plan or Specific Plan Amendment; -*
- *~~When 4,000, 8,000, 12,000, and 16,000 residential units have been completed~~ **Every three years after residential construction begins, but no sooner than after 2,000 residential units have been constructed, provided a Public Hearing on the progress of the Affordable Housing Program has not already been conducted in the previous calendar year; or -***
- *At any other times determined appropriate by the Board of Supervisors (e.g., **scheduling of an Affordable Housing Review by the Board to evaluate the circumstances for nonachievement of affordability indices**).*

"l) *Enforcement. To determine whether the Community is meeting its Affordable Housing goals, the specific minimum affordability indices presented in Table 3.12 will be tracked. The San Joaquin County Community Development ~~Director~~ **Department** shall prepare a written report and findings and determine through its monitoring of the Affordable Housing Program that the specified affordability indices have been achieved ~~beginning after the first three years of construction~~. Annual monitoring shall include an inventory of built and occupied residential units, broken down by sales price or rental price range. In the event that the minimum affordable housing indices have not been achieved, **the Board of Supervisors shall decide whether to schedule public hearings** ~~shall be scheduled~~ before the County Planning Commission and Board of Supervisors to evaluate the circumstances for nonachievement, and to develop an appropriate course of action. The County Planning Commission shall make recommendations to the Board. Both the Planning Commission and the Board of Supervisors shall consider the following issues:*

- *The portion of new High Density, Medium High Density, and Second Units that are being offered for rent or sale at affordable levels and have been occupied by Very Low Income and Low Income families;*
- *The amount of Housing Trust funds that has been collected and the Housing Trust programs that have been established and funded;*
- *The involvement of other public or private housing program monies that have been leveraged with Trust funds, whether any other specific programs will contribute to the Affordable Housing Program within the next two years, and the effects of the programs to ensure affordable housing opportunities;*
- *The types of the jobs created to date (e.g., wage scale or full or part-time) and what portion of the new jobs are "basic" (non-local); and*
- *The relationship of the Affordable Housing Program to local, State, and national economic or market trends and financing availability.*

*"Following consideration of all public testimony, written materials, and recommendations of County staff and the Planning Commission, the Board shall ~~take one or both~~ **decide on a course of action to address the affordable housing issue. Although the Board may***

**take whatever action it deems appropriate to further affordable housing goals, the Board shall focus on taking one or more of the following actions:**

- (1) Find that no action is necessary and direct County staff to continue processing applications for the construction of additional residential units in the project without modification to the Affordable Housing Program or process; or**
- (+)(2) Direct County staff to continue processing applications for the construction of additional residential units in the project according to revised Affordable Housing targets that will ensure that the Affordable Housing goals will be substantially met in the future; and/or**
- (-)(3) Recommend that certain actions be taken by the master developer, other developers, and/or by the MHHTF Board to increase the number and/or type of affordable units; and/or**
- (4) Direct County Staff to prepare a study for Board consideration and action that assesses the impacts of certain specified amendments to the Master Plan to achieve affordable housing goals (e.g., revising residential densities, adjusting the affordable housing fee, restructuring the Affordable Housing Program); and/or**
- (5) Approve future Specific Plans only if it can be demonstrated that the community will reach affordable housing targets.**

**"Any proposed action by the Board that would constrain residential development shall require the preparation of a study for Board consideration and action that assesses the impacts on affected parties (e.g., the CSD, CFDs, private developers, bond shareholders, the County). This study shall also consider potential undesirable consequences arising from such Board action (e.g., interruption in the flow of affordable housing fees into the MHHTF possibly adversely affecting new affordable housing development)."**

**(g) Guideline e) under Monitoring and Enforcement should be moved to become ~~an~~ two Implementations under Objective 2, Jobs/Housing and Affordable Housing (Appendix C) and should be revised as follows:**

**" • Redesignation of higher density residential land (e.g., multi-family R/H) to lower density land (e.g., single family R/M) uses shall be approved only if the County determines that the proposed redesignation or rezoning will not have a negative impact on the Mountain House Jobs/Housing and Affordable Housing programs.**

**"Subject to the provisions of Section 3.3: Land Use Regulations and Permitted Uses, residential densities in each land use category shall not fall below a specified minimum number of dwelling units per acre by neighborhood as indicated in Table 3.3: Maximum and Minimum Residential Units by Neighborhood."**



##### **SPECIFIC PLAN I**

Specific Plan I includes an absorption schedule that assumes all of the planned 4,176 housing units would build out within the first seven years of the project. The residential buildout schedule assumes that an average of 600 housing units would be "absorbed" (sold) each year.<sup>8</sup> While Specific Plan I includes approximately one-quarter of all planned housing for the new community, Specific Plan I includes almost one-half of all job-generating lands that are designated within the new community for development. By the time that all of the housing in Specific Plan I is constructed, about one-half of all of the industrial/business parks and shopping centers within Specific Plan I are assumed to be developed. The remaining jobs are expected to be created in the years after the 4,176 housing units have been constructed and occupied.

Under the Specific Plan I absorption schedule, by the end of the seventh year, almost 4,400 jobs are expected to be created, including 2,100 "population-serving" (primarily retail and service jobs) and 2,200 "basic" jobs (such as manufacturing or office jobs from firms that locate to the project site from elsewhere in the region or State). By the end of the tenth year, approximately 7,300 jobs are projected. The Specific Plan I absorption schedule assumes a three-year lag between housing construction and job creation.

Specific Plan I includes Jobs/Housing and Affordable Housing goals, similar to the goals established for the project in the Draft Master Plan. The Jobs/Housing and Affordable Housing goals are set for each of the first seven years of development under the Specific Plan.

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<sup>8</sup> Over all phases, the project anticipates an average absorption rate of 800 units per year, but the annual rates would be lower in the early years of the project and higher than 800 units in the later years.

**Impact S4.9-1 (C,O,M)**

**Specific Plan I may not attain an adequate balance between jobs and housing, especially during the initial phases of the project. Job creation on the site, particularly the creation of non-local-serving jobs, may substantially lag housing construction due to lack of available industrial sites that are serviced by available infrastructure, competition, and other market forces.**

Specific Plan I may not attain an adequate balance between jobs and housing, especially during the initial years. Although Specific Plan I assumes a three-year lag between housing and job development, the aggressive commercial and industrial land use absorption schedule provided by the applicant may not be achieved. Job creation on the site, especially the creation of well-paying, full time "basic" industrial and commercial jobs may substantially lag housing construction due to the infrastructure phasing plans and lack of available sites with services during the initial phases of the project.

Specific Plan I contains phasing policies that indicate the extension of long lead-time infrastructure and public services will be committed to the Old River Industrial Park, but not to other job generating land uses, such as the Mountain House Business Park near the Patterson Pass Road/I-205 interchange. Specific Plan I specifically excludes the Mountain House Business Park from the initial Community Services District boundaries, implying that the area could not be developed in the initial years of the project. Extension of services to the business park frontage along I-205 would be precluded until a major employer commits to funding the extension of water, sewer, and other lines and the property is annexed into the Community Services District.

The Jobs/Housing goals set for Specific Plan I assume a minimum jobs/housing ratio goal of 0.60 by the end of the fourth year of construction, with a "best case" ratio of 0.82 by that time. Assuming that housing construction occurs according to the applicant's "high growth" absorption schedule, a total of 927 local jobs and 538 regional "basic" jobs would need to be created to reach the "minimum" ratio goal. The absorption schedule included in Specific Plan I projects creation of more than 1,000 regional jobs by the end of the fourth year.

By the end of the seventh year of construction, a total of 2,134 local jobs and 1,875 regional jobs would be required to meet the "minimum" jobs/housing ratio of 0.70. The Specific Plan I absorption schedule projects more than enough jobs to reach this ratio. However, the ambitious absorption schedule may be difficult to attain if the Mountain House Business Park were not available for development, or were not annexed into the Community Services District until the later years of Specific Plan I.

**Mitigation Measure S4.9-1 (O,M)**

*(a) To maximize the availability of industrial sites for job creation in the early years of Specific Plan I, the Draft Specific Plan I boundaries should be ~~expanded~~ amended to incorporate lands ~~the Old River Industrial Park expansion areas to the west and south of the Specific Plan I Old River Industrial Park~~ that are not subject to Williamson Act Contracts (see also Mitigation Measure S4.1-1(a)). ~~These lands are already planned for addition to the Old River Industrial Park in later specific plans.~~ Alternatively, or*

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*in addition, the Draft Specific Plan I should be amended to include a policy that states the County and the CSD will support applications to expand the Specific Plan I boundaries to maximize job creation efforts. (o)*

*(b) Policies and implementations that specifically encourage the extension of infrastructure to the Mountain House Business Park in the early years of development should be added to Specific Plan I. ~~Specific Plan I should be amended to discuss the anticipated phasing schedule for extending services to the business park site. Figure 16.1 and the accompanying discussion in the Draft Specific Plan I should be amended to include the Mountain House Business Park in the initial Community Services District boundaries. (M)~~*

#### **Impact S4.9-2 (C,O,M)**

**Specific Plan I may not have a sufficient supply of housing that is affordable to Very Low and Low Income workers employed in the community.**

The Affordable Housing Program for Specific Plan I proposes the construction of 432 High Density units, approximately 54 second units, 389 affordable Medium Density units, and about 107 "extra allowable" Senior Citizen units, for a total of 982 affordable housing units. However, to reach the housing affordability goal of 40 percent for Very Low Income households and 60 percent for Low Income households at Specific Plan I buildout, a combined total of 1,622 units would be required (Table 4.9-7). Thus, an additional ~~490~~ **640** affordable units would need to be provided in other density ranges (e.g., in the Medium-High Density areas). Additionally, if the 54 second units and the 107 "extra allowable" High Density senior citizen units were not built as planned, or if they were not rented to Very Low or Low Income families, the Affordable Housing goals could be difficult or impossible to attain.

#### **Mitigation Measure S4.9-2 (C,O,M)**

*(a) To increase the number of affordable housing opportunities in Specific Plan I and attain the Affordable Housing goals, four to five acres of land should be redesignated from Low and Medium Density Residential to High Density housing to create 72 to 90 additional affordable units (see also Mitigation Measure M4.9-2(a)). Alternatively, or in addition to the redesignation of lands for more High Density housing, the Affordable Housing goals for Specific Plan I should be lowered to more accurately reflect the portion of total Very Low and Low Income housing that is expected to be completed during Specific Plan I. The Affordable Housing Program should be amended to comply with the other provisions of Mitigation Measure M4.9-2(a), e.g., establish income controls on the affordable housing units or assume that only one-quarter of the Senior Housing units will be available for Very Low and Low Income households. Alternatively, or in addition to the above measures, the number of High Density Residential units in each project or building could be increased if affordable housing goals are not being achieved.*

*(b) If annual monitoring of the Affordable Housing Program after year four of Specific Plan I indicates that the number of affordable units marketed and occupied in the High Density, Second Units, and/or Medium High Density categories has not reached a level that indicates the Affordable Housing indices will be achieved by the end of the Specific Plan, the County*

TABLE 4.9-7

**COMPARISON OF AFFORDABLE HOUSING GOALS AND PROPOSED HOUSING BY INCOME CATEGORY**  
**Specific Plan I**

Housing Required and Proposed by Income Category	YEAR 2 Approximately 800 Units Completed		YEAR 4 Approximately 1,800 Units Completed		YEAR 5 Approximately 2,500 Units Completed		YEAR 7 Approximately 4,200 Units Completed	
	Goal (Units) <sup>1</sup>	Proposed Units	Goal (Units) <sup>1</sup>	Proposed Units (Cumulative)	Goal (Units) <sup>1</sup>	Proposed Units (Cumulative)	Goal (Units) <sup>1</sup>	Proposed Units (Cumulative)
Very Low Income Housing Goal <sup>2</sup>	20% (226)		25% (283)		30% (340)		40% (453)	
Proposed High Density Residential <sup>3</sup>		132		132		282		432
Proposed Second Units <sup>3</sup>		15		30		37		54
Proposed High Density Senior Housing <sup>3</sup>		0		0		0		0
Proposed "Extra Allowable" High Density senior units <sup>3</sup>		30		60		75		107
Low Income Housing Goal <sup>4</sup>	45% (877)		50% (975)		50% (975)		60% (1,169)	
Proposed Affordable Medium High Density Residential <sup>3</sup>		110		221		276		389
Proposed Medium-High Density Senior Housing <sup>3</sup>		0		0		0		0
Total Goal	(1,103)		(1,258)		(1,315)		(1,622)	
Total Units		287		443		670		982

Source: SWA, 1994a; BASELINE

- <sup>1</sup> The calculation of the units which would meet the affordability goal is based on the "required housing" (taking into account a 5% vacancy factor) for each income category that has been identified by the applicant (see Table 3.10 in the Draft Master Plan).
- <sup>2</sup> Households with annual incomes of up to about 46 percent of San Joaquin County median household income (up to \$17,500 annual income). This equals a monthly rent of up to approximately \$390 or a home price of approximately \$43,000.
- <sup>3</sup> This is the number of units proposed within each density category. These income categories do not conform exactly with the expected cost of the housing in the density ranges, but are a general indication of how densities fit within affordability categories. It is assumed that the affordable second units, the "extra allowable" High Density senior citizen units, and the affordable R/MH units would build out proportionately over time.
- <sup>4</sup> Households with annual incomes of about 46 to 72 percent of San Joaquin County median household income (between \$17,500 and \$27,500 annual income). This equals a monthly rent of approximately \$390 to \$610, or a home price of approximately \$43,000 to \$70,000.

4.9 POPULATION, HOUSING, AND EMPLOYMENT

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*shall hold hearings, receive testimony, make findings, and take action as indicated in Mitigation Measure M4.9-2(f).*

## 4.10 PUBLIC HEALTH AND SAFETY

### SETTING

The current and past land uses on the site are primarily agricultural. The surrounding land uses are also primarily agricultural with some scattered rural residences. Several potential sources of public health and environmental hazards are associated with current and past land uses at the project site (Figure 3.7). These sources include:

- fuel tank usage;
- historic and recent pesticide and/or herbicide use, storage, and disposal;
- potential salt accumulation from agricultural land uses;
- discarded drilling mud from abandoned natural gas wells;
- spills and leakage from existing and abandoned fuel pipelines;
- possible presence of polychlorinated biphenyls (PCBs) in power transformers;
- electromagnetic fields generated by electrical overhead transmission lines;
- potential asbestos-containing materials present in existing buildings; and
- on-site canals and irrigation ditches that are not adequately fenced.

Seven aboveground fuel storage tanks have been identified within the project site; evidence of leakage or spills has been observed in the vicinity of three of the tanks (Earth Systems Environmental, 1990). Fuel releases from these tanks could have resulted in impacts to the subsurface soil and groundwater quality.

The primary types of crops grown on and near the project site include alfalfa, sugar beets, and corn (Earth Systems Environmental, 1990; The SWA Group, 1994a). Pesticides and/or herbicides are currently and have been used on the project site. The soils, shallow groundwater, and surface waterways at the site might be affected by the use, storage, and disposal of these chemicals, as well as by aerial spraying of adjacent fields.

Irrigation practices may have resulted in a buildup of salt concentration in surface and groundwater. Calcium, sodium, and boron salts have been identified in water wells within the project site (Duran, 1991). Nitrates may have accumulated in soils from fertilizer use and from livestock wastes; two dairies operate in the east-central portion of the project site. Water wells used for domestic or irrigation purposes and irrigation canals and ditches may provide conduits for contaminant migration to the groundwater.

Four exploratory natural gas wells were drilled and subsequently abandoned at the project site. Drilling muds, if buried on-site, could contain high concentrations of heavy metals and oil-based compounds, potentially impacting soil and groundwater quality (Earth Systems Environmental, 1990).

Three existing natural gas pipelines traverse the project site. Natural gas transmission lines transport flammable and explosive material under pressure. Escaping gases due to rupture, punctures, or leaks could accumulate in enclosed spaces; a source of ignition could cause an explosion. One fuel pipeline formerly traversed the project but was removed. Leaks or spills associated with existing and former fuel pipelines could have affected subsurface soil and groundwater quality.

Old transformers that use mineral oil as a heat-moderating fluid are present within the project site. These transformers may contain PCBs, a class of chemicals that tend to persist in the environment and have been found to cause cancer in test animals.

Two electrical overhead transmission lines traverse the project site, the Weber-Herdlyn 60-kilovolt (kV) transmission line and Rio Oso-Tesla 230-kV transmission line (Figure 3.7). The Weber-Herdlyn 60-kV line is being proposed for relocation along Byron Road. A 500-kV Rancho Seco-Tesla overhead transmission line has been proposed adjacent to the Rio Oso-Tesla line. PG&E has recently deferred the Rancho Seco-Tesla project. The centerline of a 1,000-foot wide alignment of the 230-kV Wesley/Tracy Transmission Line Project is located along the southwestern border of the project site (Figure 3.7). Objects near transmission lines that are not properly grounded (e.g., a fence) could develop an electric charge, causing a shock upon contact. Some studies of electromagnetic fields (EMF), such as those generated by transmission lines, suggest that EMF may have adverse human health impacts; however, there is no scientific consensus on the actual health effects of EMF exposure (Pennino, 1993). The California Department of Education has developed guidelines for setback of schools from overhead transmission lines to minimize possible EMF effects to school children.

Asbestos was a common component of building materials in the past. Several of the existing farm structures may include asbestos-containing materials. If any buildings currently at the project site were to be demolished or renovated, friable asbestos might be exposed, creating a human health risk.

Several on-site agricultural canals and ditches, used to convey water from the Byron-Bethany Irrigation District, as well as the Delta-Mendota Canal, could pose safety hazards to residents and animals, if not properly fenced or screened.

### **IMPACTS AND MITIGATION MEASURES**

Impacts to public health and safety are considered significant if the proposed project construction directly or indirectly were to create a potential public hazard, or involve the use, production, or disposal of materials that could pose a hazard to the public or environment.

## **MASTER PLAN**

In recognition of existing site hazards that could affect the public health and the environment, the Draft Master Plan contains policies that would require detailed programs and studies to be prepared prior to submittal of the first Development Permit for affected areas. Specific programs/investigations to be undertaken include:

- Detailed mapping of underground fuel pipelines prior to development within 500 feet of the pipelines.
- Site assessments, incrementally of the entire site, to assess the presence of hazardous substances/wastes from historic pesticide/herbicide uses, effects to future residences within 1,000 feet of the on-site dairies, and other past and current land uses that could have been a source of release.
- Mapping of abandoned gas wells.
- Assessment of the public safety impacts of open canals in areas of development.
- Emergency Preparedness Plan.

The proposed project would include the addition of commercial and industrial businesses that would increase the volume of hazardous materials transported, stored, and used on-site. Numerous local, State, and Federal statutes and regulations pertain to the proper transport, use, storage, and disposal of hazardous materials and wastes. Each business would have specific permit and reporting requirements pertaining to the unique use, storage, handling, and disposal activities associated with that business. These requirements would be in place during operation of the proposed project.

### **Impact M4.10-1**

**Public and environmental health may be affected by potential historic pesticide and/or herbicide residues in the environment, as well as by future pesticide and/or herbicide applications off-site.**

Agricultural chemicals have been used on and adjacent to the project site. Chemical residues may build up in the soil and groundwater if the chemicals used were persistent in the environment, had frequent rates of application, and tilling of the soil was not performed. Table 4.10-1 lists those agricultural chemicals identified by the San Joaquin County Agricultural Commissioner's Office as being used currently or in the past in the vicinity of the project. The majority of the chemicals used on the crops grown at the project site are not usually persistent in the environment with the exception of the organochlorine compounds (Hudson, 1993). Most of the herbicides are applied on an infrequent basis, with an average rate varying from about 1.5 times per year to every other year. The cultivation of fields on an annual or more frequent basis tends to accelerate the rate of natural degradation of agricultural chemicals (Barnes, 1993). Alfalfa crops have more frequent rates of chemical application than other types of crops grown, and the fields where alfalfa is grown are not cultivated on an annual basis. This suggests that there is a higher probability of finding chemical residues in the soil in fields where alfalfa has grown than other types of crops identified at the site.



4.10 PUBLIC HEALTH AND SAFETY

TABLE 4.10-1

AGRICULTURAL CHEMICALS CURRENTLY OR PREVIOUSLY USED ON THE PROJECT SITE AND ADJOINING LANDS

Agricultural Chemicals (Brand Names)	Compound Type	Method of Application	Crops
Pen Cap (P) <sup>1,2</sup>	Orthophosphorus	Aerial	Alfalfa
Lasso (H) <sup>2,3</sup>	Nitrogen	Directly into soil	Beans, corn
Treflan (H) <sup>4,5</sup>	Nitrogen	Directly into soil	Beans, alfalfa
Velpar (H) <sup>4,5</sup>	Nitrogen	Directly into soil	Sugar beets
Lorsban (P) <sup>4,6</sup>	Orthophosphorus	Aerial	Alfalfa
Comite (P) <sup>2</sup>	Sulfite	Aerial/ground	Corn
MCPA (H) <sup>4</sup>	Carboxylic acid	Aerial	Grain
Banvel (H) <sup>2,7</sup>	Organochlorine	Aerial	Grain
Sulfur Dust (P) <sup>4</sup>	Inorganic	Aerial/ground	Sugar beets
Disyston (P) <sup>8</sup>	Orthophosphorus	Aerial	Alfalfa, beans, grain
Orthene (P) <sup>8</sup>	Orthophosphorus/nitrogen	Aerial/ground	Beans
2,4-D (H) <sup>4</sup>	Organochlorine	Aerial/ground	Wheat, oats
Anthraquinone (BR) <sup>4</sup>	Quinone	Aerial/ground	Corn
Toxaphene (P) <sup>2</sup>	Organochlorine	Aerial/ground	Wheat
Systox (H) <sup>4</sup>	Orthophosphate	Aerial/ground	Grains

Sources: BASELINE, 1992a; Hudson, 1993.

Notes: P = Pesticide  
H = Herbicide  
BR = Bird Repellent (seeds)

- <sup>1</sup> Also known as methyl parathion.
- <sup>2</sup> Used in past; not used currently.
- <sup>3</sup> Also known as Alocchlor.
- <sup>4</sup> Used in past and currently.
- <sup>5</sup> Used in early spring.
- <sup>6</sup> Also known as Dursban.
- <sup>7</sup> Also known as Dicamba.
- <sup>8</sup> Used in past, probably not used currently.

The actual rate of degradation of agricultural chemicals depends on many variables, including soil type, soil fertility, climate, chemical type and initial chemical concentration. Both field and laboratory tests have been conducted to evaluate half-life<sup>1</sup> data for many agricultural chemicals. Half-life data are not available for all chemicals currently and formerly used on-site. However, the available data indicate that most organophosphorus compounds have half-lives of less than ten days to two months; organochlorine compounds tend to have a broader range of degradation rates, with half-lives ranging from one day to 14 years; half-life data are not readily available for the nitrogen compounds used at the site. The chemicals currently or formerly used at the site, for which data are available, which potentially have the greatest half-lives include Toxaphene (2 months to 14 years), Banvel (4 to 555 days), and 2,4-D (less than one day to several weeks). Based on the available data, and the assumption that agricultural chemicals used on crops are applied at relatively low

<sup>1</sup> A half-life is the period of time it takes a chemical to degrade to one-half its original concentration.

concentrations, and the typical site conditions, it is likely that most of the agricultural chemicals used at the site would have decayed to insignificant levels in six months or less.

For crops where organochlorine compounds are applied, the period for compounds to decay to insignificant levels may be longer, depending on the chemical and the concentration used and the type of crop cultivation. Therefore, for sites where organophosphorus compounds are used, use of the compound should cease several months prior to initiating construction. For sites where organochlorine compounds are used, use of the compound should cease several months to two years prior to construction, depending on the actual compound used and the applied concentration. Nitrogen compound use should also cease according to a similar schedule to organochlorine compounds because half-life data were not readily available to indicate otherwise.

Agricultural chemicals used at the site are applied either by ground or aerial spraying. Aerial spraying is usually performed early in the morning by either planes or helicopters (Hudson, 1993). In the future, agricultural chemicals sprayed on adjacent fields may drift onto the project site, potentially impacting public and environmental health. If spraying were performed by helicopter over cultivated fields, the dust generated may cause respiratory irritation.

If residual organic compounds were present in the near surface soils, future residents could be exposed to the chemicals in areas not covered by structures or paving (e.g., back yards).<sup>2</sup> This issue is addressed in more detail in Land Use and Agricultural Issues, Section 4.1.

The Draft Master Plan contains one Policy and one Implementation under Objective 2 in Potential Site Hazards (Appendix C) to mitigate public and environmental health impacts associated with pesticide and/or herbicide residues in the environment.

#### **Mitigation Measure M4.10-1**

*(a) The following Implementation should be included under Objective 2 in Potential Site Hazards (Appendix C):*

*"b) In anticipation of the development of specific areas, pesticide and/or herbicide applications shall be reduced or eliminated six months prior to Development Permit submittal."*

*(b) The following Implementation under Objective 2 in Potential Site Hazards (Appendix C) should be added:*

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<sup>2</sup> The applicant collected a number of on-site randomly located, near surface soil samples to preliminarily assess the likelihood of near surface soils containing pesticide residues. The soils samples were analyzed by a California EPA-certified laboratory for organochlorine pesticides. None of the samples contained concentrations of pesticides above the levels of detection.

#### 4.10 PUBLIC HEALTH AND SAFETY

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"c) Aerial spraying shall be restricted within 500 feet of the nearest dwelling along the western site boundary."

(c) Implementation b) under Objective 6 in Potential Site Hazards (Appendix C) should be revised as follows:

"b) Site Searches. Prior to the submittal of any Development Permit for areas to be developed, the property owner shall submit a Site Assessment prepared in accordance with ASTM standards to assess the presence of any fuel. . ."

#### **Impact M4.10-2**

**Potential health impacts may result from public exposure to PCBs associated with transformers or electromagnetic fields associated with overhead electrical lines.**

Older electrical transformers on-site may contain PCBs, which are a potential health and environmental hazard. A release of PCBs could occur from damage to transformers from weather, vandalism, equipment failure, or during maintenance activities.

Incidents of childhood leukemia and adult acute and chronic myeloid leukemia have been correlated to EMF exposure (Feychting and Ahlbom, 1992; Floderus, et al., 1992); however, there is no scientific consensus on the actual health effects of EMF exposure. Induction effects from proximity to transmission lines is primarily a nuisance, with the exception of interference with cardiac pacemakers.

The Draft Master Plan contains Policies and Implementations under Objective 2 in Electric and Magnetic Fields (Appendix C) that would serve to mitigate potential impacts associated with EMF. These include establishment of minimum setback distances for residences (25 feet) and non-residential buildings (10 feet) from transmission line easements and annual compilation of information pertaining to EMF exposure.

#### **Mitigation Measure M4.10-2**

*The following measures are recommended to be added as Implementations under Objective 2 in Electric and Magnetic Fields (Appendix C):*

"d) Prior to development permit submittal for areas containing electrical transformers, the developer shall request that PG&E investigate whether existing electrical transformers on the site contain PCBs and whether there are any records of spills from such equipment. If PCB-containing equipment (50 to 500 parts per million PCBs in the oil) or PCB equipment (over 500 parts per million) were identified, this equipment shall be replaced with non-PCB containing equipment prior to construction. Any identified spill areas shall be evaluated for cleanup. ~~The developer will be responsible for the costs of testing and replacing PCB-containing transformers, but would be reimbursed by PG&E if the testing indicated exceedance of the concentration criteria.~~

- "e) ~~The developer shall request information from PG&E on the calculated strengths of the electric and magnetic fields generated by the electric transmission lines that traverse the site. This information shall be compiled prior to construction and shall be used as part of the public information packet on EMF exposure; the data package shall be updated annually. The~~ An information packet shall be prepared by the developer; the packet shall include a summary of major studies regarding EMF effects and a list of reference studies, with copies available to residents upon request. The information packet shall be updated annually.*
- "f) Any metal structures or objects located within and adjacent to transmission line easements shall be grounded to avoid nuisance induction effects such as shocks (experienced upon initial contact)."*

### **Impact M4.10-3**

**Asbestos, if present in existing farm structures, could cause adverse health impacts to workers during renovation and/or demolition.**

Asbestos may be present in building materials in existing on-site structures. Demolition or renovation of structures that have asbestos-containing materials may adversely affect the health of workers through inhalation of airborne asbestos particles.

The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) has adopted regulations and policies to implement asbestos demolition and renovation requirements developed by EPA in the National Emission Standards of Hazardous Air Pollutants (NESHAP) regulations. Facilities subject to regulation include all structures, buildings, and equipment, except single family dwellings and apartments with fewer than four units. However, single family dwellings and apartments are also subject to regulation if the zoning of the parcel is other than residential, or the building had been used for or is being removed for a commercial or public use, or is being used as a training burn exercise.

After the SJVUAPCD has received a demolition notification and is satisfied that NESHAP has been complied with, the SJVUAPCD would issue a demolition release form. The release form would be submitted with a demolition permit application to the County Community Development Department as proof of NESHAP compliance.

### **Mitigation Measure M4.10-3**

*The following are recommended to be added as Objective 7 to the Draft Master Plan under Potential Site Hazards (Appendix C):*

*"Objective:*

*"To protect the public from exposure to asbestos-containing materials.*

#### 4.10 PUBLIC HEALTH AND SAFETY

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*"Policy:*

*"Demolition or renovation of structures that were built prior to the 1970s or are suspected to incorporate asbestos-containing materials shall be surveyed and abated as required by State and County guidelines and regulations.*

*"Implementation:*

*"a) Structures that would be removed or renovated as part of the project shall be screened or surveyed for the presence of asbestos-containing materials. Removal of structures shall only occur after obtaining a demolition release form from SJVUAPCD and a demolition permit approved by the Planning Division of the Community Development and Environmental Health Department. If asbestos were present, renovation and/or demolition shall be undertaken only by licensed asbestos abatement contractors trained in proper asbestos removal and disposal procedures."*

*"b) A demolition permit, to be approved by the County Community Development Department and the Environmental Health Department, shall be required prior to all proposed building demolition."*

#### **Impact M4.10-4**

**Materials disposed of at the small household landfill on the site may have affected soil and groundwater quality.**

It is unknown whether hazardous materials were disposed of in the household landfill located in the center of the site (Figure 3.7) (Earth Systems Environmental, 1990). If hazardous materials were present, they could migrate into the underlying groundwater, possibly affecting groundwater resources, or affect the public during excavation.

#### **Mitigation Measure M4.10-4**

*The following is recommended to be added as an Implementation under Objective 6 in Potential Site Hazards (Appendix C):*

*"e d) It must be demonstrated that disposed materials currently in the on-site landfill do not constitute a health or environmental hazard. Such demonstration shall be achieved through removal of disposed material in conjunction with soil sampling and groundwater sampling prior to construction in and within 500 feet of the affected area(s) to ensure minimum exposure to nearby residents and provide access for possible remediation activities, if needed."*

*Alternatively, a health risk assessment could be performed to determine whether an engineered cap would effectively mitigate environmental and public health impacts associated with the landfill.*

**Impact M4.10-5**

Open water bodies within the project site could provide active breeding sites for mosquitoes, potentially causing an environmental nuisance condition and disease transmission.

The project site is located on the margin of the Sacramento-San Joaquin Delta, a region of extensive waterways. The project site, through the creation of detention basins and maintenance of wetland areas, could contribute to the proliferation of pests and transient vector mosquito breeding sites. The mosquitoes could present a nuisance condition or health hazard if not properly controlled.

The Draft Master Plan provides mosquito abatement measures for potential breeding areas within the Mountain House Creek corridor, including water level control systems, bank design, and shoreline configurations, draining areas during mosquito breeding periods (June-October), maintenance of aquatic plants, stocking insectivorous fish, and promoting biological controls (Appendix 6-A).

**Mitigation Measure M4.10-5**

*The following Implementation should be added under Objective 1 in Mosquito Abatement (Appendix C):*

- "a) ~~As part of the Flood Control/Storm Drainage Plan, specific plans shall include an implementation schedule and maintenance requirements for mosquito abatement for all wetlands and open bodies of water within the specific plan area. Documentation of approval of proposed implementation and maintenance schedules by San Joaquin County Mosquito Abatement District for mosquito abatement shall be included in specific plans. The Flood Control/Storm Drainage Plans shall include general criteria and standards for implementation schedules and maintenance requirements for all wetlands or open bodies of water within the specific plan area. Implementation and maintenance schedules shall be approved by the Mosquito Abatement District prior to the construction of the improvements and shall include Mosquito Abatement operations to be assumed by the District.~~*

*The following Implementation should be added to the Mosquito Abatement Program (Appendix 6-A of the Draft Master Plan):*

- "m) ~~Implementation and Maintenance Schedules. Specific plans shall include a schedule for implementing and maintaining mosquito abatement procedures for all wetlands and open bodies of water. The schedules shall be reviewed and approved by San Joaquin County Mosquito Abatement District. Construction plans for any detention basins and any plans for wetland enhancement/maintenance shall include implementation and maintenance schedules. Implementation and maintenance plans shall be developed in consultation with the Mosquito Abatement District.~~*

**Impact M4.10-6**

**The development of the project may increase the potential for public exposure to explosives, fire, or the release of materials during railway accidents on the railway line crossing the northern portion of the project site.**

The proposed project would include residential, commercial, and industrial land uses adjacent to the Southern Pacific Transportation Company's railroad track traversing the northern portion of the site parallel to Byron Road. Fewer than ten freight trains per day travel through the site at speeds of about 40 miles per hour. The frequency and travel speed of trains may be increased if commuter rail service were added in the future as planned. Trains may transport hazardous materials, which,

in the event of an accident, could cause an explosion, fire, or release of hazardous materials. In the event of a release of hazardous gas, vapor, or liquids, air and water quality could be affected. There would be a greater potential for accidents to occur at the at-grade railroad crossings with the increase in vehicle traffic that would accompany project development. Any of these incidents could affect people and property in the vicinity of the tracks.

#### **Mitigation Measure M4.10-6**

(a) *Policy a) under Objective 1 in Emergency Preparedness should be modified as follows:*

*"a) Safety and protection services shall be provided to the community in the event of fire and natural disasters (including flooding and earthquakes), and emergencies resulting from accidents, including emergencies involving releases of hazardous materials."*

(b) *Implementation b) under Objective 1 in Emergency Preparedness should be modified as follows:*

*"b) Natural Disaster Response. Response shall be by Fire District staff with backup by OES staff. Earthquake preparedness and flood response training shall be an integral part of the Incident Action Plan."*

(c) *The following should be added to Emergency Preparedness (Appendix C):*

*"Objective:*

*"To be prepared to respond to emergencies, including those involving releases of hazardous materials, associated with freight transport along railroads.*

*"Policy: Emergency response shall be provided for the community for the protection of the public.*

*"Implementation:*

*"a) Specific plans shall establish buffer zones between structures proposed in areas adjacent to railroads and the track right-of-way to reduce potential public safety impacts from railway accidents. The specific plan for Neighborhood J shall include safety criteria for determining buffer zone widths north of Byron Road where residential uses are proposed.*

*"b) Specific plans shall contain requirements for businesses and public institutions located adjacent to the railway buffer zones to maintain emergency contingency and evacuation plans in the event of a railway accident.*

*"c) The ~~Emergency Preparedness Incident Action Plan~~ for the project shall include a component on emergency response to railway accidents, including those involving releases of hazardous materials. This component shall be consistent with emergency response programs developed by owners of the railway right-of-way. The ~~Emergency Preparedness~~*



#### 4.10 PUBLIC HEALTH AND SAFETY

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***Incident Action*** Plan for \_\_\_\_\_ project shall be prepared in cooperation with the County Office of Emergency Services and completed prior to submittal of the first Development Permit for specific plan areas adjacent to railroad rights-of-way for all land uses."

**Impact M4.10-7**

**Increased development along the natural gas pipelines traversing the site could increase the risk of pipeline rupture and fire or explosion which could result in death and injury or property damage.**

Excavation or other subsurface penetration in the vicinity of buried natural gas pipelines could result in pipeline rupture and ignition of leaking gas, casing explosion and/or fire. Pipelines within high population density areas generally present higher hazards. The proposed project would result in increased population density in certain areas along the pipelines. The Class Location designation,<sup>3</sup> set by the PUC, would be changed from Class I (very low density) to Class II or III (higher density and occupancy) depending on the number of buildings for human occupancy within 220 yards of the pipeline and the number of occupants. If the Class Location were changed to a higher class, the PUC could require that the pipeline be operated at a lower pressure to reduce the fire and explosion risk. The reduction in pressure would result in lower volumes of gas delivered through the pipeline. Underground vaults or pits containing pressure-regulating equipment for natural gas pipelines are required to be sealed, vented, or vaulted to reduce hazards associated with gas accumulation. Nearby trenches or vaults containing other utilities may accumulate gas due to a leak from the nearby natural gas pipeline.

**Mitigation Measure M4.10-7**

*(a) The following Objective, Policy, and Implementation are recommended to be added to Potential Site Hazards (Appendix C):*

*"Objective:*

*"To minimize the risk of human injury or property damage in the event of an explosion and/or fire at a natural gas pipeline.*

*"Policy:*

*"A Pipeline Safety Plan shall be part of the ~~Emergency Preparedness~~ Incident Action Plan, developed to minimize risks associated with natural gas pipelines within the project site.*

*"Implementation:*

*"a) Building sites within 220 yards of high pressure gas pipelines shall be chosen to minimize the risk of human injury or property damage in the event of an explosion and/or fire at the pipeline. The project densities in the vicinity of the pipelines should be limited to*

<sup>3</sup> A Class Location unit is an area that extends 220 yards on either side of the centerline of any continuous one-mile length of natural gas pipeline. The Class Location designation is determined by the number and type of buildings within the Class Location unit. Class I corresponds to a density of 10 or fewer buildings intended for human occupancy within an area of 220 yards by 1 mile; Class II corresponds to a density of greater than 10 to 46 buildings; Class III corresponds to a density of greater than 46 buildings, or the placement of a building or well-defined outside area of public assembly that is occupied by 20 or more persons at least 5 days a week for 10 weeks in any 12 month period; Class IV corresponds to a building with four or more stories (49 CFR § 192.5).

those allowed for a Class I Location designation, which corresponds to a density of 10 or fewer buildings intended for occupancy within an area of 220 yards on either side of the centerline of any continuous one-mile length of natural gas pipeline. **Alternatively, the Class Location designation should be revised by the PUC and alternative routes for future gas pipelines should be identified by the developer and approved by the PUC.**

"b) Vapor barriers and/or vents shall be included in designs for utility trenches that are not under the jurisdiction of the PUC crossing or within 100 feet of the high pressure gas pipelines to reduce the potential for the migration and accumulation of gas, leaked from a pipeline, in utility trenches. The design of the utility trenches shall be reviewed and evaluated by the Department of Public works prior to final map approval."

~~(b) The proposed land use map in areas underlain by fuel pipelines should adhere to current PUC class location designation density specifications. Alternatively, the Class Location designation should be revised by the PUC and alternative routes for future gas pipelines should be identified by the developer and approved by the PUC.~~

#### **Impact M4.10-8**

**Improperly abandoned wells, wells without appropriate sanitary seals, and agricultural canals may act as conduits for agricultural chemical migration, potentially affecting surface and groundwater quality, or may represent a safety hazard.**

Agricultural chemicals which are applied to soils and vegetation may migrate to groundwater via domestic or irrigation wells that do not have adequate surface protection, or to surface waters via agricultural canals.

#### **Mitigation Measure M4.10-8**

*The following Implementations are recommended to be added to the Draft Master Plan under Objective 2 in Potential Site Hazards:*

"d) A component of the required site assessment for pesticide and herbicide residues shall include an investigation of the location and condition of currently used and abandoned water wells. Wells in use that do not have appropriate sanitary seals shall be retrofitted to protect groundwater quality. Wells that are no longer in use shall be properly abandoned by a licensed well driller. All necessary work shall be completed prior to construction.

"e) **On-site agricultural canals and ditches, used to convey water from BBID, as well as the Delta-Mendota Canal, will be properly fenced and screened by the developer, as may be required by BBID to eliminate site hazards and to prohibit interference with water flow to agricultural BBID customers.**"

**SPECIFIC PLAN I**

Specific Plan I indicates that potential public health impacts associated with the project site are limited to an abandoned gas well and two and natural gas lines. The additional potential site hazards associated with former agricultural use, fuel tanks and pipelines, electrical transformers and transmission lines, and asbestos-containing materials identified in the Draft Master Plan are not discussed.

#### 4.10 PUBLIC HEALTH AND SAFETY

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##### **Impact S4.10-1 (C,O,M)**

**Proposed landscaping within utility line easements may not conform to PG&E requirements.**

Improvements within transmission line easements must conform to PG&E's approved land uses. Potentially acceptable land uses within easements include automobile parking, limited fencing, limited landscaping, roadways, ponds, and recreational areas. All land uses within easements would be subject to PG&E approval. Specific Plan I shows trees planted within utility line easements.

##### **Mitigation Measure S4.10-1 (C,O,M)**

*Specific Plan I should limit proposed landscaping within utility line easements to trees and shrubs that would not exceed 15 feet in height at maturity.*

##### **Impact S4.10-2 (C,O,M)**

**Mosquito abatement is likely to be required within Specific Plan I areas. An implementation and maintenance schedule for mosquito abatement was not included as part of the storm drainage and flood protection system in Specific Plan I, as required by the Draft Master Plan.**

Waterways and wetland areas provide breeding grounds for mosquitoes. The Draft Master Plan includes a Mosquito Abatement Program (Appendix 6-A of the Draft Master Plan). As part of this program, specific plans are required to provide implementation and maintenance schedules for complying with abatement procedures. Mitigation Measure 4.10-5 recommends adding maintenance schedules to the proposed Mosquito Abatement Program. If that measure were included in the Program, this impact would be less-than-significant.

##### **Mitigation Measure S4.10-2 (C,O,M)**

*Refer to Mitigation Measure M4.10-5.*

## 4.11 BIOLOGICAL RESOURCES

### SETTING

The Setting section of the original FEIR (BASELINE, 1992a) provides a detailed discussion of the vegetation and wildlife resources on the project site, including information on: 1) plant communities and agricultural cover; 2) wildlife use and habitat types; and 3) occurrence of special-status plant and animal taxa. The FSEIR (BASELINE, 1993) provides new information and an expanded discussion on special-status animal taxa of concern,<sup>1</sup> focusing on San Joaquin kit fox and Swainson's hawk. This section of the DEIR summarizes information related to sensitive biological resources on the site, evaluates the proposed project plans and relevant provisions of the Draft Master Plan and Draft Specific Plan I, including a review of the proposed Habitat Management Plan which is intended to provide for wastewater reclamation, agricultural preservation, and wildlife habitat enhancement for Swainson's hawk and other special-status taxa, and identifies necessary mitigation.

### Plant Cover, Wetlands, and Wildlife Use

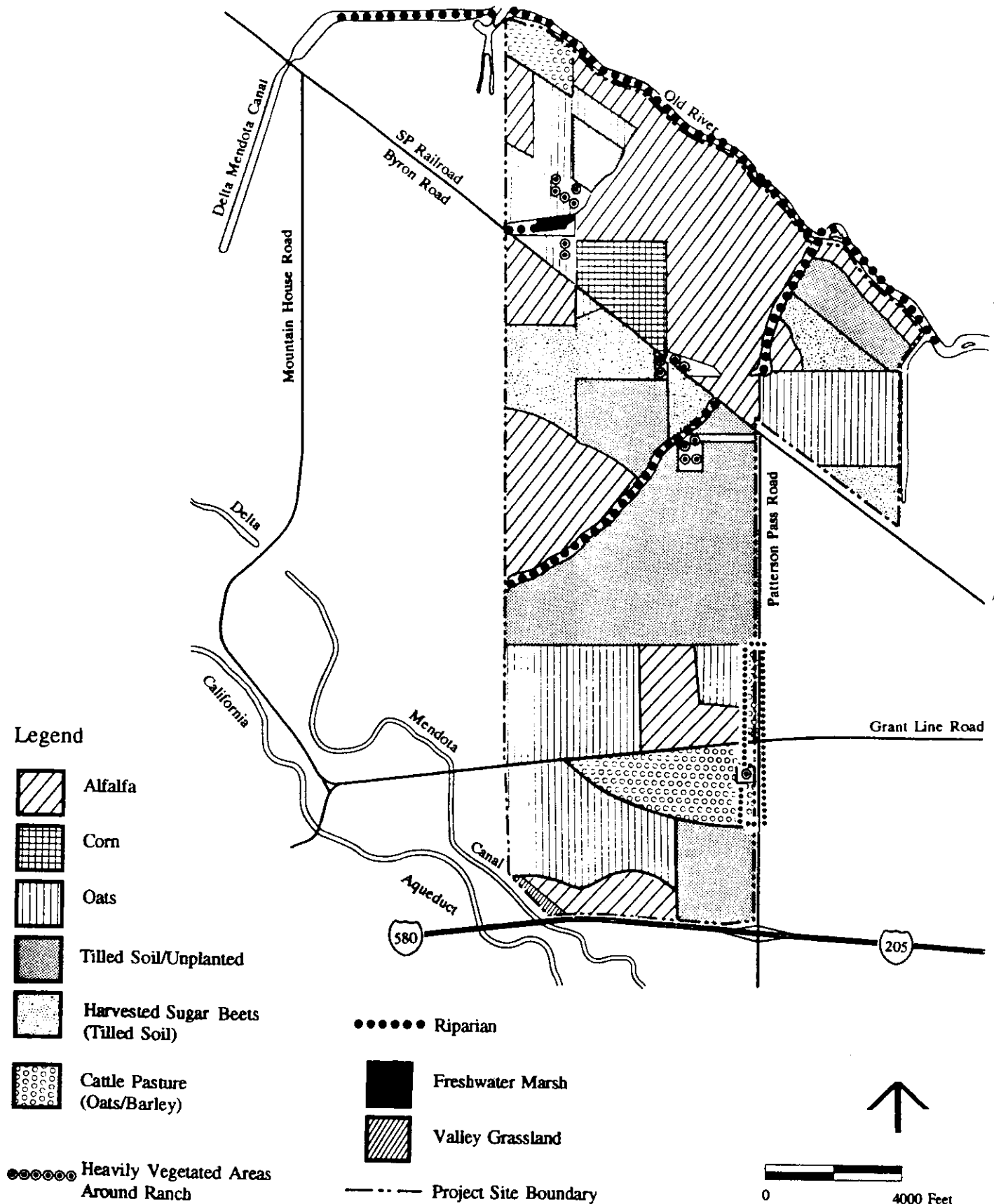
Agricultural crops form the primary plant cover over most of the site (Figure 4.11-1). The introduction of livestock grazing in the late 1800s, followed by irrigation and year-round farming in the 1900s has resulted in the elimination of most of the native plant communities from the site. This rapid conversion of the native plant cover was most likely accompanied by the elimination of some wildlife species which historically occurred in the area. The conversion of most of the site to agricultural use has not been detrimental to all wildlife species. Some species have become well adapted to resources provided by agricultural habitat, including a number of special-status taxa, such as Swainson's hawk. Agricultural cropping patterns can vary both seasonally and annually (Figures 4.11-1, 4.11-2, and 4.11-3), which subsequently affects the cover type, abundance of rodents and other prey populations, and the foraging activity of mammalian, reptilian, and avian predator species. Most of the agriculturally-compatible species have become adapted to the seasonal and annual fluctuations associated with agricultural habitat.

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<sup>1</sup> Special-status taxa include: designated rare, threatened, or endangered species and candidate species for listing by the California Department of Fish and Game (CDFG); designated threatened or endangered species and candidate species for listing by the U.S. Fish and Wildlife Service (USFWS); taxa considered to be rare or endangered under the conditions of Section 15380 of the California Environmental Quality Act (CEQA) Guidelines (State of California, 1992), such as those identified on lists 1A, 1B, and 2 in the *Inventory of Rare and Endangered Vascular Plants of California* (California Native Plant Society, 1988); and possibly other taxa which are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for State or Federal status, such as those included on lists 3 and 4 in the California Native Plant Society *Inventory* or identified as animal "Species of Special Concern" by the CDFG.

# SPRING 1991 CROPPING PATTERNS

Figure 4.11-1

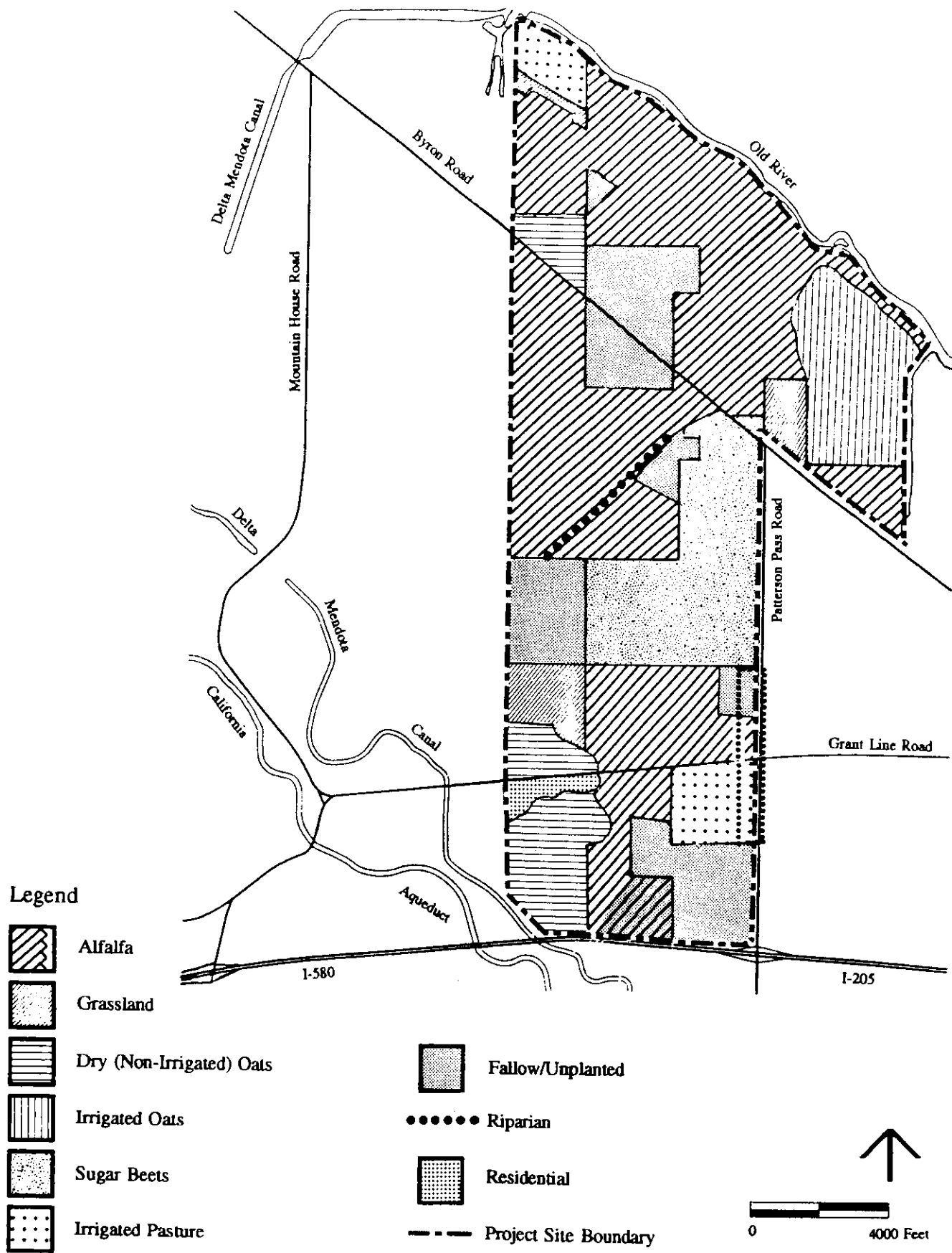


Source: BASELINE, 1992b

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# SPRING 1992 CROPPING PATTERNS

Figure 4.11-2

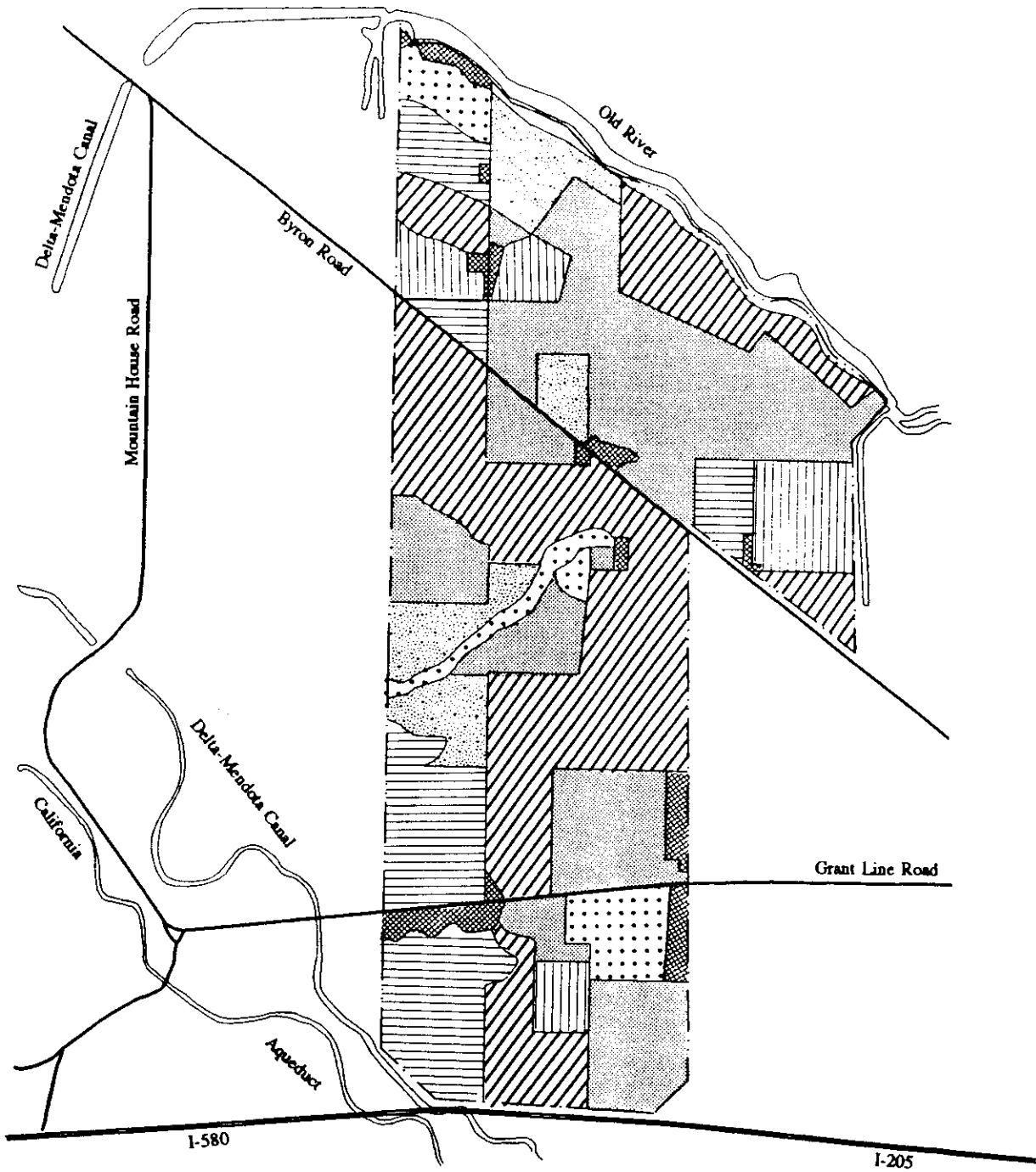


Source: Biosystems, Inc., 1992.











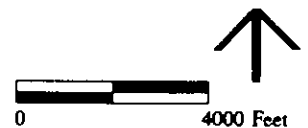
# SPRING 1994 CROPPING PATTERNS

Figure 4.11-3



## Legend

- |   |  |   |                          |
|---|--|---|--------------------------|
|  | Alfalfa                                |  | Irrigated Pasture        |
|  | Irrigated Wheat/Grain Hay              |  | Unplanted Row Crop       |
|  | Dry (Non-Irrigated) Oats/Grain/Pasture |  | Residential/Dairy/ Other |
|  | Sugar Beets                            |  | Project Site Boundary    |



Source: The McCarty Company, 1994.

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**BASELINE**

Agricultural management practices and disturbance by grazing and levee construction has limited the establishment of trees on the site. Most trees are non-native species, planted as ornamental landscaping and shade trees in the vicinity of existing residences (Figure 4.11-4). Willow-dominated riparian scrub and woodland occur in a narrow band along Old River and intermittently along Mountain House Creek. Due to the scarcity and absence of other well-developed cover, these trees provide important perching, roosting, and nesting substrate for a wide variety of avian species.

Jurisdictional wetlands encompass approximately 25 acres of the site, forming seasonal wetlands and emergent marshland (Figure 4.11-4). Additional wetland acreage occurs as a narrow band along the southern bank of Old River. Wetlands are generally considered to be areas periodically or permanently inundated by water that support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions. Wetland vegetation is absent along portions of Mountain House Creek and other channels on the site, but modifications to these features may still be subject to jurisdictional review and authority by the U.S. Army Corps of Engineers (Corps) and CDFG.<sup>2</sup> Levee construction along Old River, and channelization and intensive grazing along Mountain House and Dry Creeks have severely limited the habitat value of these features, but these and other wetlands and waters of the U.S. still provide important resources to wildlife.

### Special-Status Taxa

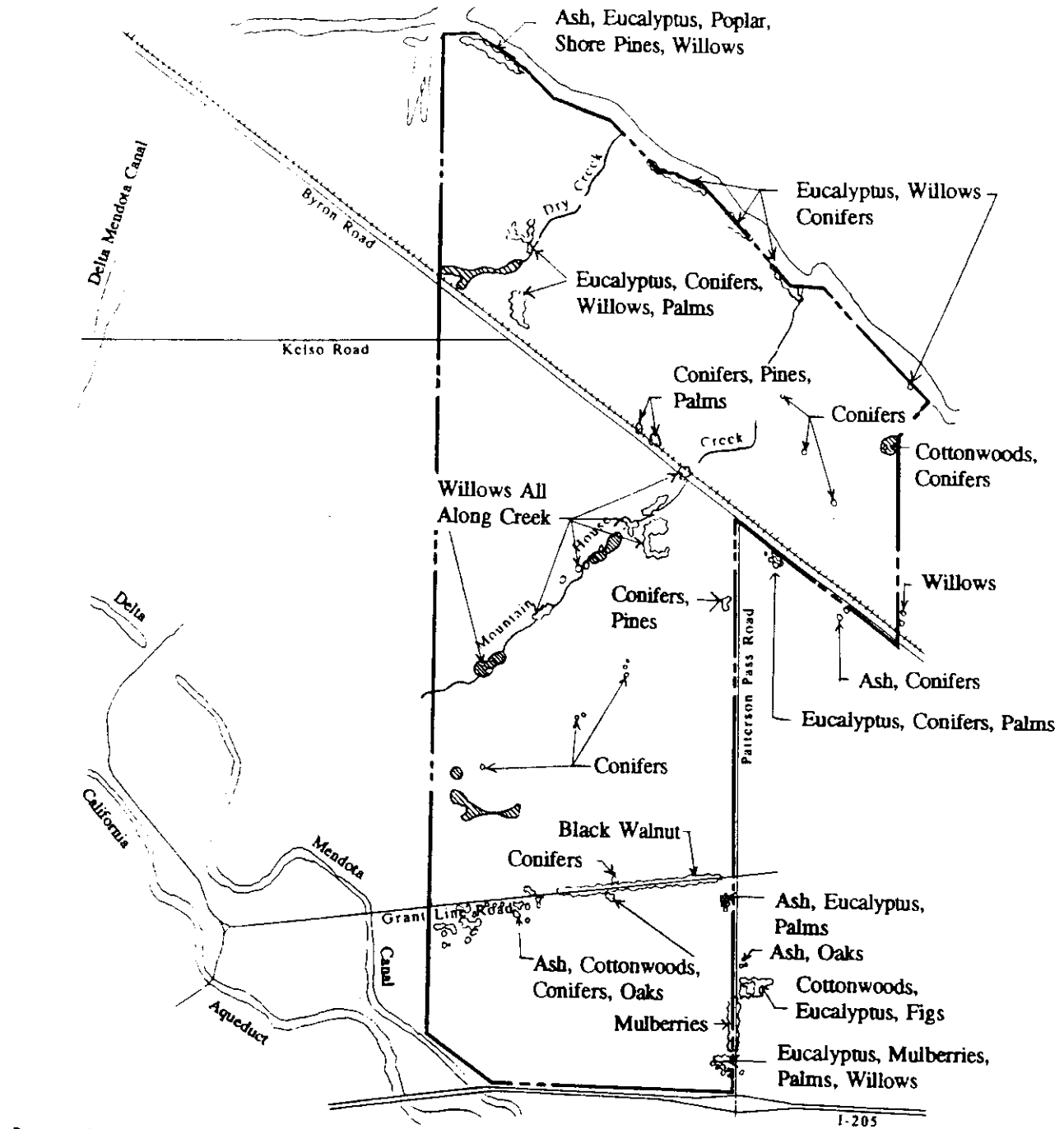
The original FEIR (BASELINE, 1992a) provides information on the potential for occurrence of each of the special-status taxa reported or suspected to possibly occur on the site. These include 14 animal taxa and two plant taxa of concern. One aquatic plant species, Mason's lilaopsis (*Lilaeopsis masonii*), occurs on pilings and the hard mud banks of Old River in the northwest corner of the site. Suitable habitat for a second plant taxa of concern, California hibiscus (*Hibiscus lasiocarpus*), also occurs along Old River, but surveys conducted this summer failed to locate this species on the site (Zentner & Zentner, 1993).

Animal taxa of concern which have been reported or are suspected to occur on the site or project vicinity include: tricolored blackbird (*Agelaius tricolor*), burrowing owl (*Athene cunicularia*), Aleutian Canada goose (*Branta canadensis leucopareia*), Swainson's hawk (*Buteo swainsoni*), mountain plover (*Charadrius montanus*), northern harrier (*Circus cyaneus*), black-shouldered kite (*Elanus caerulea*), prairie falcon (*Falco mexicanus*), peregrine falcon (*Falco peregrinus anatum*), white-faced ibis (*Plegadis chihi*), San Joaquin kit fox (*Vulpes macrotis mutica*), western pond turtle (*Clemmys marmorata pallida*), delta smelt (*Hypomesus transpacificus*), and Sacramento splittail



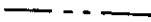
<sup>2</sup> The CDFG and Corps have jurisdiction over modifications to river banks, lakes, stream channels and other wetland features. Jurisdiction of the Corps is established through the provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into "waters" of the United States and wetlands without a permit (individual or nationwide). Jurisdictional authority of the CDFG over wetland areas is established under Sections 1601-1606 of the Fish and Game Code, which pertains to activities which would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream, and requires an agreement with the Department before any disturbance.

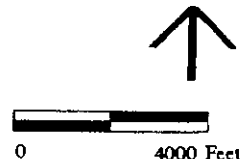
# 1993 TREE LOCATIONS AND WETLANDS

Figure 4.11-4



**Legend**

-  Wetlands
-  Channels
-  Project Site Boundary



Source: The SWA Group, 1993

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(*Pogonichthys macrolepidotus*). Table 4.11-1 provides information on the status and preferred habitat for each of these species.

Of these 14 taxa, Swainson's hawk and San Joaquin kit fox represent the largest potential constraint to development, given their legal status, wide-ranging foraging behavior, and the position of jurisdictional agencies over occurrence and utilization of the site. Northern harrier, black-shouldered kite, burrowing owl, tricolored blackbird, and western pond turtle were all observed on and in the vicinity of the site during previous studies (Figure 4.11-5). Sacramento splittail, **winter-run chinook salmon**, and delta smelt were not found in seine sampling along the Old River in 1991, but both of these species could use the inshore zone of the entire shoreline. The site is not believed to provide critical habitat for any of the remaining taxa of concern (i.e. Aleutian Canada goose, white-faced ibis, mountain plover, prairie falcon, and peregrine falcon), most of which are wintering migrant species that may occasionally use flooded cropland areas for foraging.

Special-status taxa with legal protection under the Federal or California Endangered Species Acts<sup>3</sup> often represent a major constraint to development, particularly when these species are wide ranging or highly sensitive to habitat disturbance. The San Joaquin kit fox (kit fox) and Swainson's hawk, both known from the region, require large contiguous areas of habitat to sustain viable populations and are threatened by continued loss of habitat in the Central Valley. Representatives of the USFWS and CDFG have repeatedly expressed concern over the potential impacts of the Mountain House New Town on habitat for both of these species, and have indicated that without adequate mitigation, project implementation would result in "take"<sup>4</sup> of these species under the State and Federal Endangered Species Acts. Based on discussions with the USFWS and guidelines of the CDFG

<sup>3</sup> The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve endangered and threatened plant and animal taxa. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California taxa.

<sup>4</sup> "Take" as defined by the FESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect" a threatened or endangered species. "Harm" is further considered by the USFWS to include the killing or harming of wildlife due to significant obstruction of essential behavior patterns (i.e., breeding, feeding, or sheltering) through significant habitat modification or degradation. The case of *Palila vs. Hawaii Department of Land and Natural Resources* (No. 87-2188) provided a legal basis for concluding that habitat degradation is construed as "harm" and therefore invokes "take" under FESA. A recent Federal Circuit Court of Appeals case, decided on 11 March 1994, sets forth that FESA's prohibition against the "take" of an endangered species does not extend to the modification of habitat. In the case, *Sweet Homes vs. Babbitt* (No. 92-5255), the majority's decision found the USFWS regulation defining "harm" to embrace habitat modifications to be invalid, with the Chief Judge dissenting. The USFWS will most likely request that the United States Supreme Court review this case, given the conflict between this decision and the *Palila* case. The CDFG also considers the loss of listed species habitat as "take," although this policy lacks statutory authority and case law support under the CESA.

Two sections of the FESA contain provisions which allow or permit "incidental take." Section 10(a) provides a method by which a state or private action which may result in "take" may be permitted. The applicant must provide the USFWS with an acceptable conservation plan and publish notification for a permit in the Federal Register. Section 7 pertains to a federal agency which proposes to conduct an action which may result in "take," requiring consultation with USFWS and possible issuance of a jeopardy decision. Under the CESA, "take" can be permitted under Section 2081 of the Fish and Game Code. The applicant must enter into a habitat management agreement with the CDFG, which defines the permitted activities and provides adequate mitigation.

TABLE 4.11-1

**SPECIAL-STATUS SPECIES  
KNOWN OR SUSPECTED TO OCCUR IN PROJECT VICINITY**

Species	Status	Preferred Habitat
<b>Animals</b>	<b>(State/Federal)<sup>1</sup></b>	
Tri-colored blackbird ( <i>Agelaius tricolor</i> )	CSC/FC(2)	Forages in agricultural fields and grasslands; nests primarily in freshwater marshes with tall emergent vegetation, and less often in low riparian thickets
Burrowing owl ( <i>Athene cunicularia</i> )	CSC/--	Forages in grassland, seasonal marsh, and agricultural lands; tends to nest in rodent burrows
Aleutian Canada goose ( <i>Branta canadensis leucopareia</i> )	--/FT	Winter use of fallow cropland, marshland, and grassland
Swainson's hawk ( <i>Buteo swainsoni</i> )	ST/--	Forages in open grassland and agricultural fields; nests in riparian woodland and occasionally in isolated trees
Mountain plover ( <i>Charadrius montanus</i> )	CSC/FC(2)	Winter use of grasslands and agricultural fields with low herbaceous vegetation
Northern harrier ( <i>Circus cyaneus</i> )	CSC/--	Forages in agricultural and seasonal marsh areas with low grassland vegetation; uses shrub cover for nesting
Western pond turtle ( <i>Clemmys marmorata pallida</i> )	CSC/FC(2)	Occurs along edges of streams, lakes and ponds with basking sites such as logs and steep banks
Black-shouldered kite ( <i>Elanus caerulea</i> )	--/-- <sup>2</sup>	Forages in agricultural, grassland, and seasonal marsh; nests in trees with dense foliage
California horned lark ( <i>Eremophila alpestris actia</i> )	CSC/FC(2)	Open grasslands
Prairie falcon ( <i>Falco mexicanus</i> )	CSC/--	Forages in grassland or other open habitat near cliffs
Peregrine falcon ( <i>Falco peregrinus anatum</i> )	SE/FE	Forages in marshland and grassland areas near rocky cliffs for nesting
Delta smelt ( <i>Hypomesus transpacificus</i> )	SCT/FT	Occurs in brackish zone of delta, with temporary movement into adjacent fresh water for spawning.
Loggerhead shrike ( <i>Lanius ludovicianus</i> )	CSC/FC(2)	Open grasslands and brushland
Winter-run chinook salmon ( <i>Oncorhynchus tshawytscha</i> )	--/FE	Open water of Bay and Delta, tributary rivers and streams

Table 4.11-1 Mountain House Species Status, *continued*

Species	Status	Preferred Habitat
White-faced ibis ( <i>Plegadis chihi</i> )	CSC/FC(2)	Forages in shallow open water and mud flats; nests in freshwater marshes with emergent vegetation
Sacramento splittail ( <i>Pogonichthys macrolepidotus</i> )	CSC/FC(2)	Occurs in dead-end sloughs and other slow moving waters of Delta
San Joaquin kit fox ( <i>Vulpes macrotis mutica</i> )	ST/FE	Forages in grassland, alkali scrub, and other atypical habitat; usually dens in enlarged rodent burrows, as well as culverts, pipes, and other locations
<b>Plants (State/Federal/CNPS)<sup>1</sup></b>		
California hibiscus ( <i>Hibiscus lasiocarpus</i> )	--/FC(3B)/2 <sup>3</sup>	Occurs along edge of riparian and freshwater marsh
Mason's lilaeopsis ( <i>Lilaeopsis masonii</i> )	SR/FC(2)/1B	Occurs along stream banks and marshes in tidal portion of Delta

<sup>1</sup> Federal Status:

FE - Listed as endangered under the FESA.

FT - Listed as threatened under the FESA.

FC(2) - A candidate species under review for federal listing. Category 2 includes species for which the USFWS presently has some biological information indicating that "proposing to list them as endangered or threatened species is possibly appropriate, but for which further biological research and field study is usually needed to determine biological vulnerability and threats." Category 2 species are not necessarily less rare or less threatened than Category 1 species. The distinction relates to the amount of data available and is therefore administrative rather than biological.

FC(3B) - Species in Category 3 are not current candidates for federal listing. Category 3B includes taxa which are no longer considered distinct taxa meeting the definition of "species" under the FESA.

State Status:

SE - Listed as endangered under the CESA.

SR - Listed as rare under the CESA.

ST - Listed as threatened under the CESA.

CSC - Considered a "species of special concern" by the CDFG; species have no formal legal protection but nest sites and communal roosts are generally recognized as significant biotic features.

CNPS Status:

List 1B - Plants rare, threatened, or endangered in California and elsewhere.

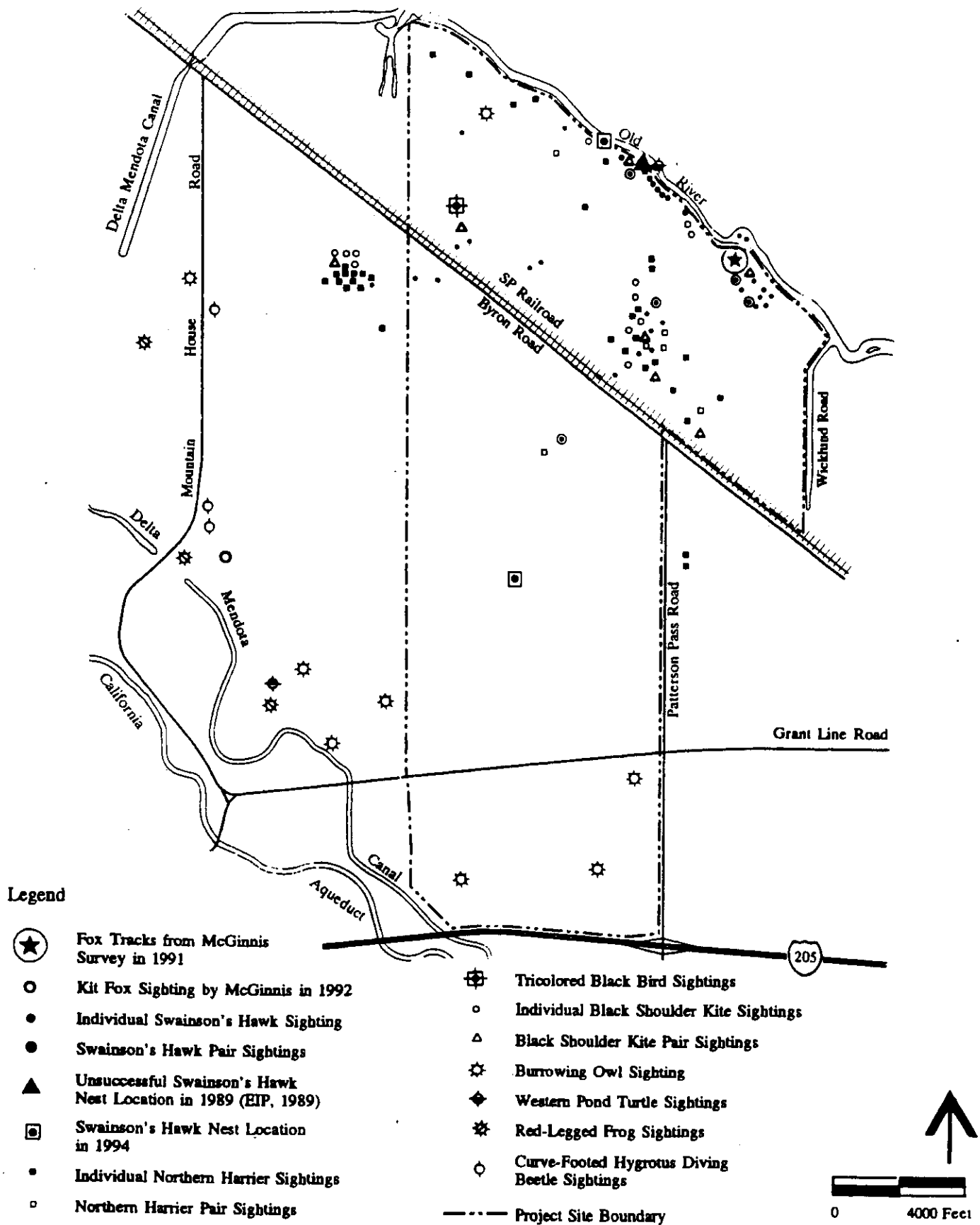
List 2 - Plants rare, threatened, or endangered in California, but more common elsewhere.

<sup>2</sup> Black-shouldered kite does not have a specific designated status, but is of concern to the CDFG because its numbers are declining.

<sup>3</sup> California hibiscus is no longer a federal candidate species, having been placed in Category 3B, which includes taxa once considered for listing but no longer under consideration and that are not current candidates for listing. This species has been reclassified from *Hibiscus californicus* to *Hibiscus lasiocarpus* in the recent Jepson Manual, and is now considered common outside of California, resulting in its placement on List 2 of the CNPS *Inventory*.

# SENSITIVE WILDLIFE SPECIES SIGHTINGS

Figure 4.11-5



Source: BASELINE, 1992; Biosystems, 1992, EIP, 1989, Jones & Stokes, 1990, Miriam Green Associates, 1994 and Grewell, 1994.

(1992), the preliminary mitigation requirements anticipated by jurisdictional agencies involve preservation and enhancement of substantial acreage for each of these two taxa. It should be noted that the applicant is of the opinion that kit fox do not occupy the site, that no take would occur, and no habitat compensation should be required. Similarly, provisions to compensate for the loss of Swainson's hawk foraging habitat contained in the Draft Master Plan are based on the assumption by the applicant that no mitigation should be required for conversion of agricultural lands south of Byron Road.

Several objectives, policies, and implementation measures in the San Joaquin County General Plan 2010 address impacts of development projects to habitat required for special status species. The following policies and implementation measures in the Vegetation, Fish, and Wildlife Habitat section of the General Plan relate to preservation of habitat for threatened and endangered species:

- Policy 1: Resources of significant biological and ecological importance in San Joaquin County shall be protected. These include wetlands; riparian areas; rare, threatened and endangered species and their habitats as well as potentially rare or commercially important species; vernal pools; significant oak groves and heritage trees.
- Policy 2: No public action shall significantly diminish the wildlife and vegetative resources of the County; cumulatively significant impacts shall be avoided.

These policies are implemented by the following measures:

Implementation 3: Species Protection. The County shall:

- (a) prepare and adopt regulations to protect special status taxa;
- (b) address protection and preservation of special status taxa in review of development applications; and
- (c) work with the California Department of Fish and Game to develop methods to save listed species such as the Swainson's Hawk.

Implementation 4: Habitat Protection, Preservation, and Restoration Program

- (a) The County shall develop and implement, with the California Department of Fish and Game, a program to protect, restore, and manage wildlife and habitat resources. The project shall include establishment of financing by project mitigation funds.



#### 4.11 BIOLOGICAL RESOURCES

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- (b) The County shall support habitat conservation and restoration plans for special-status taxa and shall work with the California Department of Fish and Game and other agencies in developing such plans.

##### *San Joaquin Kit Fox*

This subspecies is listed as a "threatened" species by the State and "endangered" by the USFWS.<sup>5</sup> San Joaquin kit fox historically inhabited most of the alkali sink plant community of the San Joaquin Valley and adjacent valley systems (Morrell, 1972, 1975). Kit fox also occupied the lower reaches of many of the surrounding foothill grassland areas, extending into western San Joaquin and eastern Contra Costa counties. However, intensive agriculture, livestock grazing, and ground squirrel eradication through the use of poison, have greatly reduced the available habitat for this subspecies during the past half century. The kit fox range map prepared by the USFWS (1990) shows the kit fox range extending over approximately the southern one-quarter to one-third of the site.

A detailed survey for kit fox was conducted by Dr. Samuel McGinnis in 1991 during preparation of the original FEIR (BASELINE, 1992a). Three principal survey techniques were used following protocol defined by the CDFG at that time (1990). These included: visual survey for dens and prey; track station monitoring over a period of 18 days; and spotlighting surveys for six nights. Residents in the project vicinity were also consulted during the survey effort to determine any fox sightings they may have made over the years on the site and the surrounding area.

During the survey, a fox print was obtained from a sooted track plate along the Old River levee near the confluence with Mountain House Creek (Figure 4.11-5). The print had characteristics of both gray fox (*Urocyon cinereoargenteus*) and kit fox. Two independent consultants concluded that the track was more like kit fox than gray fox; however, this conclusion was not definitive. Dr. McGinnis believed that the Old River levee area, where the track print was obtained, apparently functions as both a movement corridor and feeding habitat for kit fox (BASELINE, 1992a). No other evidence of possible kit fox activity on the project site was observed during the survey effort by Dr. McGinnis. Consultation with State and Federal resource agencies and County staff concluded that additional surveys should be conducted to verify kit fox presence on the site.

BioSystems Analysis, Inc. (BioSystems) was subsequently retained by the County Community Development Department to resurvey the project vicinity for presence of kit fox and to evaluate the suitability of the site to support this subspecies. Spring and summer surveys were conducted as part of the field effort, extending from 27 April to 3 June and from 3 August to 3 September 1992, respectively. The field surveys included: den and sign surveys; night spotlighting; scent stations; camera stations; and incidental wildlife observations. Information on prey densities was also collected to provide an indication on the suitability of the site as possible foraging habitat.

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<sup>5</sup> An "endangered" species is one which is considered to be threatened with extinction throughout all, or a significant portion of its range. A "threatened" species is one which, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of special protection and management efforts.

A report on the survey was completed in October 1992 (BioSystems, 1992). The report provides background information on the status and natural history of kit fox, a description of methods and results of the surveys, a discussion of occurrence and habitat potential of the site, an evaluation of potential impacts of development, and recommended mitigation. No direct evidence of kit fox occurrence on the site was found during the BioSystems surveys. No "known" kit fox dens were found during the surveys, but two "possible" and five "potential" dens were identified (Figure 4.11-6).<sup>6</sup> One of the possible dens was located just southwest of the site, along the Delta-Mendota Canal. Kit fox-sized scats were found near the entrance of one of the possible dens, and other fox scats were found along Old River.

Historically, no confirmed kit fox sightings have been documented on the site, but two reliable kit fox sightings were recently reported within one and two miles (BioSystems, 1992). One daytime observation was made by Dr. McGinnis in March of 1992, approximately one mile west of the site. The fox was observed walking along the edge of an alfalfa field, approximately 200 yards south of Mountain House Road and east of the Delta-Mendota Canal (Figure 4.11-4). Another kit fox was sighted in June 1992 approximately two miles west of the site at the corner of Kelso and Burns roads, during a spotlighting survey by BioSystems (1992). **A recent kit fox sighting was made in early August 1994 by a CDFG biologist on the east side of the California Aqueduct approximately 1,800 feet northwest of the Grant Line Road intersection with Mountain House Road, and 1.25 miles from the western boundary of the site (Fleming, 1994). The fox was encountered during an evening survey for California red-legged frog along the aqueduct. After observing the fox at a distance of approximately 20 meters, it then moved southeast parallel to the canal alignment.**

Although no direct evidence of kit fox occurrence on the site was found during the BioSystems study, the author concluded that there is evidence to suggest that kit fox occasionally use the site for foraging and possibly denning (BioSystems, 1992). The site is well within the foraging range of the kit fox observed one mile to the west, and within the dispersal range of other known sightings. Kit fox densities in the northernmost part of their range are known to be extremely low (Orloff et al., 1986). Previous studies have demonstrated the difficulty of verifying kit fox occurrence in areas of low density (Hall, 1983; Orloff et al., 1986). Other canid species may have a negative effect on kit fox use of suitable foraging habitat, but the presence of coyote, red fox, and domestic dogs does not necessarily preclude kit fox from an area. Failure to observe kit fox or their signs during short-term

<sup>6</sup> Dens were classified according to categories defined by Sue Orloff of BioSystems using a combination of factors, such as the size and shape of the entrance, and the presence of tracks, scats, and prey remains at or near the entrance. These categories vary slightly from the classification system currently used by the USFWS. Dens in the BioSystems report were classified as follows:

**Known:** Any den of appropriate size and shape in suitable habitat of known past or present use by kit foxes.

**Natal/Pupping:** Any den used by foxes to whelp and/or rear their pups. Signs of pupping activity are found at dens. Kit fox natal dens usually have multiple holes.

**Potential:** Any den of appropriate size and shape in suitable habitat but without kit fox sign.

**Possible:** Any den used by foxes, having fox sign and appropriate den entrance sizes, but for which identification to fox species is difficult. These dens could be used by red foxes or kit foxes.

#### 4.11 BIOLOGICAL RESOURCES

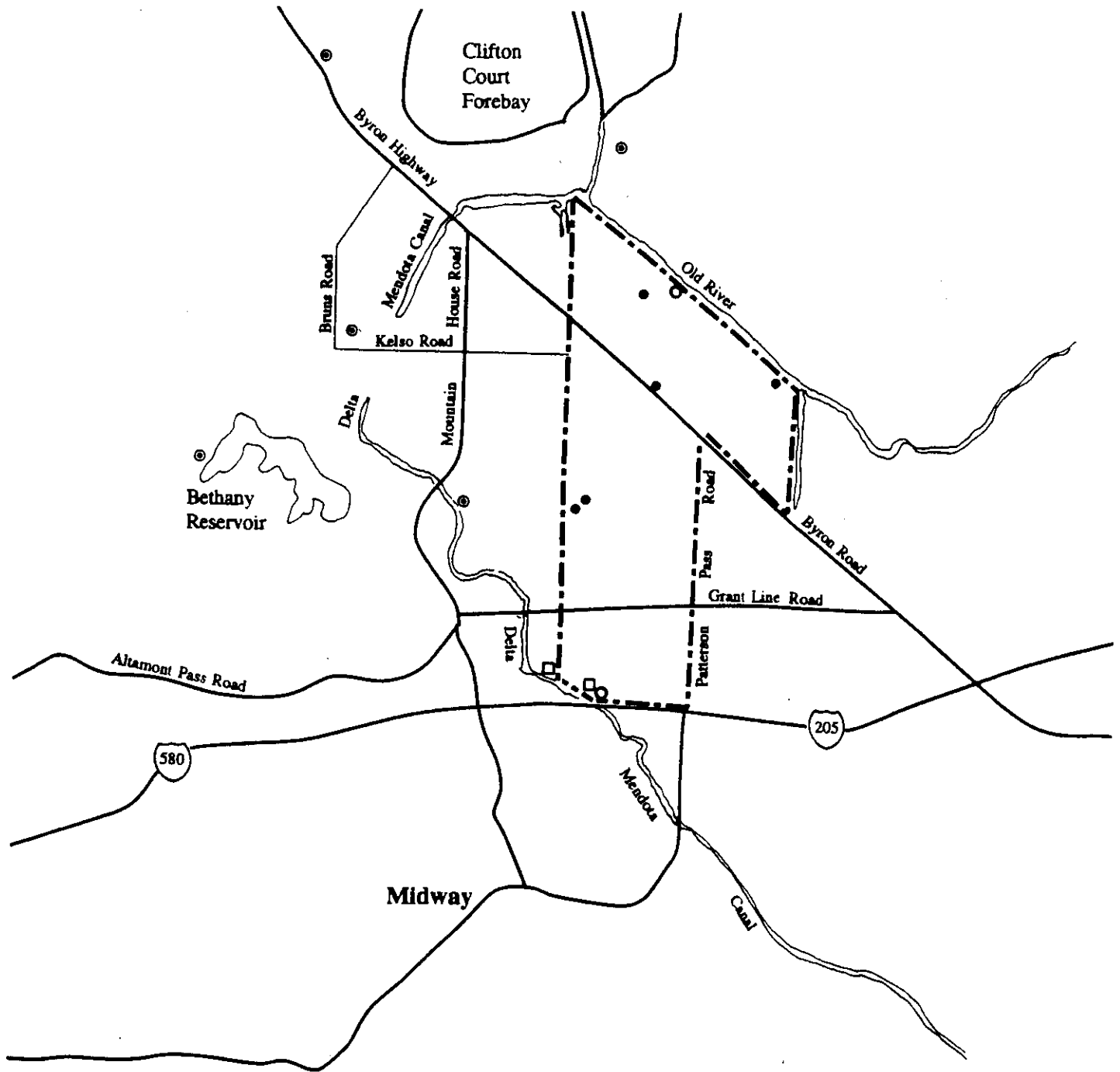
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surveys (such as those conducted on the project site) does not constitute proof that a particular area does not provide habitat for the subspecies (BioSystems, 1992).

During refinement of the Draft Master Plan and preparation of this DEIR, considerable effort has been made to clarify whether kit fox use the site, and if so, the significance of the potential impacts of the Draft Master Plan and appropriate level of mitigation. This has included: 1) preparation of

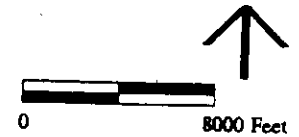
# 1992 KIT FOX SURVEY RESULTS AND SIGHTINGS

Figure 4.11-6



**Legend**

- Potential Kit Fox Den
- Potential Kit Fox Scats
- Possible Kit Fox Den
- Kit Fox Occurrence Records
- Project Site Boundary



Source: BioSystems, Inc., 1992.

a background report on kit fox by the applicant's biologist (Zentner & Zentner, 1993a), which includes an evaluation of the BioSystems report; 2) subsequent written comments by both BioSystems (1993) and the applicant's biologist (Zentner & Zentner, 1993b) on their interpretation of data, conclusions regarding kit fox use of the site, and need for mitigation; 3) preparation of a second review of the Biosystems report by another biological consulting firm retained by the applicant (H.T. Harvey and Associates, 1994); 4) written comments by Biosystems on this second review of their report (Biosystems, 1994); and 5) discussions with representatives of the USFWS (1994) and the CDFG. No consensus regarding kit fox occurrence or appropriate mitigation has been reached among the biologists involved in assessing the project.

In 1991, the County retained EIP Associates (EIP) to prepare a draft Habitat Conservation Plan (HCP) for kit fox in western San Joaquin County (EIP, 1993). The principal goal of the HCP was to create a legal, planning, and management framework which would serve to avoid jeopardizing the continued existence of kit fox currently occupying the western portion of San Joaquin County and adjacent lands. The draft HCP was intended to minimize impacts on kit fox habitat by providing sufficient mitigation lands to ensure survival, while eliminating the need for case-by-case review of any current or future development proposals. The study area evaluated as part of the draft HCP encompassed approximately 82,000 acres of the County, generally extending west of the Delta-Mendota Canal. The project site was not within the boundaries of the draft HCP study area, but is located immediately to the north.

The draft HCP contains policies and regulations to protect and conserve kit fox habitat within the study area and identifies a 23,200-acre "Core Conservation Area," generally west from I-580 to the 800-foot elevation line, and from I-205 south to the Stanislaus County line. The Core Conservation Area was considered to have the optimum mix of habitat factors for kit fox (prey base, soil type, elevation, vegetation) and contains the majority of the documented kit fox sightings in the County. The draft HCP encourages the preservation of this Core Conservation Area through establishment of conservation easements purchased by applicants of proposed developments in other locations within the HCP study area. The draft HCP has not been formally reviewed by the County Planning Commission and the Board of Supervisors, and efforts to refine and eventually adopt the HCP have not progressed since the preliminary draft report was released in June 1993.

#### *Swainson's Hawk*

Swainson's hawk is a summer breeding resident of the Central Valley, generally occurring in areas where riparian woodland and surrounding agricultural lands provide roosting, nesting, and foraging habitat. The hawk is unique among California raptors because it migrates to the Central Valley from South America in late March and early April to nest and raise its young. In late August and September, this species returns to Argentina and other neighboring countries for the fall and winter periods.

The loss of nesting and foraging habitat has greatly reduced the breeding range and abundance of Swainson's hawk in California, with an estimated decline of 90 percent in the breeding population between 1900 and 1979 (Bloom, 1980). Originally adapted to open grasslands, it has become

increasingly dependent on agricultural lands as native plant communities have been converted to agricultural uses. In recognition of the dramatic decline in population, changes in original habitat, and loss of critical foraging and nesting habitat, the hawk was designated as a "threatened" species by the California Fish and Game Commission in 1983.

Agricultural crop patterns currently influence the distribution and abundance of Swainson's hawk in the Central Valley, and foraging behavior reflects changes in prey density and availability. Swainson's hawk is an opportunistic feeder, foraging in different areas as agricultural practices expose prey or prey populations become abundant. Suitable foraging habitat currently includes open grassland or lightly-grazed dryland pasture, alfalfa and other hay crops, fallow fields, and combinations of hay, grain, and row crops such as tomato and beets. Unsuitable foraging habitat includes any crop-type in which prey are inaccessible, or which do not support adequate prey populations, such as vineyards, orchards, and cotton.

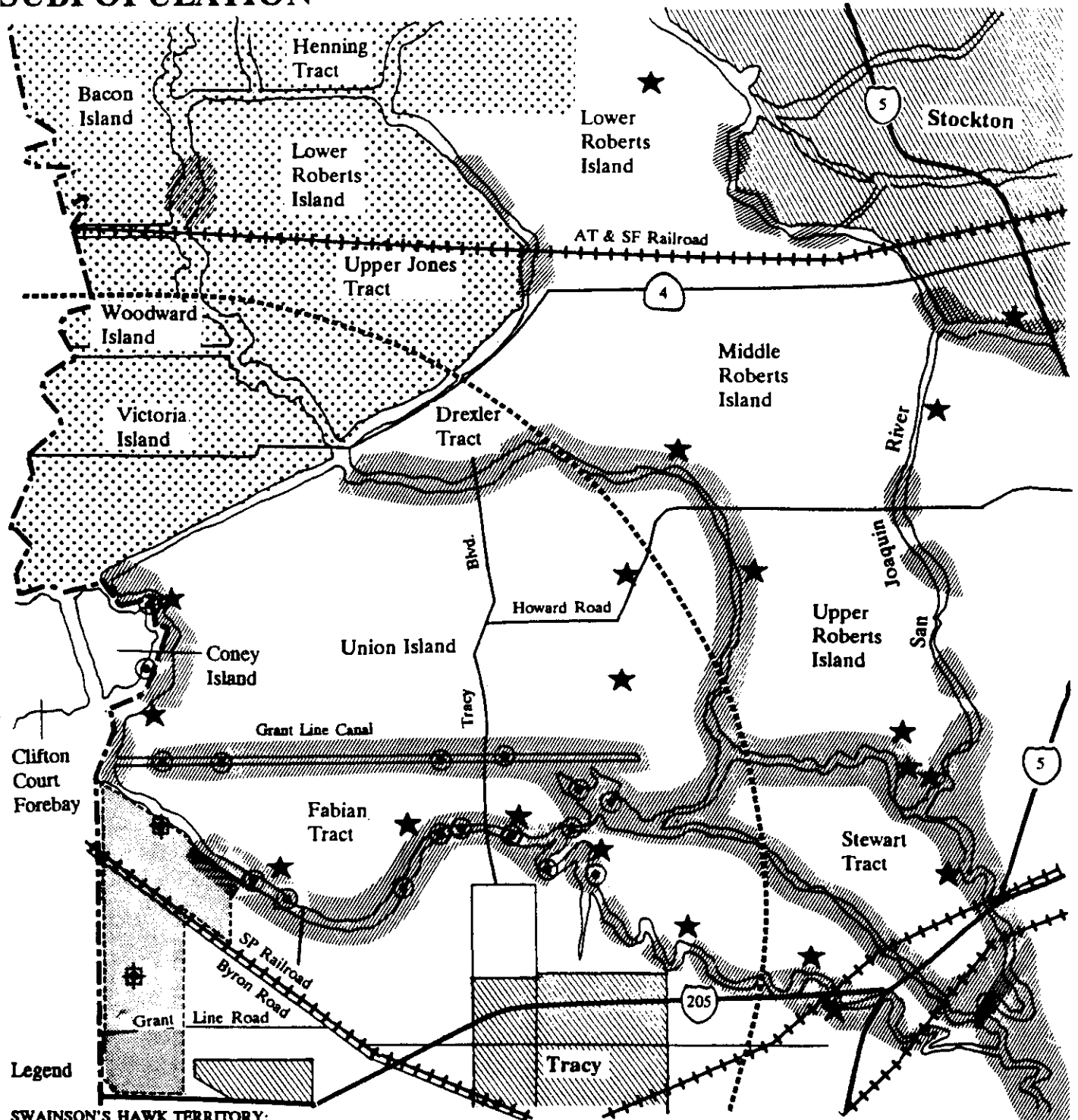
Large, open expanses of foraging habitat adjacent to or within an estimated 10-mile radius of a nest are required for successful reproductive performance, with distance from nest site and availability of suitable crop types considered to be limiting factors to successful fledging of young. Several active Swainson's hawk nesting territories have been documented along Old River in the western portion of the County, referred to as the south Delta subpopulations (Jones & Stokes Associates, 1990). Twenty-one breeding pairs were found in this area by Jones & Stokes Associates, nine within a 10-mile radius of the site. Most of the nests were located in riparian forest along Old River, Middle River, and the San Joaquin River (Figure 4.11-7). Although foraging habitat is commonly proximate to nest sites, Swainson's hawk have been documented foraging up to 18 miles from a nest (Estep, 1989).

During preparation of the original FEIR the site was surveyed on 12 occasions between 18 April and 23 May 1991 to determine Swainson's hawk presence and activity (BASELINE, 1992a). A total of 42 Swainson's hawk sightings were recorded during the surveys, and on five separate occasions birds were foraging as a pair (Figure 4.11-5). Of the 33 sightings of individual hawks, 30 were made between Byron Road and Old River, consistent with the predominance of alfalfa and other suitable crop types in 1991 (Figure 4.11-1). Most of the sightings were made in and over alfalfa fields, and generally when swathing, baling, or flood irrigation of alfalfa was occurring or had recently taken place. Large populations of California ground squirrels and Audubon cottontail rabbits were also observed along the riparian zone of the Old River levee and on irrigation berms. During the days or weeks when harvesting or irrigation was not taking place on a particular field, the constant presence of ground squirrels and rabbits on the adjacent levees and berms may have attracted Swainson's hawk to the vicinity of Old River until harvest activities provided greater opportunities to obtain prey in other locations.

No nesting activity was observed on the site in 1991 (BASELINE, 1992a), but no detailed nesting or foraging surveys have been conducted on the site since then. The survey work conducted in 1990 by Jones & Stokes Associates identified nine nesting locations within a 10-mile radius of the site (Figure 4.11-7). A wildlife monitoring program conducted by a previous biological consultant to the

# NESTING DISTRIBUTION OF THE SOUTH DELTA SWAINSON'S HAWK SUBPOPULATION

Figure 4.11-7

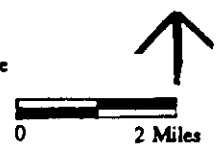


**Legend**

**SWAINSON'S HAWK TERRITORY:**  
(observed nesting pairs and nests)

- ★ 1990 Nest Locations (Jones and Stokes, 1990)
- ⊙ 1993 Nest Locations/Partial Mapping (Green and Associates, 1994)
- ⊕ 1994 On-Site Nest Locations
- ▨ Riparian Forest

- Mixed Row, Grain, and Hay Crop Agriculture  
Crop Agriculture
- ▤ Row and Grain Crop Agriculture
- ▧ Urban
- 10-Mile Radius from Project Site
- ▩ Project Site



Source: Jones and Stokes, 1990, Miriam Green Associates, 1994, Grewell, 1994, and BASELINE, 1993.

**BASELINE**

applicant (EIP, 1989) noted that a pair of Swainson's hawk unsuccessfully attempted to nest on the site in an isolated willow tree along Old River (Figure 4.11-5), and it ~~could be possible that a pair of hawks may attempt to nest on the site again in the future~~ **appears that this may be the location of one of the current active nests described below.** More recent surveys conducted for the Department of Water Resources (DWR) during the 1993 breeding season as part of the Interim South Delta Project identified several additional nest locations within two miles of the Old River frontage of the site (Miriam Green Associates, 1994). These include: two nests on islands upriver from the Westside Irrigation District Canal along the eastern edge of the site, four nests along Grant Line Canal on the northern edge of Fabian Tract, and on Coney Island near the Clifton Court Forebay (Figure 4.11-7). The nesting survey for DWR was restricted to levees and levee islands, and it is possible that additional territories in the project vicinity were undetected during the 1993 nesting season.

**A At least two pairs of hawks established a nests on the project site in April of 1994 (Figure 4.11-5). The One nest is located on the south levee of Old River in an isolated willow tree (Grewell, 1994). CDFG and DWR biologists discovered the nest during monitoring of construction activities associated with a barrier in Old River, approximately 0.4 mile downstream from the nest. Due to the proximity of construction, the nest has been monitored extensively by CDFG and DWR biologists. The other nest occurs in a eucalyptus tree surrounded by alfalfa fields in the southern third of the site.**

**Based on this recent nest information, as of 1994 the entire site is within two miles of an active nest.** Given the average ten-mile foraging radius for Swainson's hawk from an active nest, the fact that suitable nesting habitat occurs along the nearby Delta river system, and documented nesting and foraging activity on the site, it is reasonable to assume that nesting pairs and fledglings depend on the site for a portion of their prey requirements. A detailed telemetry study of all nesting pairs within approximately 10 miles would be necessary to provide accurate information on the relationship of the entire site to the home range and core foraging habitat of individual birds.

Except where existing rural development or unsuitable crops are cultivated, most of the site meets the two basic criteria used by the CDFG in determining whether a particular area provides suitable foraging habitat for Swainson's hawk, which should be mitigated for if converted to urban uses (CDFG, 1992). These criteria include: 1) location within a 10-mile radius of an active nest site, and 2) presence of suitable foraging habitat type. All of the site falls within a 10-mile radius of documented nesting territories, and hawk activity observed during preparation of the original FEIR (BASELINE, 1992a) indicates the importance of the northern portion of the site as foraging habitat. The extent of suitable foraging habitat on the site varies from year to year as cropping patterns change, but areas devoted to alfalfa generally remain in production for four to five years after planting because this is a perennial species, making it particularly important to foraging raptors. Areas to the south of Byron Road are most likely currently used by Swainson's hawk for foraging, particularly when management of alfalfa fields exposes prey, but further detailed surveys would be necessary to confirm the extent and frequency of use.

The extent of alfalfa on the site has changed considerably since the 1991 field survey effort, with substantially more area south of Byron Road devoted to alfalfa production in 1992 and 1994 (Figures



#### 4.11 BIOLOGICAL RESOURCES

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4.11-2 and 4.11-3). Over 50 percent of the area north of Byron Road devoted to alfalfa in 1991 (Figure 4.11-1) is currently unplanted or in production with another crop (Figure 4.11-3), emphasizing the importance of the remaining alfalfa fields to the south of Byron Road. The CDFG considers all agricultural and pastureland not devoted to unsuitable crop-types (i.e., vineyards, mature orchards, and cotton) as potential foraging habitat, including plowed or fallow lands and fields under

crop rotation which are currently planted with a crop where prey are inaccessible, such as corn (CDFG, 1992).

Inventories of acreages devoted to crops and other uses on the site provide an estimate of the extent of suitable foraging habitat on the site. The analysis from the SEIR used information from an inventory conducted for the applicant in September 1992 (The McCarty Company, 1992)<sup>7</sup> to provide an initial determination on the total acreage which would meet the CDFG criteria for suitable habitat. Inventories were also conducted in 1989 and 1994 (The McCarty Company, 1989; 1994), and together provide a preliminary estimate of the average acreage devoted to suitable and unsuitable foraging habitat (Table 4.11-2). Excluding dairy facilities, non-farm lands with residential and other developed uses, and almond orchards (which over three years averaged a total of 418 acres), the remaining 4,260 acres of the site represents suitable foraging habitat for Swainson's hawk based on cover types. Of this, fields planted in alfalfa (three-year average of 1,556 acres) provide high quality foraging habitat, and the remainder generally provides moderate to low quality habitat. Areas devoted to corn (three-year average of 324 acres) provides poor quality habitat in the year planted due to the inaccessibility of prey, but is still considered potential foraging habitat by the CDFG as these fields tend to be planted with suitable crop types in subsequent years as part of crop rotation. Although a detailed inventory was not performed for crop estimates in 1993, the extent of cropland devoted to alfalfa has been estimated to be as high as 2,332 acres, assuming that no alfalfa acreage was removed in 1992 and 305.6 additional acres were planted south of Byron Road in 1993 (The McCarty Company, 1994).

In 1990, the City of Stockton initiated a process to develop a plan to provide for mitigation for the loss of Swainson's hawk foraging and nesting habitat due to proposed development within that city. It was determined that providing adequate mitigation was infeasible if restricted to the city limits, and the study area was expanded to include all of San Joaquin County. Participation by the County and other local jurisdictions necessary to complete a countywide plan was initiated, but funding for the expanded scope of work has not been secured. Only a preliminary draft Habitat Conservation Plan has been completed (Jones & Stokes Associates, 1991). In 1993, the San Joaquin County Council of Governments (COG) Board voted to add preparation of a countywide, multi-species Habitat Management Plan to the COG work program. Eventually, a regionally-based multi-species

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<sup>7</sup> The crop acreages identified in the subsequent surveys vary from those identified in the original FEIR due to the time of year and changes in crop patterns.

#### 4.11 BIOLOGICAL RESOURCES

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Habitat Conservation Plan may serve to finance the acquisition and maintenance of habitat for Swainson's hawk and other special-status taxa in San Joaquin County.<sup>8</sup>

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<sup>8</sup> San Joaquin County and other jurisdictions have required that ~~some~~ recent development projects mitigate for the loss of Swainson's hawk habitat, according to the draft mitigation guidelines proposed by the Department of Fish and Game. **Other development projects have been required to "comply with the California Endangered Species Act."** A large subdivision approved by the County in the unincorporated town of Lockford was required to purchase land or conservation easements off-site to mitigate for impacts to Swainson's hawk (the River Oaks subdivision, being constructed by Luis Aristhendi in Lockford, was required to purchase mitigation lands off-site). A 430-unit subdivision proposed in French Camp was similarly required to mitigate for Swainson's hawk impacts according to the CDFG guidelines (the Lee Lakes subdivision, proposed by Madoski, is currently on appeal to the Board of Supervisors). The City of Tracy has required that developers of the large I-205 Specific Plan area, including the regional shopping mall at the Grant Line Road/I-205 interchange, comply with CDFG mitigation guidelines by contributing a per acre fee to a fund that will purchase Swainson's hawk habitat elsewhere.

TABLE 4.11-2

**ESTIMATED CROP AND NON-CROP ACREAGE  
SWAINSON'S HAWK FORAGING HABITAT SUITABILITY**

Crop Type/Land Use	December 1989	September 1992	May 1994	Average Total
<b>Unsuitable foraging cover types:</b>				
Non-farm lands	324.7	324.7	399.7	
Dairy facility	46.0	46.0	56.5	
Almond orchard	<u>57.7</u>	<u>0.0</u>	<u>0.0</u>	
Total acreage	428.4	370.7	456.2	418.4
<b>Suitable foraging cover types:</b>				
Alfalfa	1,140.9	2,027.1	1,500.7	
Corn	0.0	973.1	0.0	
Irrigated row crop - not planted	0.0	0.0	1,291.2	
Other irrigated cropland	2,620.3	801.7	922.1	
Non-irrigated cropland	<u>470.8</u>	<u>487.8</u>	<u>490.5</u>	
Total acreage	4,232.0	4,289.7	4,204.5	4,242.1

Source: The McCarty Company, 1989, 1992, and 1994.

Note: Other irrigated cropland includes green beans, grain, pasture, sugar beets, and cannery tomatoes. Non-irrigated cropland includes pasture and grain. Unplanted irrigated row crops in 1994 could include corn, green beans, sugar beets, and tomatoes, but had not been planted by the time the survey was conducted.

## IMPACTS AND MITIGATION MEASURES

The CEQA Guidelines identify potentially significant environmental effects on biological resources that include:

- impacts on a population or critical habitat of special-status plant or animal taxa;
- substantial interference with the movement of any resident or migratory fish or wildlife species;
- substantial reduction in habitat for fish, wildlife, or plants.

Although not specifically identified in the CEQA Guidelines as a potentially significant effect, modifications to wetlands and substantial non-compliance with policies of San Joaquin County General plan 2010 related to the protection of biological resources are also considered to be potentially significant adverse impacts. Modifications to wetlands are of great concern to jurisdictional agencies due to the regional and national importance of these features, and is therefore considered a significant impact.

### MASTER PLAN

The Draft Master Plan addresses recreational facilities and open space issues for the proposed community, including creation of public parks and management of sensitive biological resources. Approximately 763 acres of the site would be designated for open space use, including a community park along Mountain House Creek, a regional park along the Old River, two golf courses, a marina, wetlands preservation, and other parklands, easements, and buffers. A major component of the Draft Master Plan is the establishment of a multi-purpose Habitat Management Plan (HMP) which would provide for water reclamation, agricultural preservation, and wildlife habitat enhancement for Swainson's hawk and other special-status taxa. Other provisions related to biological resource management include: wetlands preservation, tree conservation, and treatment of other special-status taxa of concern.

### Habitat Management Plan

The project HMP is intended to provide a method for mitigating the loss of foraging habitat for Swainson's hawk and other special-status raptors, and conversion of agricultural lands to non-farm uses. This is proposed through off-site dedication and management of agricultural lands, using reclaimed wastewater as the primary source of irrigation water. The *Mountain House Multi-Purpose Habitat Management Plan* (Zentner & Zentner, 1994a and 1994b) has been proposed as a preliminary HMP for the project, focusing on mitigating loss of foraging habitat for Swainson's hawk. The proposed HMP summarizes information on the status, distribution, and habitat requirements of Swainson's hawk and other raptors, evaluates the proposed project and its relationship to the assumptions regarding potential loss of foraging habitat, describes the proposed mitigation plan, identifies performance and monitoring standards, and provides a preliminary implementation plan. The proposed HMP does not address the on-site nesting activity by Swainson's hawk, which has occurred since the last revisions to the plan were made, and does not include any specific provisions to protect the nest location or critical habitat for the nesting territory.

Three areas have been identified as alternative locations for the proposed HMP wastewater disposal and habitat mitigation area. The three alternatives include: a preferred permanent location, using agricultural lands on Fabian Tract; an alternative permanent location, using agricultural lands in Alameda County immediately west of the site; and an interim alternative, using the lands to the north of Byron Road within the project site for disposal until development in later phases. The location north of Byron Road is being considered for interim use to provide for wastewater disposal requirements for development associated with Specific Plan I until a permanent location is selected and constructed. The interim location would occupy an estimated total of 410 acres, with 120 acres of storage ponds and 290 acres of irrigation lands for wastewater disposal.

~~One of the basic assumptions of the proposed HMP is that the actual area of impact on foraging habitat for Swainson's hawk within the project site is limited only to the area north of Byron Road. This assumption by the applicant's biologist would substantially limit the mitigation requirements for the project.~~ The HMP proposes to provide mitigation for the loss of approximately ~~1,500~~ 3,860 acres of on-site habitat. Additional mitigation is proposed for the loss of foraging habitat resulting from

construction of the permanent wastewater storage ponds so the HMP assumes that mitigation would be required for the loss of approximately ~~1,800~~ 4,160 acres of existing foraging habitat.

### Swainson's Hawk

As proposed in the Draft Master Plan, mitigation for loss of foraging habitat ~~north of Byron Road~~ would be achieved through a combination of different approaches. These include participation in the Mountain House HMP, fee participation in a County-sponsored multi-species conservation program, or by other programs approved by the County, direct payment of mitigation fees to the CDFG, if a CDFG-sponsored program were in effect at the time mitigation were undertaken, or through a combination of these programs. The actual mitigation for loss of Swainson's hawk foraging habitat would therefore be provided incrementally as identified foraging habitat was converted to urban uses.

TABLE 4.11-3

#### APPLICANT'S PROPOSED SWAINSON'S HAWK MITIGATION PROGRAM (SHMP)<sup>1</sup>

Type of Habitat Acquired <sup>2</sup>	Distance of Mitigation Land from Active Nest	Nest Trees Planted	Habitat Enhanced	Mitigation Ratio <sup>3</sup>
Foraging	>10 miles	N/A	Yes	0.75:1
Foraging	>5 miles and within 10 miles	N/A	Yes	0.50:1
Foraging	0 to 5 miles	N/A	Yes	0.33:1
Potential nesting <sup>4</sup>	N/A	Yes	Yes	0.25:1
Existing nesting <sup>4</sup>	N/A	No <sup>5</sup>	Yes	0.17:1

Source: Zentner & Zentner, 1994.

- <sup>1</sup> Program assumes a ~~1,500~~ 3,860-acre area of suitable foraging habitat on the project site would require mitigation. Mitigation would also be required for approximately 300 acres of foraging habitat on Fabian Tract if used for wastewater storage ponds.
- <sup>2</sup> Mitigation lands would be dedicated in fee or through establishment of conservation easements. ~~These Foraging lands would be at least 100 acres in size and, subject to reasonable land availability, contiguous. Nesting habitat (existing and proposed) shall be at least five acres in size and shall contribute no more than six percent of total mitigation lands.~~
- <sup>3</sup> Mitigation ratio represents the amount of land, by habitat type, to be acquired to mitigate for each acre lost to development.
- <sup>4</sup> Combined existing and potential nesting habitat would constitute no more than six percent of total mitigation lands.
- <sup>5</sup> Existing nesting habitat already contains nest trees and would not be planted with additional nest trees.

If applicants for development proposals ~~north of Byron Road~~ elected to participate in the Mountain House HMP, compensation for loss of foraging habitat would be provided according to a mitigation ratio established in a Proposed Swainson's Hawk Mitigation Program (SHMP) (Table 4.11-3). Depending on the type of replacement habitat created or acquired, the applicant would choose from a "menu" of mitigation options. The proposed mitigation credit ratios in the SHMP range from

0.17:1 ratio for acquisition of existing off-site nesting habitat<sup>9</sup>, to a ~~0.75:1~~ 0.5:1 ratio for foraging habitat created or acquired more than 5 miles but less than 10 miles from an active nest. Ratios for replacement foraging habitat less than 10 miles from an active nest would vary from 0.50:1 to 0.33:1, depending on distance from the selected nest location.

#### **San Joaquin Kit Fox**

Provisions in the Draft Master Plan related to San Joaquin kit fox are limited to preconstruction and construction protocol, and no other implementation measures such as compensation for loss of habitat are proposed. The *Background Report, Mountain House New Town and the San Joaquin Kit Fox* (Zentner & Zentner, 1993a) prepared by the applicant's biologist summarizes information on distribution and habitat requirements of kit fox, reviews the results of recent studies conducted in the project vicinity, and makes a comparison of this information to the habitat characteristics of the site. Habitat characteristics and suitability issues evaluated in the report include: prey densities, land use patterns, interspecies competition and predation, escape cover, and barriers to movement. In the section entitled "Legal Requirements," the *Background Report* concludes:

"Considering federal and state law and the specific factual circumstances of the plan, the project proponents have no legal obligation to provide mitigation for the preservation of the San Joaquin kit fox."

#### **Other Special-Status Species**

In addition to Swainson's hawk and San Joaquin kit fox, the Draft Master Plan addresses several other special-status taxa which could be affected by the project, and proposes site surveys for these species prior to submittal of any Development Permit. Implementation measures include: pre-construction surveys to protect active raptor nests during the breeding season, preserving and enhancing the Mountain House Creek and Old River corridors as suitable habitat for taxa of concern, relocation of active burrowing owl nests, and participation in the Mountain House HMP.

#### **Wetlands Management**

Most of the jurisdictional wetlands on the site would be preserved in their existing location. The Draft Master Plan include policies to protect existing wetlands and provide mitigation where impacts are unavoidable. The Plan also includes implementation measures which require the preparation of detailed plans for treatment of wetlands, buffers to protect valuable habitat, control of storm water runoff, and other measures. Separate sections of the Draft Master Plan address the Mountain House Creek corridor and Old River habitat, including information on the preservation and enhancement of wetlands and other habitat values.

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<sup>9</sup> Credit for each acre of foraging habitat lost to development is given for each 0.17-acre of existing off-site nesting habitat acquired as part of the SHMP.

### **Tree Conservation**

The Draft Master Plan includes policies and measures to preserve healthy trees as visual and biological resources. Tree surveys and assessments would be required prior to submittal of the first Development Plan to determine the location, species, and condition of mature trees. Those trees found suitable for preservation would be considered in preparing detailed roadway and development designs. With the proposed measures in the Draft Master Plan, potential impacts on trees is considered less-than-significant with regard to biological resources. This issue is addressed further in Visual Quality, Section 4.8 of this DEIR (see impacts and mitigation measures M4.8-4 and S4.8-4).

### **Mountain House Creek Community Park**

Mountain House Creek Community Park would be established as the primary open space area running diagonally through the project, providing opportunities for passive recreational use and wildlife habitat enhancement. The park would encompass approximately 80 acres, formed by a corridor along the existing creek channel. Habitat restoration within the creek corridor would include creation of perennial and seasonal marshland, riparian woodland, and native grasslands. Implementation measures in the Draft Master Plan address landscape design, flood control requirements, park and recreational use, infrastructure improvements, water quality, and restoration construction. Detailed restoration plans would be required for each specific plan along the creek. Creek improvements would be constructed at the same time drainage and flood control improvements are implemented, to be phased as development proceeds in the different neighborhoods along the Creek.

### **Old River Regional Park**

The Old River levee would be developed as a regional park, serving a variety of purposes including recreational use, wildlife habitat, and flood protection. The Draft Master Plan contains implementation measures to provide for flood control through construction of a second levee, and requirements related to park and recreational use, habitat enhancement, and operation, maintenance, and monitoring. Provisions for habitat enhancement include creation of oak woodland, riparian woodland, and grassland plant communities. Recreational activities would be buffered from the river frontage, with most trails and other improvements constructed along the second levee. Timing, phasing, and responsibilities for the park improvements would be addressed as part of the overall Parks and Open Space Plan, and implementation may be tied to development of neighborhoods adjacent to Old River. The proposed 60-acre marina along Old River is addressed under the Private Recreation section of the Draft Master Plan, with details regarding design criteria to be provided as part of the Specific Plan for the surrounding area.

### **Impact M4.11-1**

**Project implementation would result in the elimination of over 4,000 acres of agricultural land and associated wildlife habitat on the site.**



Implementation of the Mountain House project would eliminate all the existing agricultural and pasture land on the site, which supports a range of wildlife species. Most of the existing habitat would eventually be replaced with urban development, ornamental landscaping, intensively managed parks, and other open space uses that have only limited value as wildlife habitat. Of greatest concern is the area between Byron Road and Old River, where large numbers of mammalian and avian predatory species were observed during field surveys of the site (Figure 4.11-3). The proposed replacement of approximately 1,500 acres of cropland north of Byron Road with urban uses and intensively managed open space uses, such as a marina, golf courses, and neighborhood parks, would offer no viable alternative habitat for wildlife, including several special-status taxa that occur on or frequent the area.

Off-site mitigation programs would serve to protect and enhance existing habitat in the area surrounding the project site, particularly for special-status taxa. Enhancement of the Mountain House Creek corridor and the Old River riparian corridor would improve the wildlife habitat value of these features, but would be bordered by intensive development and recreational uses, and would not fully mitigate the conversion of the remainder of the site to urban uses. The loss of over 4,000 acres of existing habitat on the site represents a substantial reduction in wildlife habitat and must be considered a significant unavoidable adverse impact of the project, as indicated in the CEQA Guidelines.

#### **Mitigation Measures M4.11-1**

*Specific measures recommended to mitigate potential adverse impacts on San Joaquin kit fox, Swainson's hawk, other special-status taxa, the Mountain House Creek corridor, wetland features, and habitat associated with Old River would serve to partially mitigate the loss of existing wildlife habitat. However, the loss of over 4,000 acres of wildlife habitat is an unavoidable adverse impact, which cannot be fully mitigated to a less-than-significant level.*

#### **Impact M4.11-2**

**Project implementation would result in elimination of suitable on-site foraging and dispersal habitat for San Joaquin kit fox.**

Implementation of the proposed project would eventually result in the elimination of all the suitable kit fox foraging habitat on the site. Based on the results and conclusions from the BioSystems survey and discussions with representatives of the USFWS and CDFG in 1992 (BASELINE, 1993), the FSEIR indicated that the project would have a significant adverse impact on kit fox habitat and recommended the preparation of a habitat protection, replacement, and management plan that addressed on-site protection or conservation of replacement habitat. Based on prey availability and cover type, an estimated 3,211 acres of the site were determined to be of high- or moderate-value as kit fox foraging habitat in the FSEIR, with the remaining 1,456 acres considered to be of little

or no habitat value (BioSystems, 1992).<sup>10</sup> Consultation with representatives of the USFWS and CDFG during the 1992 survey by BioSystems indicated that an acceptable compensation for loss of suitable kit fox habitat would be a 3:1 ratio (three acres of replacement habitat for each one acre lost to development), consistent with mitigation requirements for other developments affecting substantial areas of kit fox habitat in the area, including the proposed Los Vaqueros Reservoir and Byron Airport projects in Contra Costa County (BioSystems, 1992). However, in response to concerns raised by the applicant's consultants over the recommended 3:1 ratio of compensation for lost habitat, and questions raised over the jurisdictional authority of the County in defining specific mitigation measures for compliance with CESA and FESA, specific references related to possible mitigation ratios and acreage requirements were deleted from the text and mitigation measures in the SEIR.

As noted previously, the applicant's position is that the site does not provide suitable denning and foraging habitat for kit fox, that the project would not result in a "take," as defined by the Endangered Species Acts, and that no habitat compensation should be required. Somewhat inconsistently, the Draft Master Plan does include pre-construction and construction protocol "to ensure that project construction does not result in harm or injury to the kit fox." In a second review of the BioSystems report, another biological consultant retained by the applicant states that kit fox individuals from the population in the grasslands of the Altamont Hills "may occasionally investigate portions of the Mountain House site, and that juveniles may sometimes move through the area attempting to disperse to suitable habitat, but that the site is not part of the home range of any kit fox" (H.T. Harvey and Associates, 1994).

Most of the proposed protocol would meet the pre-construction, construction, and operational recommendations specified in the survey report by BioSystems and the *Standardized Recommendations for Protection of the San Joaquin Kit Fox* (USFWS, 1989). However, some details of the proposed protocol appear to be inadequate to ensure protection of any kit fox encountered during construction. These include:

- the length of time between pre-construction surveys and when construction occurs;
- the definition of dens; and
- the lack of consultation with the USFWS.

The length of time allowed between pre-construction surveys and the actual grading or other disturbance of the site could increase the possibility that kit fox may subsequently move into an area and could be harmed or killed if trapped in a den when construction actually begins. The pre-construction protocol focuses on "known" dens rather than both "known" and "potential" dens, as defined in the *Standardized Recommendations* of the USFWS. The failure to consider "potential" dens could reduce the available retreat cover for kit fox using the site. Finally, the proposed protocol provides for only limited consultation with representatives of the USFWS in determining appropriate

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<sup>10</sup> Alfalfa fields and berms were considered by BioSystems to provide atypical, but high-quality habitat. Irrigated oats, dry oats, and grasslands were considered to provide moderate-quality habitat. Irrigated pasture, riparian/marsh, and row crops/fallow fields were considered to provide little or no habitat value to kit fox.

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treatment of any known dens that are encountered during the pre-construction survey or necessary monitoring.

Because of the discrepancy between the mitigation requirements recommended by jurisdictional agencies during preparation of the SEIR and the limited mitigation proposed in the Draft Master Plan, ~~an informal consultation was conducted with~~ the USFWS **was consulted** during preparation of this DEIR. The purpose of the ~~informal~~ consultation was to ascertain the agency's position regarding kit fox occupancy of the site and the likely mitigation requirements to permit incidental take of the endangered subspecies. Representatives of the USFWS were supplied with all of the studies and assessments addressing kit fox use of the site, including the survey report by BioSystems (1992), the FSEIR (BASELINE, 1993), the *Background Report* by the applicant's biologist (Zentner & Zentner, 1993a), and *Comments on the Background Report* prepared by Sue Orloff of BioSystems (1993).

A meeting was held on 23 November 1993 to review the preliminary findings of the USFWS. The meeting was attended by two representatives of the Service, a representative of the applicant's biologist, and two of the consultants involved in preparation of this DEIR. During the meeting, representatives of the USFWS summarized their interpretation of the *Background Report* and confirmed their position that the site is occupied kit fox habitat, and that the agency would continue to recommend a 3:1 ratio for required mitigation. Using crop data for 1989 and 1992, the USFWS representatives determined that an average of 2,537 acres on the site provide suitable foraging habitat which they concluded would require mitigation if converted to urban uses (USFWS, 1994).

Although the acreage total of 2,537 acres currently considered by USFWS as providing suitable habitat is somewhat less than that determined by BioSystems, it still represents a substantial mitigation requirement, which could be as high as 7,611 acres at a 3:1 ratio. This mitigation requirement could have major ramifications on the long-term feasibility of developing the site, which have not been taken into account by the applicant or the County. The financial ramification of this recommended mitigation requirement should be addressed prior to the approval of the Draft Master Plan, even if mitigation were deferred to the time of individual Tentative Map or Development Permit applications.

Estimates of habitat suitability reflect the cover type at selected periods in time, and changes in crop patterns affect the extent of the suitable habitat on the site. Areas determined to be currently of little or no value to kit fox (i.e., irrigated pasture, row crops, and fallow fields) still have the potential for use as foraging habitat if the site remains in agricultural use. These areas may have supported crops considered to provide atypical high- to moderate quality habitat in the recent past. One approach to providing a more thorough understanding of the extent of high- to moderate-quality kit fox habitat on the site would be to review agricultural cropping patterns over the past five to ten years. Average values could then be obtained for each of the different crop types, and any off-site habitat compensation requirements could be determined from these average values. A survey of past cropping patterns on adjacent lands to the west would also be useful if this area is considered for off-site compensation. This approach to determining compensation requirements could be

implemented during the preparation of a mitigation plan for kit fox, if required by jurisdictional agencies.

There are several factors which would seem to indicate that the recommended 3:1 ratio for replacement habitat may be excessive. This would be the same compensation ratio required for locations where known dens and other direct evidence of use have been documented. As noted previously, the site is located at the periphery of the currently accepted kit fox range mapped by the USFWS. Agricultural cover, especially row crops, have generally not been known to provide important habitat for kit fox, and the changing mosaic of crop types and associated habitat may be limiting factors in the suitability of the site as foraging habitat. Further detailed study on kit fox use of agricultural habitat would be necessary to clarify the importance of this habitat type, particularly in the northern portion of their range. However, the lack of any definitive evidence of kit fox occurrence and use of the site indicate that the overall habitat value is lower than the nearby grasslands of the Altamont Hills, where numerous sightings and dens have been documented.

These factors would seem to justify consideration of less than a 3:1 compensation ratio for the loss of designated high- to moderate-quality atypical habitat on the site. Preservation and enhancement of approximately 2,537 acres of the agricultural lands to the west of the site as part of a kit fox habitat management plan for the project would serve to retain similar habitat within the known range of kit fox (where at least one kit fox has actually been sighted). Preserving agricultural acreage at a mitigation ratio of 1:1 may serve as a reasonable compromise between the applicant and jurisdictional agencies and help to resolve permit requirements without the added costs and delays associated with possible legal actions. Alternatively, the applicant could be required to purchase conservation easements for land within the "Core Conservation Area" west of I-580, identified in the County's draft HCP.

#### **Mitigation Measure M4.11-2**

*(a) The Draft Master Plan provisions related to San Joaquin kit fox should be revised and amended, based on the results of further negotiation with representatives of the USFWS and the CDFG. The revised Draft Master Plan should provide a coordinated approach to addressing the concerns of jurisdictional agencies. Adjacent agricultural lands in Alameda County ~~should~~ **may** be considered as a suitable off-site mitigation area for San Joaquin kit fox, ~~but could not then be used as the location~~ **except for any wastewater storage ponds disposal and habitat management for the Swainson's hawk mitigation, as this would result in further reduction of suitable kit fox habitat.** Alternatively, mitigation lands within the "Core Conservation Area" identified in the County's draft HCP could be acquired by the applicant. Approval of the Draft Master Plan should be contingent on subsequent revisions necessary to comply with San Joaquin County General Plan 2010 policies regarding habitat protection and any possible requirements of jurisdictional agencies, pursuant to the provisions of the State and Federal Endangered Species Acts.*

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*If required by jurisdictional agencies, an incidental take permit and a Habitat Management Agreement for San Joaquin kit fox should be obtained by the project applicant, or by subsequent applicants for other specific plans within the project, or by subsequent applicants of individual Tentative Maps. A copy of any and all fully executed permits and/or management agreements should be submitted to the San Joaquin County Community Development Department prior to the issuance of any Development Permit, construction permits, or building permits, or initiation of any improvements such as construction of water or wastewater treatment plants, whichever occurs first.*

*(b) The Draft Master Plan provisions regarding kit fox should be revised to reflect the position of jurisdictional agencies and the likelihood that an incidental take permit would be required from the USFWS and a Habitat Management Agreement would be required from the CDFG before grading or other modifications to the site would be allowed. Revisions should be made to the relevant discussion, assumptions, policies, and implementation measures in section 7.3.3 of the Draft Master Plan and the ~~"Background Report" by the applicant's biologist (Zentner & Zentner, 1993a)~~ **"The San Joaquin Kit Fox Report" contained in Appendix 7-D** to reflect these likely requirements. These should include the following:*

- Revise Assumption 7.3.3-1 b) of the Draft Master Plan, and Policy a) and Implementation a) for Objective 3 of Biological Resource Management section (Appendix C) to reflect that compensation for loss of suitable kit fox habitat could include off-site mitigation and/or other requirements to comply with the provisions of Section 10(a) of the Federal Endangered Species Act and Section 2081 of the State Fish and Game Code.*
- Revise Implementation a) for Objective 3 of Biological Resource Management section (Appendix C) to indicate that the proposed "Kit Fox Pre-construction and Construction Protocol" contained in Appendix 7-F should be reviewed and meet with the approval of the USFWS and the CDFG, and that these protocol shall apply until jurisdictional agencies determine that their implementation is no longer required to prevent harm or injury to kit fox. A copy of the revised protocol should be submitted to the San Joaquin County Community Development Department, together with the written approval of jurisdictional agencies, prior to issuance of any construction permit or initiation of site improvements, whichever comes first.*

*(c) The proposed "Kit Fox Pre-construction and Construction Protocol" contained in Appendix 7-F of the Draft Master Plan should be revised to provide greater consistency with the preconstruction, construction, and operational recommendations specified in the survey report by BioSystems (1992), and at minimum should meet the "Standardized Recommendations of the Protection of the San Joaquin Kit Fox" (USFWS, 1989). This should include the following:*

- Revise Pre-construction Protocol Measure 1 to adjust the pre-construction survey period from "six (6) months" to "within 60 days" prior to initiation of any construction activity,*

and to include the USFWS in the required notification of survey results within two weeks of completing a survey.

- *Revise Pre-construction Protocol Measure 2 to include treatment of both known and "potential" kit fox dens encountered during pre-construction surveys. This should include provisions related to monitoring of den status (Measure 2a), den destruction (Measure 2b), and establishment of a protective exclusion zone if the potential den would not be destroyed by grading or other development activities (Measure 2e).*
- *Revise Pre-construction Protocol Measure 2d to read as follows:*

*"Prior to destruction of any known kit fox den, the USFWS shall be notified in writing of the intent to destroy the subject den(s), and disposition of the den shall be determined by the USFWS. Destruction of occupied known or suspected natal or pupping dens shall not be permitted during the breeding season (1 November through 31 July), until the den has been vacated or the kit fox pups have dispersed. Adequate measures, including restrictions or curtailment of construction activity and use of exclusion fencing, shall be developed in consultation with the USFWS and implemented to ensure protection of the natal or pupping dens while occupied by kit fox pups."*
- *Revise Pre-construction Protocol Measure 2e to delete all references to specific distances for the protective exclusion zone and to indicate that the size (radius) of the zone shall be established in consultation with representatives of the USFWS and CDFG.*
- *Revise Construction Protocol Measure 1 to include the following provision at the end of the measure:*

*"If live kit fox are encountered, ramps or structures should be installed immediately, if possible, to allow the animal(s) to escape."*
- *Revise Construction Protocol Measure 6 to state that all construction pipes of 4-24 inches in diameter shall be stacked "at least 3.5 feet above ground" prior to use. The end of this measure should include the following provision:*

*"If during inspection, a kit fox is discovered inside a pipe, that section of pipe should not be moved, or if necessary should be moved only once to remove it from the path of construction activity, until the kit fox has escaped."*
- *Revise Construction Protocol Measure 8 to include the following provisions at the end of the measure:*

*"The designated ecological monitor shall notify the USFWS and CDFG in writing within three working days of the findings of any such animal. Notification must include the date,*

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*time, and location of the incident, and any other pertinent information. Any kit fox found dead or injured must be turned over immediately to the CDFG for care and analysis."*

*(d) If off-site mitigation is required by jurisdictional agencies, the management practices and habitat enhancement recommendations specified in the survey report by BioSystems (1992) should be incorporated into the habitat management plan to ensure long-term viability of mitigation areas as kit fox habitat. Any deviation from the BioSystems recommendations should be negotiated with representatives of the USFWS and CDFG, with adequate explanation provided to justify them from a biological standpoint.*

#### **Impact M4.11-3**

**Project implementation would result in elimination of all existing and potential on-site foraging habitat for Swainson's hawk.**

Proposed development would contribute to a reduction in existing and potential foraging habitat for Swainson's hawk, and could adversely affect nesting along this segment of Old River. Habitat loss is the most significant threat to the remaining populations, as agricultural practices change or agricultural lands are converted to urban uses, and as nest trees are destroyed. This conversion of foraging habitat and effect on known nesting territories on the site and vicinity would conflict with San Joaquin County General Plan 2010 policies and would be a significant adverse impact under CEQA, resulting in a substantial reduction of critical habitat for this special-status species.

The loss of nesting and foraging habitat has greatly reduced the breeding range and abundance of Swainson's hawk in California, and the CDFG has developed detailed mitigation guidelines in an effort to protect critical habitat for this species (CDFG, 1992). The *Draft Mitigation Guidelines for Swainson's Hawk* (CDFG, 1992 and 1993) provide information on recommended management, natural history and population status, nesting and foraging requirements, and mitigation criteria for Swainson's hawk, with a general goal of no net loss of breeding or foraging habitat. The guidelines are intended to provide lead agencies and project sponsors with an interim framework for developing adequate measures to mitigate the loss of habitat until a comprehensive plan is completed and adopted by the CDFG. The mitigation criteria specified in the guidelines include: consultation with representatives of the Department; restrictions on disturbance within one half mile of a known nest site from March 1 through August 15; prevention of loss of nest trees; maintenance of sufficient foraging habitat to support breeding pairs and successful fledgling of young; and retention, restoration and enhancement of nesting and foraging habitat. The guidelines stipulate that mitigation for foraging habitat be provided at a minimum 1:1 acre ratio (one acre of replacement habitat for each one acre lost to development).

The CDFG has been continuously reevaluating the provisions of the *Draft Mitigation Guidelines* since they were first prepared in 1990; while the Guidelines provide a framework for mitigation, the degree to which mitigation for specific projects conforms with the Guidelines has varied greatly from region to region. The CDFG is now attempting to standardize enforcement of the Guidelines to

provide predictability in determining mitigation cost/requirements for projects within the species range and a consistent program for enforcement in different counties and regions of the Department. Revised Guidelines were distributed for comment in October 1993 (CDFG, 1993).

The only substantial change between the 1992 and 1993 Guidelines pertains to mitigation ratios considered necessary to maintain sufficient foraging habitat to support breeding pairs. While the 1992 Guidelines call for a 1:1 mitigation ratio for all suitable foraging habitat within 10 miles of an active nest, the mitigation ratios in the revised Guidelines vary with distance from an active nest. Within one mile of an active nest, the minimum mitigation requirement ratio of 1:1 remains unchanged. Beyond one mile but within five miles, the mitigation requirement drops to a minimum ratio of 0.75:1 (0.75 acre of new habitat management lands for every acre lost to development). Beyond five miles but within a 10 mile radius, the mitigation requirement drops again to a minimum ratio 0.5:1. A modified version of the revised 1993 Guidelines will presumably be used by the Department in the future, but as of the date this report was prepared, the 1992 Guidelines are still to be used in evaluating conformance of individual projects with the mitigation goals of the CDFG (Zezulak, 1993).

As discussed in the SEIR, project implementation would result in the loss of over 4,200 acres of suitable Swainson's hawk foraging habitat, which meet the two basic criteria used by the CDFG in determining mitigation requirements to maintain sufficient habitat to support breeding pairs. This would include the loss of over 2,000 acres of alfalfa fields which provide high quality foraging habitat. Due to the extent and density of development proposed on the site, the suitability of foraging habitat on adjacent undeveloped properties ~~to the east and west would most likely~~ **could** be reduced as well, **particularly to the southwest**. In the absence of adequate mitigation, the CDFG would consider this loss of foraging habitat to constitute "take" under Section 2081 of the State Fish and Game Code, and would be considered a significant adverse impact of the project under the CEQA Guidelines (CDFG, 1994).

In an informal meeting held in October of 1993 during preparation of this DEIR, representatives of the CDFG expressed concern over the disparity between provisions in a preliminary version of the proposed HMP and specifications in the *Draft Mitigation Guidelines*. The CDFG representative expressed concern over the feasibility of using treated wastewater for irrigation on mitigation lands for Swainson's hawk, as proposed in the HMP, but could not comment more thoroughly because of the preliminary nature of the HMP and lack of sufficient detail (Mensch, 1993). The concerns of the CDFG were re-iterated several months later in a written review of an expanded version of the proposed HMP, citing "internal inconsistencies", "sweeping generalities", and "major discrepancies" with the *Draft Mitigation Guidelines* (CDFG, 1994). The proposed HMP ~~has had~~ **has had** been refined further since the last review by the CDFG **before circulation of the DEIR**, but the major assumptions regarding mitigation requirements and departure from the *Draft Mitigation Guidelines* remained largely unchanged. ~~The recent nesting activity on the site will most likely only magnify the concerns of the CDFG, and their position that the HMP as proposed inadequately addresses potential impacts on Swainson's hawk and provides insufficient mitigation. The comment letter by the CDFG (1994) on the DEIR again reiterates their concern over the inadequacies of the~~



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previous draft of the proposed HMP. As noted above, the proposed HMP has been revised again during the public review period of the DEIR (Zentner & Zentner, 1994b). Major changes to the proposed HMP include acknowledgment that the project would impact up to an estimated 3,860 acres of suitable foraging habitat and incorporation of recent information on nesting activity on the site. While the revised HMP now recognizes that most of the site provides suitable foraging habitat, the relevant assumptions, policies, and implementations of the Draft Master Plan and many of the provisions of the HMP have not been revised as recommended in Mitigation Measure M4.11-3. Although further review would be necessary to confirm CDFG's position regarding the revised HMP, it appears likely that they would again find the report "inadequate and inaccurate" (CDFG, 1994) given that most of the errors and concerns identified in their most recent review have still not been rectified.

Based on the observations reported in the original FEIR in 1991 and without more recent or thorough studies on foraging activity on the site, the ~~proposed revised~~ HMP prepared by the applicant's biologist ~~concludes~~ **still contends** that historic and **most** current use for foraging by Swainson's hawk is limited to the area north of Byron Road (Zentner & Zentner, 1994b). Swainson's hawk foraging activity observed in 1991 reflected the abundance of high quality foraging habitat (primarily alfalfa fields in the northern portion of the site) and preponderance of poor quality habitat to the south of Byron Road, much of which was tilled soil with no forage value at all (Figure 4.11-1). As noted previously, cropping patterns in agricultural habitat change seasonally and annually, and the foraging activities of Swainson's hawk and other opportunistic feeders are modified as prey abundance and availability change. The abundance of high quality foraging habitat south of Byron Road has increased substantially since 1991 (Figures 4.11-2 and 4.11-3), and it is likely that foraging activity by Swainson's hawk has also increased throughout this portion of the site. Future development would permanently eliminate suitable foraging habitat from the site as agricultural fields were converted to urban uses.

The proposed mitigation ratios specified in Table 4.11-3 provide substantial acreage credit for creating or purchasing nesting habitat, a provision that is not included in either the 1992 or 1993 *Draft Mitigation Guidelines*. While establishment and preservation of nesting habitat is a desirable goal of the HMP, the proposed credit ratios appear excessive given that most riparian habitat along Old River and other locations in the project vicinity would most likely be preserved as a normal condition of development approval. The proposed Swainson's Hawk Mitigation Program (SHMP), a part of the Habitat Management Plan (HMP), also bases credit ratios for foraging habitat on proximity of the mitigation lands to an "active nest,"<sup>11</sup> rather than the distance the converted foraging habitat is from a known nest location as defined in the revised 1993 *Draft Mitigation Guidelines*. All proposed mitigation ratios contained in Table 4.11-3 would provide for substantially less replacement habitat than the minimum ratio specifications of the CDFG guidelines.

The Draft Master Plan ~~and proposed HMP~~ **still contains** outdated information on existing nesting habitat, using information on nesting locations reported from a single source (Jones & Stokes, 1990a). The absence of on-site nesting, **and** distance from nest locations, **and limited foraging activity** was assumed in the ~~proposed previous~~ HMP to be one of the factors which justified a proposed reduction in mitigation requirements from those specified by the CDFG. As indicated by the on-site nesting activity in the 1994 breeding season, this assumption is inaccurate. Other recent surveys conducted for DWR indicate that a number of attempted and successful nest locations occur within two miles of the site, with some less than one mile to the east along Old River (Miriam Green Associates, 1994). The entire site is located within five miles of one or more active nesting territories. Although ideal nesting habitat for the species is absent on the site, isolated trees and less well-developed riparian habitat, such as that occurring along the Old River frontage, could provide nesting substrate in the future. The on-site nesting activity and proximity of other known nesting locations increase the likelihood that the site provides

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<sup>11</sup> The proposed HMP defines an "active nest" as a nest site which has been used within the past three years rather than five years as currently defined by the CDFG.

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critical foraging habitat for one or more nesting pairs and fledgling birds, which should be recognized in refining the proposed HMP and providing adequate mitigation for conversion of suitable habitat.

As currently proposed by the applicant, the HMP would provide mitigation for the conversion of a total of approximately ~~1,800~~ **4,160** acres (~~1,500~~ **3,860** acres on the site north of Byron Road and possibly 300 acres at off-site wastewater storage ponds) of suitable foraging habitat, and assumes that no mitigation would be required for lands south of Byron Road which is still approximately **382** acres less than the average indicated in Table 4.11-2. Using the proposed mitigation ratios from the HMP (Table 4.11-3), a total of from ~~1,350~~ **2,080** to ~~562~~ **1,302** acres of mitigation lands would be established as part of the SHMP if applied to ~~1,800~~ **4,160** acres (Table 4.11-4). The highest estimate (~~1,350~~ **2,080** acres) is based on a mitigation program with no nesting habitat and all foraging habitat located ~~more than~~ **between 5 and 10** miles from an active nest. The lowest estimate (~~562~~ **1,302** acres) is based on a mitigation program with all foraging habitat located less than five miles from an active nest (~~520~~ **1,214** acres) and a maximum amount of acquired existing nesting habitat (~~34~~ **88** acres). These totals could be reduced even further if future applicants choose other methods to meet proposed mitigation requirements in the Draft Master Plan, such as participation in a Countywide HMP. The acreage totals for the proposed HMP would represent less than ~~13~~ **29** to ~~30~~ **46** percent of the acreage requirement specified in the 1992 *Draft Mitigation Guidelines* (Table 4.11-4). A detailed analysis would be necessary to determine the total acreage requirement using the 1993 *Draft Mitigation Guidelines*, but a preliminary estimate of ~~3,700~~ **4,300** acres indicates that the proposed HMP would provide less than ~~from 16~~ **31** percent up to ~~37~~ **49** percent of the acreage requirements specified in the revised 1993 *Draft Mitigation Guidelines*.

Applying the proposed mitigation ratios from the SHMP (Table 4.11-3) to 4,260 acres of suitable foraging habitat on the site and 300 acres for the off-site wastewater storage ponds (instead of the proposed ~~1,800~~ **4,160** acres) results in a maximum total estimate of from ~~3,195~~ **2,280** to ~~1,577~~ **1,413** acres for off-site mitigation lands. Due to major inconsistencies between the basic assumptions and provisions in the Draft Master Plan and the mitigation guidelines of the CDFG, particularly the limited area identified as foraging habitat and lack of any specific measures to protect the on-site nest locations such as development setbacks and construction restrictions, the **revised** HMP ~~as currently proposed~~ would **still** not adequately mitigate potential impacts on Swainson's hawk use of the site.

Concerns over the appropriateness of using treated wastewater in habitat mitigation areas would have to be addressed through careful monitoring and management for salts and mineral levels. Numerous discrepancies over the basic assumptions and appropriate mitigation ratios proposed as part of the HMP and SHMP would also have to be resolved through further negotiation with the CDFG. If these numerous issues can be resolved, the conceptual program and mitigation site design described in the proposed HMP appears to be biologically feasible. Some important details of the proposed mitigation program have not yet been incorporated into the Draft Master Plan or proposed HMP. These include:

- appropriate crop types to be used on mitigation lands;
- minimum size of mitigation lands allowed as part of a specific SHMP;

TABLE 4.11-4  
ESTIMATED ACREAGES FOR  
SWAINSON'S HAWK MITIGATION

Mitigation Guidelines/Program	Mitigation Ratios	Total Mitigation Acreage
Proposed SHMP applied to <del>1,800</del> 4,160 acres	Varies, see Table 4.11-3.	Estimate of from <del>1,350</del> 2,080 to <del>562</del> 1,302 acres. <sup>1</sup>
Proposed SHMP applied to 4,560 acres <sup>2</sup>	Varies, see Table 4.11-3.	Estimate of from <del>3,195</del> 2,280 to <del>1,577</del> 1,413 acres. <sup>1</sup>
CDFG 1992 Guidelines applied to 4,560 acres	1:1	Maximum of 4,560 acres. <sup>3</sup>
CDFG 1993 Guidelines applied to 4,560 acres	Varies between 0.5:1 and 1:1, based on proximity to nest location	Estimate of <del>3,700</del> 4,300 acres. <sup>4</sup>

Source: Environmental Collaborative.

- <sup>1</sup> Highest estimate assumes mitigation program with no nesting habitat and all foraging habitat located over 5 miles but less than 10 miles from an active nest. Lowest estimate assumes all foraging habitat located less than five miles from an active nest and a maximum amount of acquired nesting habitat (~~256 acres of nesting habitat~~).
- <sup>2</sup> This includes 4,260 acres of suitable habitat on-site indicated in Table 4.11-2 and 300 acres of off-site lands to be used for wastewater storage ponds.
- <sup>3</sup> Acreage requirements may be lower, depending on the extent of any on-site habitat preservation, and enhancement efforts for off-site lands.
- <sup>4</sup> Based on the distance of suitable foraging habitat from nearest known nest location along Old River and center of site, with approximately ~~1,000~~ 3,500 acres (together with 300 acres for off-site storage ponds) located within one mile of an active nest, and the remainder of the site located within 5 miles of an active nest.

- a mechanism to ensure a minimum acreage of suitable foraging habitat is provided every year if unsuitable crop types such as silage corn are to be permitted as part of crop rotation;
- development setbacks, restrictions on construction activities, and other provisions to protect the existing nest on the site;
- details on the relationship of the SHMP to phased improvements associated with wastewater reuse; and
- information on all mitigation options and procedures necessary to ensure overall coordination, management, and monitoring of the HMP.

The primary permanent off-site mitigation area on Fabian Tract would provide an opportunity for habitat enhancement in close proximity to the site and numerous known nest locations. The island is surrounded by Old River to the south and the Grant Line Canal to the north, both of which contain riparian habitat which is currently used for nesting and could be enhanced further as additional nesting habitat. The island contains over 4,500 acres of land, allowing for adjustment to the ultimate

size of the habitat management lands in the Mountain House HMP as negotiations with the CDFG (and property owners) proceed and mitigation requirements are more clearly defined.

In contrast, the proposed Alameda County off-site mitigation area west of the site is located at the southwestern edge of the delta system, and does not border any major riparian habitat which is typically preferred for nesting by Swainson's hawk. Mature trees which could be used as isolated nesting locations in this area are scarce throughout the agricultural fields. This mitigation area would eventually be separated from the Old River corridor by future development within the new community, and the further south dedicated habitat is located the more isolated it would be from the river. At buildout of the project, hawks would generally have to fly over urban development to access foraging habitat in the mitigation area. This would most likely contribute to a reduction in suitability and use by Swainson's hawk, even if foraging habitat were enhanced and additional trees were planted and managed for nesting habitat within the mitigation area. Enhancement of this area for Swainson's hawk habitat may also lower its value to other special-status taxa with different requirements which have been reported from the area, including kit fox.

#### **Mitigation Measures M4.11-3**

*(a) Approval of the Draft Master Plan (which includes the HMP) should be contingent on subsequent revisions necessary to comply with San Joaquin County General Plan 2010 policies regarding habitat protection and with Section 2081 of the State Fish and Game Code and the Habitat Management Agreement required by the CDFG.*

*The Draft Master Plan and proposed HMP provisions regarding compensation for conversion of suitable foraging habitat should be revised to provide greater consistency with the "Draft Mitigation Guidelines for Swainson's Hawks in the Central Valley of California" prepared by the CDFG. Depending on the extent of any on-site preservation and the enhancement associated with off-site mitigation, replacement habitat requirements could be as high as 4,560 acres (includes 300 acres for off-site wastewater storage ponds).*

*Revisions should be made to the relevant assumptions, policies, implementations of the Draft Master Plan, and the "Mountain House Multi-Purpose Habitat Management Plan" (Zentner & Zentner, 1994b). This should include the following:*

- Revise Assumptions 7.3.1 a) and b) of the Draft Master Plan, and Policy a) and Implementation c) for Objective 2 of Biological Resources Management section (Appendix C) to indicate that acreage requirements for the HMP would be determined through negotiation with CDFG in preparing a Habitat Management Agreement pursuant to Section 2081 of the State Fish and Game Code.*
- Delete specific references to a limited mitigation requirement of only 1,500 acres throughout the Draft Master Plan and **revise the proposed HMP to indicate that an estimated 4,240 acres of on-site habitat could be converted to urban uses.** Specific references that should be deleted or revised in the Draft Master Plan include: Assumptions 7.3.1 a) and b),*

*Assumption 7.3.2 a), Table 7.3, and Figure 7.8 of the Draft Master Plan, as well as Policy a) for Objective 2 of Biological Resources Management section (Appendix C).*

- *Resolve acceptability of establishing mitigation credit prescription ratios for foraging habitat based on proximity of mitigation lands to an active nest rather than distance of lost habitat from an active nest with the CDFG, and revise the proposed Swainson's Hawk Mitigation Program (Table 7-3 of the Draft Master Plan) accordingly. If the proposed approach is considered acceptable by the CDFG, mitigation ratios indicated in the Swainson's Hawk Mitigation Program should be revised. The proposed establishment of mitigation land greater than 10 miles from an active nest should be eliminated from the Swainson's Hawk Mitigation Program and deleted from Table 7-3 of the Draft Master Plan as these lands would have highly limited value to nesting pairs due to their distance from an active nest.*
- *Resolve acceptability of establishing mitigation credit for nesting habitat, and as directed by the CDFG delete or revise the specified acreage ratios defined in the Swainson's Hawk Mitigation Program of the proposed HMP (Table 7.3 of the Draft Master Plan) for existing and potential nesting habitat.*
- *Revise the relevant text of the Draft Master Plan and the proposed HMP regarding Swainson's hawk nesting habitat to reflect more recent data on distribution of nesting locations in the project vicinity, including the active nests on the site during the 1994 breeding season, that nesting locations change to varying degrees over time as new breeding pairs enter an area or disturbance factors reduce the suitability of historic nest locations, and the fact that trees on the site could be used for nesting in the future.*
- *Revise the text of the Draft Master Plan and the proposed HMP to provide for preservation or adequate mitigation for loss of the active Swainson's hawk nests on the site. Adequate development setbacks should be provided around the active nest **along Old River** to ensure its long-term suitability for nesting, which may include establishment of permanent foraging habitat on the site. The land area of the proposed Regional Park along Old River should be expanded, as necessary, to provide for the protection of the nest and surrounding foraging habitat, with additional policies and implementations included in the Old River Regional Park section of the Draft Master Plan to prevent possible disturbance associated with recreational use of the parklands. This should also include provisions to prohibit or intensively monitor any disturbance, construction, or other project-related activities within 1/2 mile which may cause nest abandonment or forced fledging if the nest is in active use in future years. Details regarding appropriate setbacks, monitoring requirements, and development restrictions **around an active nest, as well as appropriate mitigation if the active nest in the center of the site is lost,** should be defined in consultation with the CDFG.*
- *Revise Implementation g) for Objective 1 of Biological Resources Management section (Appendix C) and the proposed HMP to indicate that unacceptable crop types would not be planted on mitigation lands and that a mechanism would be established to ensure a*

minimum level of high-quality foraging habitat (i.e., alfalfa). Unacceptable crop types to be specified in the HMP should include vineyard, orchard, cotton, and other crop types where prey are inaccessible to foraging hawks. A mechanism to ensure that minimum acreage requirements for suitable foraging crop types are met is particularly important if unsuitable crops such as silage corn are to be permitted as part of crop rotation in the mitigation lands. A minimum acreage requirement for alfalfa within the mitigation area should be coordinated with the CDFG, but the 35 percent specified in the proposed HMP appears too low. Acreage ~~diverted~~ devoted to alfalfa on mitigation lands should at a minimum meet the average for the project site, estimated at 41 percent, based on cropping patterns for 1989, 1992, 1993, and 1994.

- *Revise Implementation h) for Objective 1 of Biological Resources Management section (Appendix C) and the proposed HMP to indicate that use of rodenticide shall only be allowed when small mammal levels pose a serious threat to agricultural crops and populations levels reach a specified threshold. This threshold and procedures to determine and implement remedial action should be coordinated with the CDFG, but the threshold specified in the proposed HMP of only 10 burrows per 100 feet appears too low. A mean of 20 burrows per 100 feet were observed in alfalfa fields during the survey by BioSystems (1992) and would be a more acceptable threshold before use of rodenticides should be permitted.*
- *Revise Assumption 7.3.2 c) of the Draft Master Plan to indicate that mitigated land dedicated as part of a specific Swainson's Hawk Mitigation Program needs to be at least 100 acres in size, consistent with the proposed HMP.*
- *Revise the proposed HMP to include information on all mitigation options, overall phasing and monitoring of all mitigation lands established as part of each specific Swainson's Hawk Mitigation Program, and relationship of implementing the specific programs to phasing of improvements associated with wastewater reuse.*

*A take permit or Habitat Management Agreement for loss of Swainson's hawk habitat should be obtained by the applicant, pursuant to Section 2081 of the State Fish and Game Code. A copy of the fully executed habitat management agreement with the CDFG should be submitted to the San Joaquin County Community Development Department prior to the issuance of any Development Permit, construction permit, or building permit, or initiation of any improvements such as construction of water or wastewater treatment plants, whichever occurs first.*

*(b) The proposed HMP should be revised to include a combination of on-site habitat preservation and off-site replacement. Ideally, the entire area north of Byron Road, containing approximately 1,500 acres, should be set aside as an agricultural preserve to be enhanced and managed for Swainson's hawk and other protected wildlife species, with the required replacement habitat provided at a ratio negotiated and approved by the CDFG, and any additional compensation provided in the immediate vicinity off-site.*

*As an alternative to a combination of on- and off-site habitat mitigation, Fabian Tract would be the preferred off-site mitigation area, due to its location within the Delta system, proximity to active nesting territories, and presence of existing and potential foraging habitat.*

*With the possible exception of the area north of Byron Road, which is currently not within the boundary of the proposed secondary wastewater reuse area, the adjacent lands in Alameda County should not be used as mitigation lands for loss of Swainson's hawk foraging habitat on the site. The proposed alternative permanent reclamation area in Alameda County is unsuitable for Swainson's hawk mitigation due to its distance from Old River and the Delta system, lack of nesting habitat in close proximity to the area, potential conflicts with habitat requirements of other special-status taxa such as kit fox, and ultimate separation from other foraging habitat as the Mountain House project is implemented. Reference to use of adjacent lands in Alameda County as mitigation lands for loss of Swainson's hawk foraging habitat should be deleted from the Draft Master Plan and proposed HMP unless the mitigation area is restricted to north of Byron Road.*

#### **Impact M4.11-4**

**In addition to San Joaquin kit fox and Swainson's hawk, proposed development would affect a number of other special-status taxa.**

The loss of a substantial amount of agricultural habitat would also adversely affect other special-status bird taxa known to occur on or frequent the site. These include: northern harrier, black-shouldered kite, burrowing owl, **loggerhead shrike**, **California horned lark**, and possibly tricolored blackbird. The loss of over 4,000 acres of suitable foraging habitat would contribute to an incremental decline in the status of each of these species, eliminating the site as suitable foraging habitat and possibly destroying active nests as well. Measures implemented to mitigate adverse impacts on Swainson's hawk may also serve to alleviate impacts on these taxa, depending on the extent of on-site habitat preservation, characteristics of any required off-site conservation areas and the provisions for habitat enhancement. Any off-site mitigation area would have to consider whether enhancement efforts for target species would adversely affect the suitability of the area for other special-status taxa which have different habitat requirements.

Measures recommended in the SEIR which address other special-status taxa and minimize loss of raptor nests in active use on the site have been incorporated into provisions of the Draft Master Plan. Without adequate pre-construction surveys, it is possible that nests of special-status raptors could be inadvertently destroyed during incremental phases of development, killing both young and adult individuals. Loss of an active nest for any of the raptors known to frequent the site would be in violation of the Migratory Bird Treaty Act<sup>12</sup> and the State Fish and Game Code. As each large tract of land would be developed, supplemental surveys have been proposed prior to construction,

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<sup>12</sup> The Migratory Bird Treaty Act does not provide protection for habitat of migratory birds, but does prohibit the destruction or possession of individual birds, eggs, or nests in active use without a permit from the USFWS.



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with any active nest protected until fledging has occurred and disposition of the nest resolved in consultation with the CDFG.

Proposed development may also affect special-status plant and animal populations associated with the riparian and open water habitat along Old River. These include the reported population of Mason's lilaopsis in the northwestern corner of the site, as well as possible occurrences of delta smelt, Sacramento splittail, **winter-run chinook salmon**, and California hibiscus. If additional populations of taxa of concern occur along Old River, adequate protection would be necessary to ensure the long-term viability of plant populations and the suitability of the river habitat for delta smelt and other fish species. While the Draft Master Plan includes general implementation measures pertaining to the need for further study during review of Specific Plans, and habitat preservation and enhancement along Old River, no measures have been proposed that address the individual species known from or suspected to occur along the river.

##### **Mitigation Measure M4.11-4**

*(a) To provide for protection of any populations of special-status species along the Old River frontage of the site, the following should be included as part of the Parks and Open Space Master Plan as an additional implementation for Objective 4 of Biological Resources Management section (Appendix C):*

- "j) A habitat protection plan shall be prepared for the population of Mason's lilaopsis in the northwestern portion of the site prior to approval of the first specific plan adjacent to Old River in this area. The habitat protection plan shall be prepared by a qualified plant ecologist in consultation with and which meets with the approval of representatives of the USFWS and CDFG. The plan shall provide for the protection of identified populations, addressing potential impacts associated with boating, marina development, water diversion, storm drainage runoff, levee modifications, and recreational use of levee habitat.*
- "k) A habitat protection plan for Mason's lilaopsis and other special-status taxa which may be encountered during further detailed surveys, shall be prepared prior to approval of any specific plan along Old River. Other special-status taxa of concern include delta smelt, Sacramento splittail, **winter-run chinook salmon**, and California hibiscus.*
- "l) A survey shall be conducted along the banks of Old River to confirm the presence or absence of the California hibiscus on the site, prior to approval of any specific plan which could affect Old River. The survey shall preferably be conducted by a qualified botanist during the blooming period of this species, in August and September. If populations of this species are encountered, a habitat protection plan shall be prepared by a qualified plant ecologist in consultation with representatives of the USFWS and CDFG. The plan shall provide for the protection of identified populations, addressing*

*potential impacts associated with boating, marina development, water diversion, storm drainage runoff, levee modifications, and recreational use of levee habitat.*

*"m) A survey shall be conducted to confirm the presence or absence of ~~D~~ delta smelt, winter-run chinook salmon, and Sacramento splittail along the river segment bordering the site, prior to approval of any specific plan which could affect Old River. The survey shall be conducted by a qualified fishery biologist using an otter trawl at intervals along the river segment during the spring spawning season and during migration periods. If any of the species is detected, a habitat protection plan should be prepared by a qualified fisheries biologist in consultation with and which meets with the approval of representatives of the USFWS and CDFG. The plan shall provide for the protection and enhancement of existing habitat conditions, addressing potential impacts associated with boating, marina development, water diversion, storm drainage runoff, levee modifications, and recreational use of levee habitat."*

*(b) Several aspects of the Draft Master Plan provisions regarding Other Special-Status Species should be revised to ensure protection of active nests and compliance with applicable State and Federal regulations, as follows:*

- Revise Implementation b) for Objective 4 of Biological Resources Management (Appendix C) to include pre-construction raptor surveys along the Old River frontage of the site as well.*
- Revise Implementation c) for Objective 4 of Biological Resources Management to indicate that any relocation of an active burrowing owl nest should be performed in accordance with CDFG guidelines and that a permit must be obtained prior to any disturbance to the nest.*
- Revise Implementation i) for Objective 4 of Biological Resources Management to indicate that pre-construction raptor and burrowing owl surveys would still be required to protect active nests until young birds have fledged even if an applicant participates in the HMP or other conservation plan.*

#### **Impact M4.11-5**

**The project would block the movement of most terrestrial species between the eastern base of the Altamont Hills and the Delta-farmland region to the east.**

Future development of the site would eliminate the open agricultural habitat and could eventually block wildlife movement across the site for most terrestrial species. While the Mountain House Creek riparian zone has been substantially altered, its proposed use as a "community park" could prevent its functioning as a wildlife movement corridor, particularly if the area were developed with intensively managed landscaping with little cover or habitat value and were designed for active recreational use.

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Mitigation in the SEIR recommended that Mountain House Creek be enhanced and maintained as natural habitat and a wildlife movement corridor across the site. Criteria defined in the mitigation measure included: establishing a restored corridor with a minimum width of 200 feet, use of native plant species to create a mosaic of emergent vegetation and dense cover, restrictions on human access and recreational improvements, and provisions for monitoring of the restoration plan.

The Draft Master Plan addresses the need for preservation and enhancement of the creek corridor, and in general recognizes the importance of minimizing direct human activity within the creek corridor. However, a number of the proposed Implementations would be inconsistent with the recommended criteria to restrict human access, and could limit the potential habitat value of the corridor. In particular, creating a paved, multi-use path on either side of the Creek would contribute to intensive pedestrian and cycling activity along the edge of the corridor. The improved path should be restricted to one side of the Creek, perhaps alternating from side to side of roadway crossings, with a less intensive unpaved hiking trail on the opposite site to define the edge of recreational uses and undisturbed wildlife habitat. The opposite sides of the Creek should be maintained as upland wildlife habitat. In addition, provisions for monitoring, maintenance, and corrective action if the restoration plans do not meet specific performance standards appear to be inadequate to ensure long-term success of the creek restoration effort. The *Mountain House Creek Phase One Habitat Restoration Plan* (Zentner & Zentner, 1993c) provides a detailed conceptual approach to restoration along the segment of the Creek within the Specific Plan I area, but most of the recommended performance standards and monitoring methods have not been incorporated into the Draft Master Plan. Provisions for any monitoring of the Creek restoration effort are currently limited to periodic "inspections" with no performance criteria.

Information on timing of proposed restoration efforts is not clearly defined in the Draft Master Plan. Presumably a restoration plan would be required during review of each Specific Plan encompassing portions of the creek, and specific design and improvement plans would be implemented as adjoining lands along the creek are developed. Flood control improvements are proposed to be constructed sequentially as various neighborhoods are developed along the creek, and any restoration efforts could not be implemented until the final modifications to the corridor for flood control purposes have been completed. This proposed approach to implementation could allow development to proceed and surrounding agricultural habitat to be lost throughout the Specific Plan area until a particular creek segment would be directly affected by construction. The habitat restoration effort along the creek could be fragmented for many years, depending on the ultimate timing of development on adjacent lands proceeds. This approach to restoration would not provide for a continuous corridor of habitat until the entire length of the Creek were developed with urban uses, severely limiting its overall habitat value for much of the life of the project.

Establishment of dense cover along the corridor would take ten years or more after initial plantings, and allowing restoration improvements to be made incrementally would delay the effectiveness of the enhancement effort all that much longer. Implementing the restoration component of the Creek plan during the initial stages of development within a specific plan area would allow for

establishment of protective cover before much of the surrounding lands were developed, and would increase the potential use of the creek as a movement corridor for larger wildlife species.

The Draft Master Plan should serve to ensure that the restoration component of the Mountain House Creek Community Park be funded as a backbone improvement during the specific plan phase, consistent with the Draft Master Plan position that the park be established as the "primary open space spine through the community." This would permit establishment of protective cover for wildlife before adjacent lands are developed with urban uses, and provide for habitat enhancement along the entire length of the Creek within the specific plan area rather than a fragmented approach as individual developments make improvements to the Creek corridor and phased flood control improvements are implemented. To some extent, recreational improvements such as trails, pathways, bridges, fencing, signage, and interpretive displays could still be required as part of individual development plans for affected creek segments. However, this requirement must be balanced with the need to protect sensitive habitat and adequately control human disturbance within the corridor. At some point during buildout of the specific plan area, fencing, signage, and interpretive displays would be necessary to protect sensitive habitat, and trails and pathways would be necessary to direct and control pedestrian activity and to meet recreational demands within the community.

#### **Mitigation Measure M4.11-5**

*(a) The Mountain House Creek Planting and Restoration Measures contained in Appendix 7-A to the Draft Master Plan, referred to in Implementations l), n), dd), ee), and ff) for Objectives 3 and 4 of Parks and Recreation section (Appendix C), should be expanded to include provisions for monitoring, replacement plantings, and re-evaluation of the restoration plan, similar to the provisions contained on pages 27-33 of the "Mountain House Creek Phase One Habitat Restoration Plan" (Zentner & Zentner, 1993c).*

*Several aspects of Draft Master Plan provisions regarding Mountain House Creek should be revised to ensure successful implementation of proposed restoration and enhancement efforts, provide for establishment of protective cover prior to development of adjacent lands, and to limit disturbance to wildlife along the enhanced corridor. This should include the following:*

- *Revise Implementation p) for Objectives 3 and 4 of Parks and Recreation (Appendix C) to read as follows:*

*"p) The restored Mountain House Creek corridor shall accommodate a multi-purpose trail along one side of the creek, but other recreational uses such as picnic areas, playgrounds, and turf shall be restricted outside the corridor to minimize human activity within sensitive wildlife habitat. The location of the multi-use path can vary from either side of the Creek, but the opposite side of the Creek corridor shall remain without a paved path to limit disturbance to wildlife."*

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- *Revise Implementation q) for Objectives 3 and 4 of Parks and Recreation (Appendix C) to read as follows:*
  - "q) Recreational uses may be located along the perimeter of the corridor, but shall require additional land area separate from the minimum corridor width of 200 feet. Trails shall meander on the outside edge of the corridor encroaching no closer than 50 feet from the creek channel or other surface water features, providing views of the creek and a sense of community participation without degrading the wildlife habitat value of the corridor."*
- *Revise Implementation s) for Objectives 3 and 4 of Parks and Recreation (Appendix C) to read as follows:*
  - "s) Recreational activities shall be buffered from wetlands and sensitive wildlife habitat along the Creek. These buffers may include vegetative screens or hedges composed of native plant materials which allow views but discourage access to sensitive areas."*
- *Revise Implementation u) for Objectives 3 and 4 of Parks and Recreation (Appendix C) to read as follows:*
  - "u) A post-and-cable or similar barrier shall be provided along all Creek corridor edges which front public spaces such as roads. 'Good neighbor' fencing (open fencing promoting views of the corridor) shall be used to minimize the potential for dumping of debris and yard clippings into the corridor where private residential and commercial uses border the Creek and no trail system is proposed."*
- *Merge and revise Implementations w) and x) for Objectives 3 and 4 of Parks and Recreation (Appendix C) into a single measure to read as follows:*
  - "w) A multi-use path shall be constructed along the Creek from Marina Boulevard to Old River. A minimum 16-foot right-of-way shall be reserved for the path. Within the right-of-way, a minimum eight-foot width shall be improved with asphalt, and painted with a center stripe. The path shall be grade-separated where it crosses the SP tracks."*
- *Revise Policy e) for Objective 5 of Parks and Recreation (Appendix C) to read as follows:*
  - "e) Passive recreational uses such as bird watching, nature trails, and observation areas are normally compatible with wetlands and may be permitted adjacent to wetlands. Active recreational uses such as ballfields, paved bike trails, or other such uses shall not be located within or immediately adjacent to wetlands areas."*

*The Mountain House Creek Community Park section of the Draft Master Plan, including Implementation v) for Objectives 3 and 4 of Parks and Recreation (Appendix C), should be revised to define timing of the creek restoration component of the park plans during the specific plan phase. Implementation v) should indicate that:*

*"v) All channel modifications, wetland enhancement, and revegetation associated with the Creek restoration component of the park plans shall be funded and implemented as backbone improvements during the specific plan phase and not deferred as a requirement of individual tentative map or phased flood control improvements along the Creek corridor."*

*(b) All exhibits depicting the creek corridor in the Draft Master Plan should be modified to show a single multi-use path, possible alternating from one to the other side of the corridor as it follows the length of the creek (and should include provisions for access for maintenance vehicles). This should include Figures 7.4 and 7.5 referred to in Implementations b), g), and p) for Objectives 3 and 4 of Parks and Recreation (Appendix C).*

#### **Impact M4.11-6**

**Development of the project site would eliminate seasonal wetlands and temporarily flooded areas such as irrigated pastures and drainage swales.**

The Draft Master Plan would preserve most of the existing wetlands in their existing locations, minimizing potential adverse impacts and the need to develop a detailed wetland restoration plan. Restoration of the Mountain House Creek and preservation and enhancement of habitat along Old River would result in a net increase to the total acreage and habitat value of wetlands on the site. Some provisions of the Draft Master Plan related to wetland management would be inconsistent with the objective of preserving these features, providing inadequate setbacks and no verification with jurisdictional agencies. Any unavoidable modifications to wetlands and other waters of the U.S. should still require review by the Corps and CDFG to determine jurisdiction and any mitigation requirements.

#### **Mitigation Measure M4.11-6**

*The Draft Master Plan provisions regarding Wetlands Management should be revised to ensure adequate setbacks from wetlands and coordination with jurisdictional agencies. This should include the following:*

- *Revise Policy d) for Objective 5 of Biological Resources Management (Appendix C) to read as follows:*

*"d) Wetlands shall be protected from damage caused by adjoining development. Buildings and structures shall be setback from the edge of wetlands a minimum of 50 feet. This setback distance should be increased where wetlands are of high value, or restoration and enhancement is proposed."*

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- *The following should be included as an additional Implementation for Objective 5 of Biological Resources (Appendix C):*

*"j) Any proposed modifications to wetlands or waters of the U.S. should be prepared in consultation with and meet, where required, with the approval of representatives of the Corps and the CDFG prior to approval of any specific plans encompassing these features."*

#### **Impact M4.11-7**

#### **Construction and operation of the proposed 60-acre marina would impact the productive inshore zone and riparian edge habitat of Old River.**

The proposed marina could degrade the water quality and habitat value of Old River. The Draft Master Plan currently has no objectives, policies, or implementation measures related to the need to minimize potential adverse impacts of the proposed marina. Disturbance associated with construction and operation of the marina could also adversely affect a number of special-status taxa reported from or suspected to occur along this segment of the Old River, including Mason's lilaeopsis, California hibiscus, delta smelt, and Sacramento splittail. The presence of such a large facility would substantially increase boat traffic on Old River, and would most likely result in higher average boat speeds on this segment of the river due to water skiing and other recreational activities. Increased boating activity and speeds would result in adverse impacts on fish, wildlife, and aquatic habitat. These impacts include: disturbance to fish and wildlife habitat along the shoreline and inshore zone of the River; increased levels of petroleum pollutants; and killing of small fish and aquatic invertebrates through the direct action of propellers and engine water cooling systems. Water stagnation and algal blooms could occur within the marina waters, adversely affecting oxygen availability for young fish and other aquatic organisms.

#### **Mitigation Measure M4.11-7**

*(a) To ensure adequate protection of the aquatic habitat of Old River, the following should be included as an additional policy for Objective 9 of Parks and Recreation (Appendix C):*

*"d) Unless detailed study demonstrates that the potential impacts of the proposed marina on biotic resources could be mitigated to a less-than-significant level, the proposed 60-acre marina shall be eliminated in favor of a boat launch ramp and day use parking lot for the private use of the residents of the new community. This facility could be fashioned along the lines of other San Joaquin County public use ramps and picnic areas such as those located off Manley Road in the Mossdale area and at the end of Dos Reis Road west of Lathrop. This mitigation would provide easy access to the Delta system for the residents of Mountain House New Town while at the same time eliminate many of the potential hazards to the Old River aquatic system caused by a marina operation. Recommended further study shall be conducted as part of the environmental review for the specific plan encompassing the marina area."*

(b) *Implementation b) for Objective 9 of Parks and Recreation (Appendix C) should be expanded to include provisions to minimize disturbance to fish and wildlife habitat of Old River, prevent water quality degradation, and conduct further detailed surveys for special-status taxa as recommended in Mitigation Measures 4.11-4(a), (b), and (c).*

(c) *To minimize disturbance to wildlife and riparian habitat along Old River, the following should be included at the end of Implementation f) for Objective 6 of Parks and Recreation section (Appendix C):*

*" . . . This shall include signage along the length of the site fronting Old River, limiting boat speeds to 5 mph to prevent disturbance to wildlife and riparian habitat."*

#### **Impact M4.11-8**

**Off-site improvements, such as the raw water conveyance pipeline and pumping facilities, wastewater storage ponds, and application of wastewater irrigation could adversely affect sensitive biological resources.**

Project implementation would result in a number of off-site improvements which could adversely affect sensitive biological resources such as critical habitat or restricted populations of special-status taxa, sensitive natural communities, and wetlands. In general, most of the detailed studies conducted during preparation and environmental review of the Draft Master Plan have focused on the project site, and only limited information is available on presence of any sensitive resources within areas considered as possible locations for off-site disposal of wastewater.

Available information indicates that habitat for a number of special-status taxa could be affected by off-site improvements. For the adjacent lands in Alameda County to the west of the site, this could include: suitable foraging and denning habitat for kit fox; foraging and burrow habitat for burrowing owl; aquatic habitat supporting populations of California red-legged frog (*Rana aurora draytonii*) and curve-footed hygroty diving beetle (*Hygroty curvipes*); and possibly populations of several plant taxa of concern reported from the area (Jones & Stokes, 1990a) such as caper-fruited tropidocarpum (*Tropidocarpum capparideum*), San Joaquin spearscale (*Atriplex patula* ssp. *spicata*), Contra Costa goldfields (*Lasthenia conjugens*), and California hibiscus. Detailed surveys would be necessary to confirm the presence or absence of sensitive resources in areas affected by project-related improvements. Enhancement of this area for use by Swainson's hawk and other raptors may also lower its value to kit fox, which have different habitat requirements.

Assuming habitat along Old River and other waterways would not be disturbed by improvements, the presence of sensitive resources on Fabian Tract would be of less concern due to the geographic isolation of the island, which limits access by land-motile species, and the extent of past disturbance by agricultural use. Sensitive resources on Fabian Tract would most likely be limited to nests of Swainson's hawk and other raptors, although further detailed surveys would be necessary to confirm this assumption.



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Use of treated wastewater as the primary source of irrigation water in the mitigation lands of the proposed HMP could result in increased levels of salts and metals, which could affect the agricultural viability of the land to support suitable crop types for use as foraging habitat as well as the types of crops that can be grown. Metals could accumulate on crops or be absorbed through the plant root systems and enter the food chain when ingested by rodents and other herbivores, which provide the primary food source for Swainson's hawk and other raptors addressed by the HMP. Salt and metal levels in the effluent would depend on the wastewater source. Long-term monitoring and management of water quality would be necessary to ensure viability of suitable agricultural crops, and to minimize exposure of wildlife to high levels of metals.

Raw water would be pumped from the California Aqueduct to serve as the source of potable water for the project. **The proposed intake point for water along the aqueduct is located downstream from the Skinner Fish Protection Facility, which is intended to prevent movement of fish and other aquatic species from the Delta into the aqueduct. While the fish screening device used at the Skinner Facility has been shown to be less than 100 percent effective, and fish that are entrained through the facility may subsequently survive to inhabit the California Aqueduct, the fish are considered lost from the Delta for regulatory and resource management purposes. Any entrainment losses at the Skinner Facility are considered an Impact of State Water Project operations on Delta fisheries, not the subsequent downstream diversions or specific project use of water from the aqueduct, including the intake proposed as part of the project. The California Department of Water Resources is required to account and mitigate for fisheries losses at the facility, and no additional mitigation is considered necessary. While major fish screens near Clifton Court Forebay are intended to prevent movement of fish into the aqueduct, it does have a limited fishery resource, and species observed within the aqueduct have included the small delta smelt. Without adequate screening, fish and other aquatic wildlife within the aqueduct could be drawn into the pumping facility and destroyed (Fjelstad, 1993). The CDFG has developed General Fish Screening Criteria to prevent loss of fishery resources, pursuant to sections 1600 and 6100 of the Fish and Game Code. These criteria specify the placement, opening size, and construction requirements of fish screens.**

##### **Mitigation Measure M4.11-8**

*(a) Detailed field surveys of any proposed off-site mitigation locations should be conducted by a qualified biological consultant to determine the presence of any special-status taxa, sensitive natural communities, or wetland resources. Surveys for special-status taxa should focus on the presence of critical habitat features (i.e., nest and den locations of highly mobile species, and breeding habitat for amphibians and insect taxa of concern) which could be adversely affected by construction of the wastewater storage ponds, conveyance pipelines, and other improvements. If sensitive resources are encountered, proposed improvements should be modified, and as necessary, to provide compliance with the State and Federal Endangered Species Acts, a habitat protection plan should be prepared by a qualified biologist in consultation with representatives of the USFWS and CDFG. These provisions could include appropriate setbacks and construction restrictions from a nest or den during the breeding*

*season for the taxa of concern, or relocation of proposed structural improvements such as storage ponds or pipeline alignments.*

~~*(b) The pump intake for raw water drawn from the California Aqueduct should be designed to meet the "General Fish Screening Criteria" used by the CDFG to minimize the loss of fish and other aquatic species.*~~

*(e) (b) Also refer to mitigation measures in Section 4.4.2 of this DEIR, Wastewater, for additional provisions to adequately monitor and adjust the proposed effluent reuse plan to prevent excessive levels of salts and metals in wastewater irrigation.*

### **SPECIFIC PLAN I**

Specific Plan I provides information on recreation and open space resources within the Specific Plan area, identifying the overall recreation system, neighborhood parks, and community parks. The Draft Specific Plan I also contains a discussion on Biological Resources, addressing the proposed HMP and Swainson's hawk mitigation, San Joaquin kit fox, wetlands management, and other sensitive species. As proposed in the Draft Master Plan, provisions related to protection of kit fox are limited to pre-construction and construction protocol. The Draft Specific Plan I discussion on Swainson's hawk and the proposed HMP assume that approximately 175 acres of foraging habitat would be lost, together with possibly a portion of the 300 acres of habitat on Fabian Tract if wastewater storage ponds are constructed as part of this phase of development. No mitigation has been proposed for conversion of suitable Swainson's hawk foraging habitat to the south of Byron Road, and the discussion simply defers to the Draft Master Plan for information on timing and location of proposed mitigation.

Provisions contained in the Draft Master Plan and Draft Specific Plan I, with recommended revisions made in this DEIR, would serve to mitigate potential impacts on other special-status taxa, wetland resources, and mature trees to a level of less-than-significant. Specific Plan I would not result in any direct impacts to Old River, although an increasing population on the site could lead to additional human activity along the banks of the River and the demand for a regional park.

#### **Impact S4.11-1 (C,O,M)**

**Specific Plan I would result in elimination of suitable foraging and dispersal habitat for San Joaquin kit fox on over 700 acres of the site.**

Implementation of Specific Plan I would result in the conversion of more than 700 acres of atypical foraging habitat considered to be of high to moderate quality for use by kit fox, based on the suitability analysis prepared by BioSystems (1992). Depending on phasing, urban development within the Specific Plan I area could disrupt movement and dispersal through other portions of the site, resulting in fragmentation of surrounding agricultural habitat and contributing to a further reduction in suitable habitat. No provisions have been made to provide for the loss of kit fox habitat, and without adequate mitigation, implementation of Specific Plan I may be in violation of the State and Federal Endangered Species Act.

Pre-construction survey and construction protocol have been proposed to prevent harm or injury to kit fox, but this has not been clearly identified as an implementation in Specific Plan I. Revisions to the proposed protocol included in Appendix 7-F of the Draft Master Plan would also be necessary to ensure protection of kit fox during construction.

#### **Mitigation Measure S4.11-1 (C,O,M)**

*(a) Specific Plan I section 7.2.2 should be revised to include appropriate discussion, policies, and implementation measures regarding San Joaquin kit fox, consistent with the recommendations in Mitigation Measures 4.11-2(a), (b), (c), and (d). Approval of Specific*

*Plan I should be contingent on subsequent revisions necessary to comply with the State and Federal Endangered Species Acts.*

*(b) The Kit Fox Pre-construction and Construction Protocol contained in Appendix 7-B of the Draft Master Plan should be revised as recommended in Mitigation Measure M4.11-2(c), and section 7.2.2 of the Draft Specific Plan I should be expanded to include an implementation measure which requires that these protocol shall apply until jurisdictional agencies determine that their implementation is no longer required to prevent harm or injury to kit fox.*

**Impact S4.11-2 (C,O,M)**

**Specific Plan I would result in elimination of over 1,000 acres of suitable foraging habitat for Swainson's hawk on the site.**

As currently proposed, Specific Plan I would provide mitigation for less than 15 percent of the over 1,000 acres of existing and potential Swainson's hawk foraging habitat which would be converted to urban uses, a substantial portion of which is now planted with alfalfa. An additional 410 acres to the north of Byron Road outside the Specific Plan I area could be affected through construction of storage ponds and modifications to agricultural lands associated with land disposal of treated wastewater for this first phase of development in the new community. This could result in the elimination of 120 acres of high-quality habitat to accommodate wastewater storage ponds. Because the Draft Specific Plan I lacks any provisions related to appropriate management of agricultural lands in the wastewater reuse program, even the estimated 290 acres necessary for land disposal of treated effluent could eventually become unsuitable as foraging habitat for Swainson's hawk. This loss of suitable foraging habitat for Swainson's hawk would most likely be considered "take" of a State threatened species by the CDFG, and would be a significant adverse impact under the CEQA Guidelines.

**Mitigation Measure S4.11-2 (C,O,M)**

*The Draft Specific Plan I section 7.2.1 should be revised to include appropriate discussion, policies, and implementation measures regarding Swainson's hawk and the proposed Habitat Management Plan, consistent with the recommendations in Mitigation Measures 4.11-3(a) and (b). This should include deleting the reference to loss of only 175 acres of Swainson's hawk foraging habitat on the site, and providing a clear description of the timing and relationship of required mitigation to wastewater reuse if the proposed HMP is to be implemented during Specific Plan I. Approval of the Draft Specific Plan I should be contingent on subsequent revisions necessary to comply with the required habitat management agreement with the CDFG.*

*~~As required by the CDFG, a~~ **A take permit for loss of Swainson's hawk habitat shall be obtained by the applicant required,** pursuant to Section 2081 of the State Fish and Game Code. **A If required, a copy of the fully executed habitat management agreement with the CDFG should be submitted to the San Joaquin Community Development Department prior to the issuance of any***

#### 4.11 BIOLOGICAL RESOURCES

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*Development Permit, construction permit, or building permit, or initiation of any improvements, such as construction of the water or wastewater treatment plants, whichever occurs first.*

##### **Impact S4.11-3 (C)**

**The proposed Mountain House Creek Linear Park includes trail and landscape improvements which would contribute to intensive human activity along the Creek and would limit the potential wildlife habitat value of the corridor.**

While the proposed *Mountain House Phase One Habitat Restoration Plan* (Zentner & Zentner, 1993c) provides a thorough evaluation of the existing condition of the Mountain House Creek corridor, appropriate plantings, and a conceptual approach to restoration, most of the recommended performance standards and monitoring methods contained in that Plan have not been incorporated into the Draft Master Plan or Draft Specific Plan I. Without adequate monitoring, maintenance, and any necessary corrective action if specific performance standards were not met, the long-term success of the Creek restoration effort is questionable. Details of the creek plans indicated in the Mountain House Creek Linear Park Concept would conflict with recommended revisions to the Draft Master Plan intended to minimize habitat disturbance in the corridor. These potential conflicts include: pathways along both sides of the Creek, corridor widths that appear to be less than 200 feet, and ornamental landscape improvements at roadway crossings and other locations along the corridor.

The creek restoration component would apparently be constructed in sequence to coincide with flood control improvements which would be necessary as various neighborhoods are developed along the corridor. As currently proposed, improvements would actually be restricted to just one side of the creek until development reaches a threshold in one neighborhood. The Draft Specific Plan I contains no information on the relationship between flood control improvements and creek restoration. Due to the phased approach to implementing improvements, the habitat restoration effort along the creek would be fragmented for some period of time, possibly years. This approach would not provide for important cover along both sides of the creek until bordered by development, and would severely limit the habitat value of the restoration effort and function as a movement corridor for larger wildlife species.

##### **Mitigation Measure S4.11-3 (C)**

*The Draft Specific Plan I section 7.1.3 should be revised to include appropriate discussion, policies, and implementation measures regarding treatment of the Mountain House Creek corridor, consistent with the recommendations in Mitigation Measure 4.11-5(a).*

##### **Impact S4.11-4 (C,O,M)**

**Off-site improvements, such as the raw water conveyance pipeline and pumping facilities, wastewater storage ponds, and application of wastewater irrigation could adversely affect sensitive biological resources.**

Several aspects of the Draft Specific Plan I would require off-site improvements which could affect critical habitat or restricted populations of special-status taxa, sensitive natural communities, and wetlands. Pumping from the California aqueduct could destroy fish and other aquatic wildlife within the aqueduct drawn into the pumping facility if adequate screening were not provided at the intake point. Specific impacts associated with the wastewater reuse program would depend on the alternative location selected for land disposal and storage pond construction, but could result in significant adverse impacts if further detailed confirmation surveys were not conducted, necessary modifications made to protect sensitive resources, and appropriate monitoring and management measures are not implemented.

**Mitigation Measure S4.11-4 (C,O,M)**

*Additional detailed field surveys, necessary modifications to all proposed off-site improvements to be used during any phase of implementation of Specific Plan I, and appropriate monitoring provisions recommended in Mitigation Measures M4.11-8(a), (b), and (c) should be implemented prior to approval of any Tentative Map within the Specific Plan I area or issuance of any Development Permit, construction permit, or building permit, or initiation of any improvements such as construction of water or wastewater treatment plants, whichever occurs first.*

## 4.12 TRANSPORTATION

### SETTING

The existing conditions of the regional and local road network are described in detail in the original FEIR for the General Plan Amendment for Mountain House New Town (BASELINE, 1992a) and are largely unchanged since its preparation. That information is summarized below, and updated, when applicable, specifically for traffic volumes.

#### State and Regional Highways

The project site is located within a mile of two interstate freeways that provide regional site access. Interstate 580 (I-580) is an eight-lane freeway extending east from the San Francisco Bay Area, traversing the San Ramon/Livermore Valley (Tri-Valley) area, extending across the Altamont Pass easterly to the Interstate 205 (I-205) junction, and then continuing southeasterly as a four-lane freeway to connect to Interstate 5 (I-5) for north-south regional travel (Figure 4.12-1). I-205 extends as a four-lane freeway from its junction with I-580 near the Alameda-San Joaquin County line, passes along the southern boundary of the project site and continues for approximately 13 miles to connect with I-5 northeast of Tracy. In conjunction with I-580, I-205 provides an important connection between the Central Valley and the Bay Area. Both I-580 and I-205 are Congestion Management Program (CMP) routes.

There are five freeway interchanges connecting to local roads within five miles of the project site: on I-580 at Grant Line Road and Patterson Pass Road, and on I-205 at Patterson Pass Road, 11th Street, and Grant Line Road (Figure 4.12-1). These interchanges are generally unsignalized diamond interchanges built to rural standards.

#### Local Roads

The project site is served by several arterial roads within San Joaquin County and other jurisdictions (Figure 4.12-1). Most of these roads are currently two-lane rural roads with relatively straight alignments and posted speeds of 50 mph.

- Patterson Pass Road is a north-south road along the east edge of the project site, connecting Byron Road to I-205 and continuing south to I-580.
- Grant Line Road is a main east-west local route that crosses the southern portion of the project site; Grant Line Road is offset by about half a mile at Byron Road, continuing easterly into the City of Tracy.

# SITE VICINITY ROADWAYS

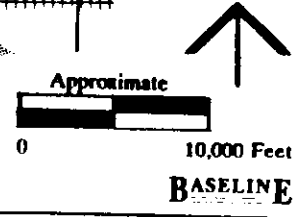
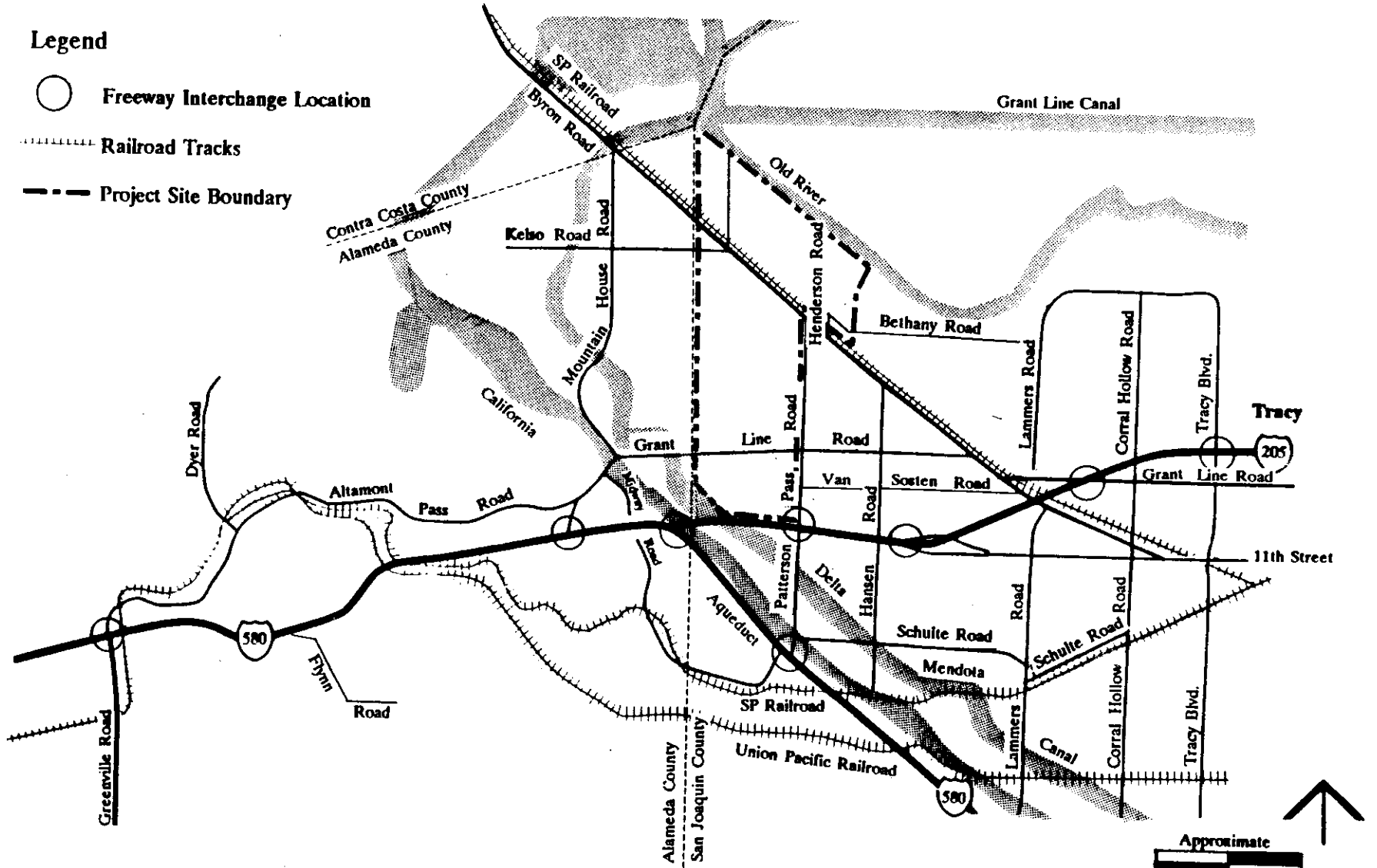
Figure 4.12-1

**Legend**

○ Freeway Interchange Location

⋯ Railroad Tracks

--- Project Site Boundary



4.12-2



- 11th Street is a four-lane major arterial that extends from I-205 several miles east of the project site into central Tracy. The segment from I-205 to Tracy Boulevard is on the County's CMP system.
- Byron Road is a two-lane rural highway connecting the Brentwood area in Contra Costa County with downtown Tracy, passing diagonally through the northern portion of the project site.
- Mountain House Road is a north-south road in Alameda County, about a mile west of the project site.
- Altamont Pass Road is a winding two-lane road that parallels I-580 from Mountain Pass House Road westerly through the Altamont Pass to Greenville Road in Livermore.

Several other two-lane minor local roads cross or terminate at the project site. Kelso Road, which crosses Byron Road, provides local access to the northwest portion of the site, while Henderson and Bethany roads provide access to the northeast portion of the site. Von Sosten Road provides local access to the site south of Grant Line Road between Byron and Patterson Pass roads.

#### Existing Traffic Volumes

The highest average daily traffic (ADT) volumes in the study area are observed on I-580, with total two-way daily traffic of about 105,800 vehicles just west of the I-580/I-205 junction (Figure 4.12-2). South of this junction, the volume on I-580 drops to about 28,500, while I-205 east of the junction carries the remaining 77,300 daily vehicles (Figure 4.12-2).



I-580 is an important east-west route for truck travel; average daily traffic on I-580 at the Altamont Pass includes about 15 percent truck traffic, based on Caltrans reports on truck traffic on State highways (Caltrans, 1989). Peak-period truck traffic counts for I-205 indicate that the AM peak period traffic stream is about 12 percent heavy vehicles (trucks, light trucks, buses, and recreational vehicles), while the corresponding portion for the PM peak-period traffic stream is about eight percent (Korve Engineering, Inc., 1990). Existing AM and PM peak hour volumes are shown in Figures 4.12-3 and 4.12-4, respectively.

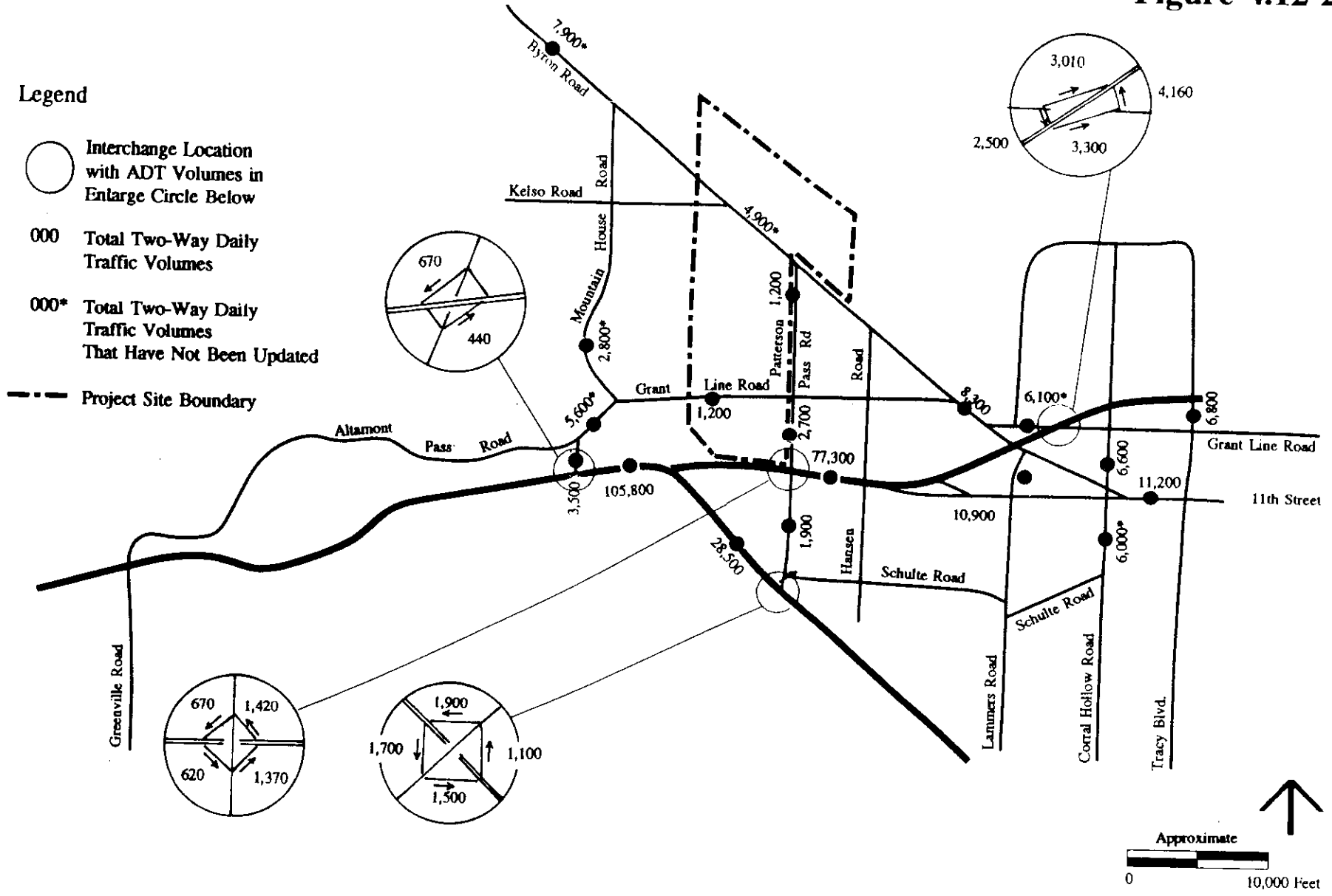
Most of the other study area roads have ADT volumes of less than 5,000 (Figure 4.12-2). Exceptions are 11th Street, with an ADT of about 10,900 just east of I-205 and 11,000 east of Corral Hollow Road; Byron Road, which carries about 7,900 vehicles daily northwest of the project site and 8,300 vehicles southeast of the project site; Grant Line Road with ADT volumes of about 5,600 near its intersection with Altamont Pass Road and 6,100 just to the east of its intersection with Lammers Road; and Corral Hollow Road, with an ADT of approximately 6,600 south of Grant Line Road. At the project site, Byron Road has an ADT volume of about 4,900, Grant Line Road has an ADT volume of about 1,200, and Patterson Pass Road carries about 2,700 vehicles daily near the I-205 interchange. North of Grant Line Road, the ADT on Patterson Pass Road decreases to about 1,200 vehicles.

# EXISTING AVERAGE DAILY TRAFFIC (ADT) VOLUMES

Figure 4.12-2

**Legend**

-  Interchange Location with ADT Volumes in Enlarge Circle Below
- 000** Total Two-Way Daily Traffic Volumes
- 000\*** Total Two-Way Daily Traffic Volumes That Have Not Been Updated
-  Project Site Boundary





4.12-4

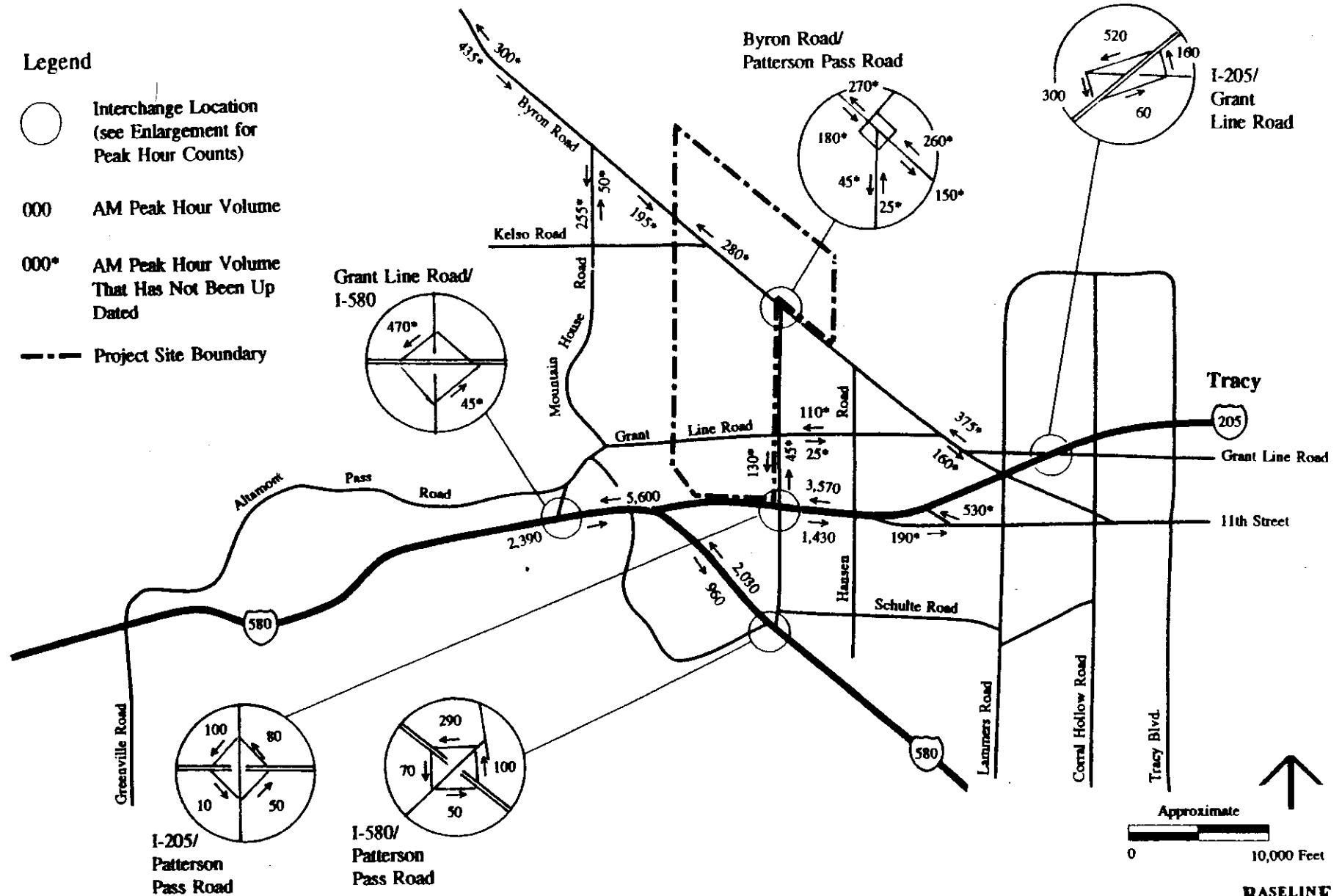
Sources: Caltrans 1993, San Joaquin County 1993, Alameda County 1989-1990, Korve Engineering 1990.

# EXISTING AM PEAK HOUR TRAFFIC VOLUMES

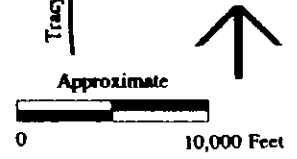
Figure 4.12-3

## Legend

-  Interchange Location (see Enlargement for Peak Hour Counts)
- 000 AM Peak Hour Volume
- 000\* AM Peak Hour Volume That Has Not Been Up Dated
-  Project Site Boundary



4.12-5



BASELINE

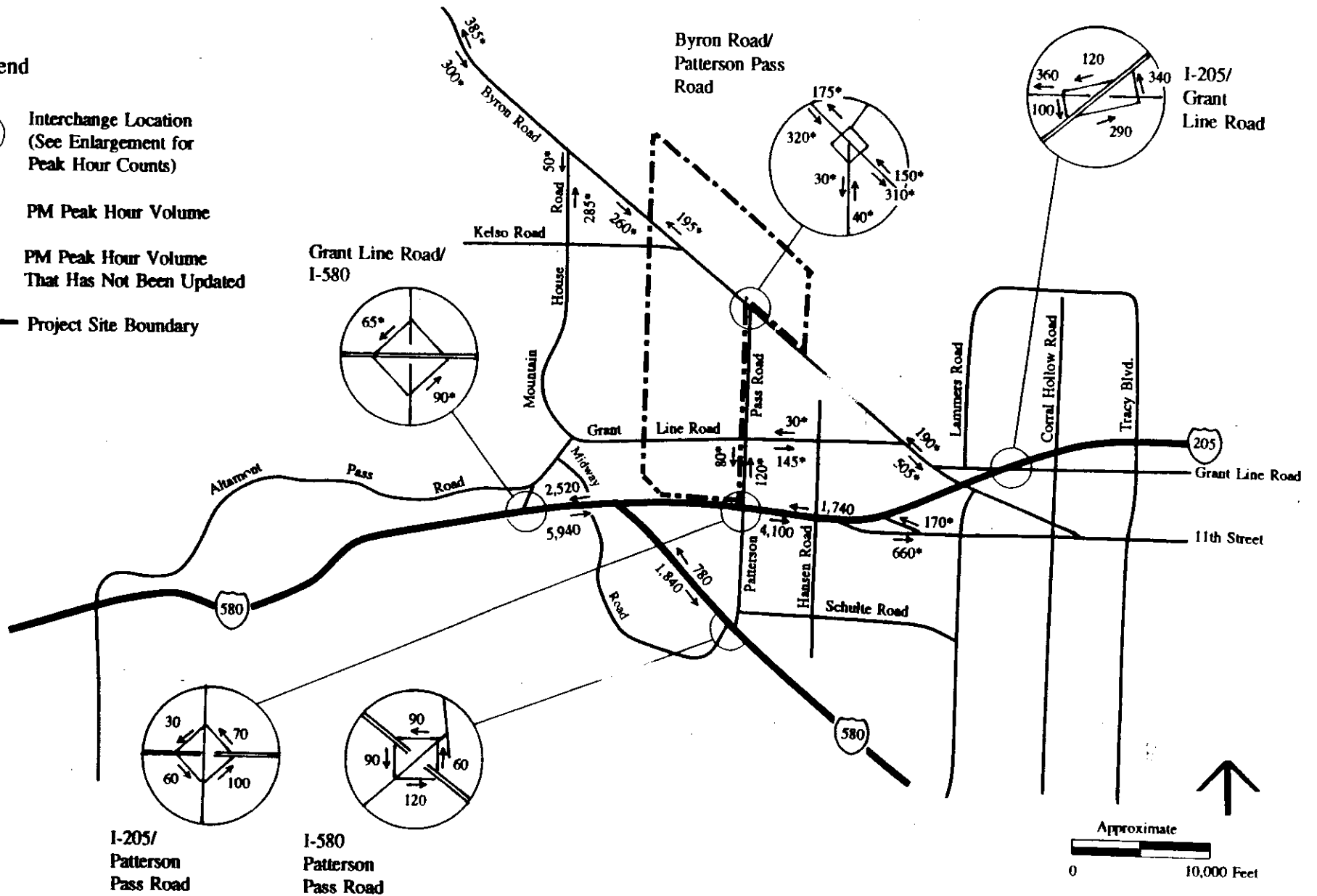
Sources: Caltrans 1993, San Joaquin County 1993, Alameda County 1989-1990, Kerve Engineering 1990.

# EXISTING PM PEAK HOUR TRAFFIC VOLUMES

Figure 4.12-4

**Legend**

- Interchange Location (See Enlargement for Peak Hour Counts)
- 000 PM Peak Hour Volume
- 000\* PM Peak Hour Volume That Has Not Been Updated
- Project Site Boundary



4.12-6

Sources Caltrans 1993, San Joaquin County 1993, Alameda County 1989-1990, Korve Engineering 1990.

### Levels of Service

Levels of Service (LOS) standards are letter grades of A through F which rate the quality of traffic flow on a roadway (see Appendix E for Level of Service descriptions). Analysis of existing LOS for roadway segments in the project vicinity have been performed for the existing conditions and is based the 1985 *Highway Capacity Manual* (Transportation Research Board, 1985) procedures. Existing AM and PM peak hour LOS have been calculated using the peak hour volumes shown in Figures 4.12-3 and 4.12-4.

The San Joaquin General Plan 2010 requires LOS standards for various types of roads:

- On all State highways: LOS D or better.<sup>1</sup>
- Within a city's sphere of influence: LOS C or better, or LOS D if allowed by the City General Plan.
- On all other roads: LOS C or better.

Most site vicinity freeways and roads operate at LOS C or better during peak periods, with one exception (Figure 4.12-5 and Table 4.12-1). I-205 operates at LOS F during PM peak hours in the eastbound direction. During the AM peak period, I-205 operates acceptably at LOS D or better. Existing ramps and interchanges in the site vicinity generally operate with minimal delays at all times of the day.

Two-lane rural road LOS analysis is based on average travel speeds and frequency of passing opportunities, which are measures of the quality of traffic flow as perceived by the driver. LOS A and B indicate satisfactory passing opportunities and free flow speeds of over 50 mph. Most of the site vicinity roads currently operate at LOS A or B. LOS C indicates the formation of "platoons," or groups of cars formed behind a slightly slower vehicle which slows travel speeds and hinders passing ability. Free flow speed is still over 50 mph on straight rural roads with LOS C operations; however, the opportunity for drivers to pass at will is reduced.

### Transit Service

The nearest regularly scheduled bus service to the project site is provided by the San Joaquin Regional Transit District. The Transit District currently serves the Stockton Metropolitan area, which is more than 25 miles from the project site, but ~~plans to expand into other areas of~~ **is in the process of extending intercity service in San Joaquin County as the need arises.** In addition, the District operates regional transit service from San Joaquin County to the Bay Area (as far north as Contra Costa County and as far south as Santa Clara County), Stanislaus County, and Sacramento, including subscription morning/evening commute service between the Lawrence Livermore National Laboratory, located about ten miles west of the project site, and the cities of Stockton, Manteca, and Tracy, and service to the Bayfair BART Station.

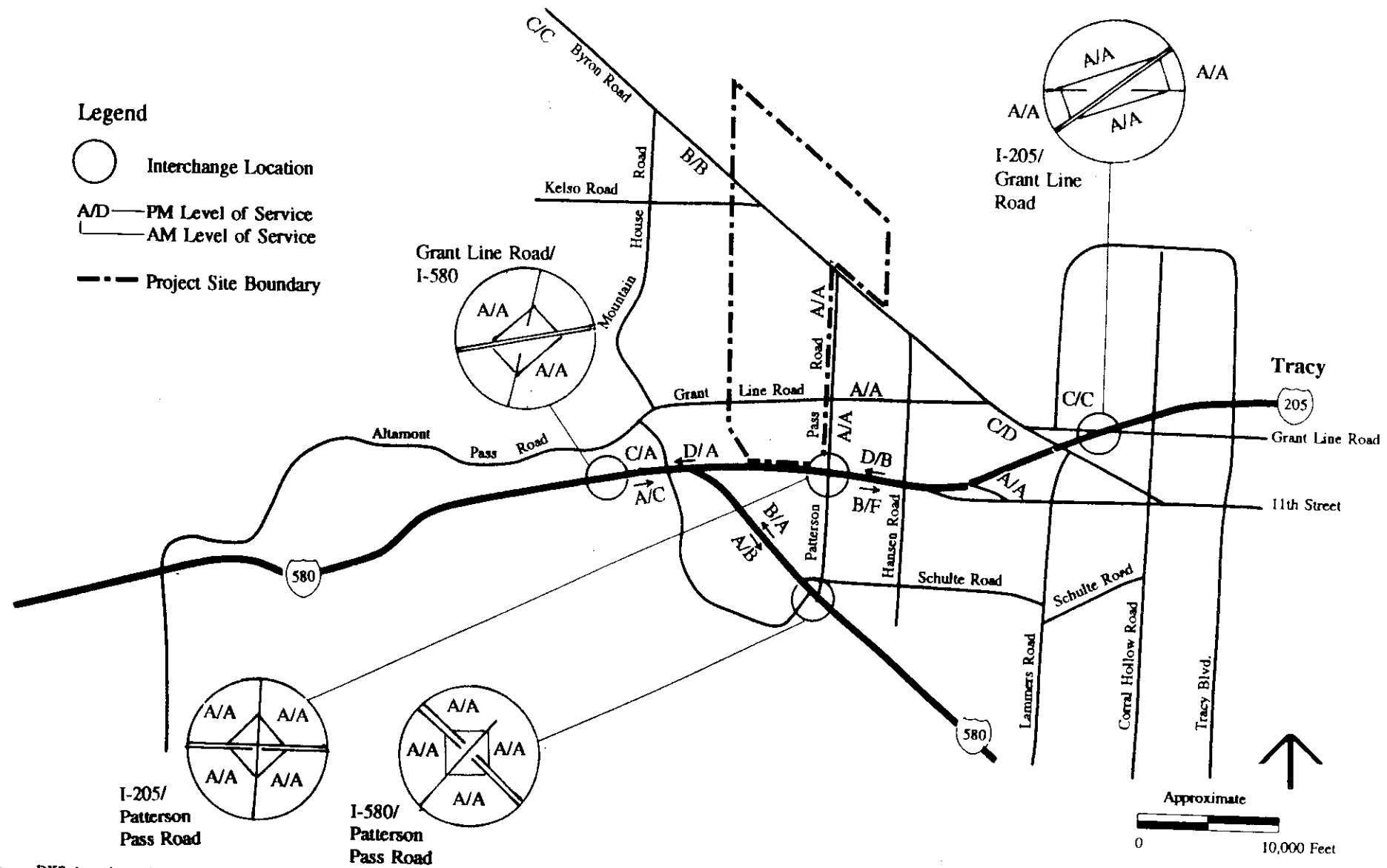
Several other transit carriers operate within 5 to 20 miles of the project site. Tracy Trans operates a dial-a-ride service in the City of Tracy. The Livermore-Amador Valley Transit Authority (Wheels) operates fixed-route bus service in the cities of Livermore, Dublin, and Pleasanton. The Central

<sup>1</sup> Note that Caltrans District 10 uses a more restrictive standard LOS C for State highways in rural areas.

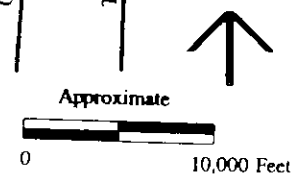
# EXISTING LEVELS OF SERVICE SITE VICINITY ROADWAY SEGMENTS

Figure 4.12-5

- Legend**
- Interchange Location
  - A/D — PM Level of Service
  - AM Level of Service
  - - - Project Site Boundary



4.12-8



Source: DKS Associates, 1993.

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**BASELINE**

TABLE 4.12-1

**EXISTING FREEWAY LEVELS OF SERVICE  
1993 PM Peak Hour**

Location	Number of Lanes in Each Direction	Peak Hour Volume		Volume-to-Capacity Ratio		Level of Service	
		West-bound	East-bound	West-bound	East-bound	West-bound	East-bound
I-580 west of I-205 junction	4	2,520	5,940	0.32	0.74	A	C
I-580 east of I-205 junction	2	780	1,840	0.20	0.46	A	B
I-205 at Patterson Pass Road	2	1,740	4,100	0.44	1.03	B	<u>F</u>

Source: DKS Associates; Caltrans District 4.

Note: **Bold** and underlined letters indicate locations where County standards for acceptable LOS are not met under existing conditions.

Costa County Transit Authority provides bus service between the cities of San Ramon, Dublin, and Pleasanton and the Walnut Creek BART station.

The nearest Bay Area Rapid Transit (BART) station is the Bayfair station near San Leandro, about 30 miles west of the project site. A BART extension to Dublin, about 20 miles west of the project site, is currently under construction. BART Express bus routes serve the Tri-Valley area, with service as far east as Livermore.

AMTRAK operates a feeder bus service between Tracy and the AMTRAK station in Stockton. The AMTRAK line between Oakland and Stockton runs on the Southern Pacific track located along the south side of Suisun Bay and along the Atchison, Topeka and Santa Fe (ATSF) track through the Delta.

### Railroad Lines

The project site is traversed by the Southern Pacific (SP) Transportation Company "Mococo" branch line which runs parallel and adjacent to Byron Road from Tracy north to Martinez (Figure 4.12-1). A second SP track, currently inoperative, runs from Tracy south of I-205 through the Altamont Pass. A third line owned by the Union Pacific Railroad Company runs through southern Tracy, continuing through the Altamont Pass to the Bay Area. The two active railroad lines carry freight.

In the project vicinity, there are seven grade crossings along the SP track that parallels Byron Road. These are at Herdlyn, Lindemann, Kelso, Henderson, Wicklund, Reeve, and Grant Line roads. Six of the seven streets are local access roads; only Grant Line Road, east of the site, carries appreciable traffic volumes.

### IMPACTS AND MITIGATION MEASURES

The CEQA Guidelines indicate that a project will normally have a significant impact if it causes an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system. The San Joaquin County road standards contained in the General Plan 2010 are for LOS C or better on all County roads, except in a city sphere of influence area where the city has adopted more lenient standards, and LOS D on all freeways and State highways<sup>2</sup> (San Joaquin County, 1992). For this DEIR, impacts have been identified as significant when future traffic volumes would result in an LOS not meeting standards identified in the General Plan 2010.

The I-580 freeway, I-205 freeway, and 11th Street are **San Joaquin County** CMP routes. The CMP standard for I-580 and 11th Street is LOS D, while the standard for I-205 from the County line to Tracy Boulevard is LOS F, and the standard from MacArthur Drive to I-5 is LOS E.<sup>3</sup> Under the **San Joaquin County** CMP, an impact is considered significant if the ADT volume increases by 250 trips or more, or if an LOS of C or worse is projected to degrade by one or more letter categories.

**I-580, I-680, and State Route 84 in Alameda County are Alameda County CMP routes. The standard in Alameda County for CMP routes is LOS E.**

### MASTER PLAN

The internal circulation at the project site is proposed as a series of major arterials, minor arterials and collectors (Figure 4.12-6); the major arterials would be four to six lanes wide, the minor arterials would be four lanes wide, and collectors would be two lanes wide. Traffic signals are proposed at 27 intersections on the site. The project proposes improvements to two existing rail crossings (at Kelso and Henderson Roads), closure of the Wicklund Road rail crossing, a new at-grade crossing at Patterson Pass Road and a new grade-separated crossing of both Byron Road and the SP track west of Patterson Pass Road.

The project includes provisions for bus and rail passenger transit services, bicycles and pedestrians. Local transit service would operate within each neighborhood area, focused on neighborhood centers. Regional bus routes would operate to Tracy, Stockton, Livermore and the nearest BART station, with a central transfer facility within the Town Center (Figure 3.9 and Table 3.8). Park-and-ride facilities are proposed at the central transfer facility, each neighborhood center, and the future rail station(s).

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<sup>2</sup> For the purposes of this analysis, note that the LOS standards of General Plan 2010 (LOS D) have been used. However, Caltrans District 10 uses a more restrictive standard, LOS C, for rural freeways such as I-580 south of I-205.

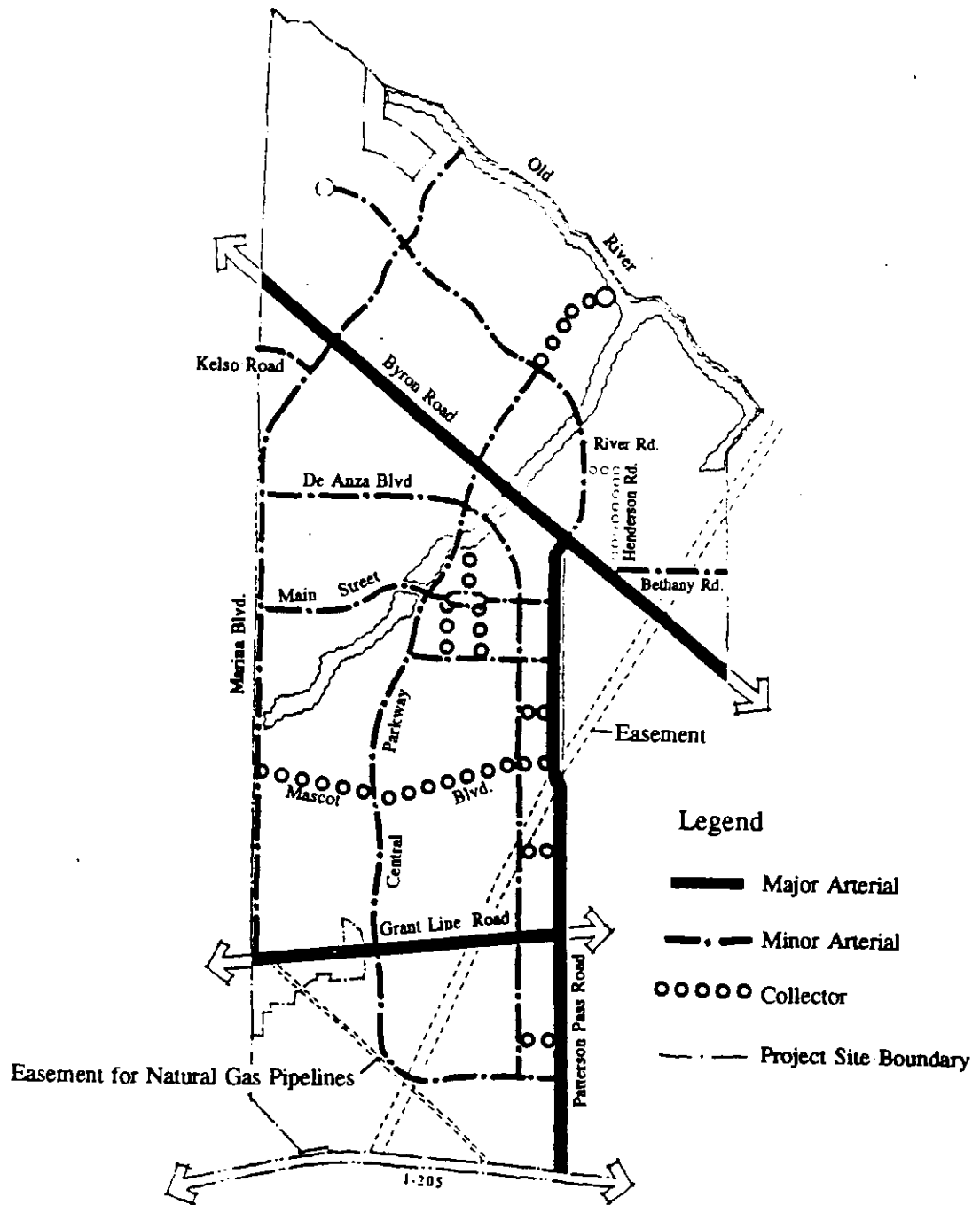
<sup>3</sup> Congestion Management Program (Con Mag) for San Joaquin County, November 26, 1991.



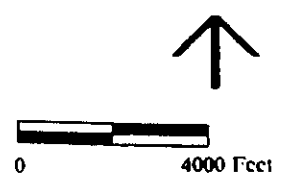
Feeder bus service is proposed between Mountain House and the Altamont and Mococo rail stations upon implementation of passenger service on those lines. A continuous network of off-street bike paths and on-street bike lanes is proposed, along with signed bike routes on collector streets.

# MASTER PLAN CIRCULATION SYSTEM

Figure 4.12-6



- Legend**
- Major Arterial
  - Minor Arterial
  - Collector
  - Project Site Boundary



Source: The SWA Group, 1993.

The project includes provisions for certain regional transportation improvements in the site vicinity. Specific improvements identified include the I-205/Patterson Pass Road freeway interchange, the I-580/Grant Line Road interchange and an intermodal station on the Mococo line. The Draft Master Plan also proposes the project's participation in a Strategic Transportation Plan study of the Altamont Corridor, in the development of HOV lanes on I-205 and truck climbing lanes on I-580, and in other freeway mainline improvements (Table 3.7).

The Draft Master Plan proposes improvements to Byron, Patterson Pass, and Grant Line roads on the site, defining them as Mountain House "Gateways." The Draft Master Plan also includes provisions for participating in traffic studies and improvement measures for other County arterials, and for roadways in other counties or cities that would be impacted by the project. This latter participation is conditioned on equal consideration of the other jurisdictions' impacts on the project.

The Draft Master Plan includes Transportation Demand Management (TDM) measures to reduce the use of single occupant vehicles within, to and from the site. The TDM program incorporates San Joaquin Valley Air Pollution Control District (SJVUAPCD) measures, and a monitoring program, implemented under the structure of a Transportation Management Association (TMA). The project appears to meet transit/TDM requirements of the County General Plan 2010 and the County Congestion Management Program (ConMAG, 1991).

The Draft Master Plan also includes transportation "trigger points" which indicate the number of occupied residential units that are anticipated to trigger the need for a particular transportation improvement. ~~The trigger points are proposed as guidelines, rather than actual construction dates, with a trip analysis being done at such time a trigger point is reached to establish the actual construction date.~~ This DEIR evaluates full buildout of the Master Plan and the Specific Plan I, but does not evaluate the adequacy of the trigger points or the phasing of improvements. Moreover, the Master Plan does not provide a mechanism for reviewing trigger points in advance of when they are reached in case improvements are needed earlier than anticipated, and does not indicate how early the planning for an improvement would begin in order to provide for necessary designs, approvals and construction **by the time that the trigger point is reached.**

The Draft Master Plan provides for project participation in funding of community and regional transportation improvements based on "fair share" estimates defined in the Public Financing Plan. The Public Financing Plan is a separate document being prepared for the Mountain House project, and is therefore not specifically analyzed in this DEIR. The Draft Master Plan proposes that the fair share estimates used in the Public Financing Plan initially be based on estimates provided in the most current EIR, with final determination being made at the time of design or funding of the individual improvements. (Table 4.12-7, later in this DEIR section, presents information on projected percentages of traffic on individual roadways to assist the County in establishing fair share responsibilities for use in the Public Financing Plan.) The Draft Master Plan also proposes creation of a Mountain House Planning Area as a part of the County's Traffic Impact Mitigation Fee program. The local portion of fees collected within this planning area is proposed to be used to fund

## 4.12 TRANSPORTATION

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County Arterial improvements identified in that program, with specific fees set by the County prior to submittal of the first Development Permit.

### **Impact Methodology and Assumptions**

The transportation impacts of the project are examined in this DEIR in the context of cumulative projected growth in the County and in the region to the year 2010. For this analysis, the project was superimposed onto 2010 projections of housing and employment in the remainder of San Joaquin County and the surrounding region, including the nine-county Bay Area, the four-county Sacramento area, and Stanislaus County. To provide a baseline for comparison, a "No Project" alternative was also developed which assumes no development of the project site but which includes the same 2010 growth forecasts for the remainder of the County and the surrounding region.

This transportation impact analysis uses the San Joaquin County Council of Governments (COG) Travel Model. The model has been significantly revised and expanded since the 1991 County's General Plan 2010 FEIR (BASELINE, 1992b) and the Mountain House FEIR (BASELINE, 1992a) and FSEIR (BASELINE, 1993). The Travel Model was revised to incorporate peak hour and mode choice forecasting capabilities.<sup>4</sup> A description of the final model and details of the various land use and network assumptions for 2010 are contained in Appendix F. **The 2010 regional network is consistent with applicable agencies' financially constrained networks as of late 1993.** For this DEIR, the following changes were made to the model network and land use inputs, while retaining the basic model structure:

- Traffic zones were disaggregated within the project site to provide better detail for on-site traffic impact analysis.
- The 2010 land uses for the site were updated to correspond to the current proposed project.
- The 2010 land use assumptions for the remainder of San Joaquin County were retained from the FSEIR. This forecast incorporates San Joaquin County General Plan 2010 land use projections, adjusted to delete the previously proposed "new town" projects of Liberty and Forest Oaks and to reflect somewhat more growth by 2010 in Tracy, Lathrop, and Stockton than assumed previously in both the original FEIR (BASELINE, 1992a) and the General Plan 2010 FEIR (BASELINE, 1992b).
- The 2010 land use assumptions for the Bay Area, Sacramento, and Stanislaus County were updated to reflect the applicable agencies' most current forecasts. Bay Area forecasts are based on ABAG's *Projections '92* forecasts, using travel projections developed by MTC for

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<sup>4</sup> DKS Associates, 1992-93, for the San Joaquin County COG. The revised model was used for testing multi-modal alternatives for the COG's 1993 Regional Transportation Plan EIR. As part of this work, the model was recalibrated on newly available 1990 census travel data and validated against daily and peak hour traffic counts as well as transit ridership counts, resulting in significant changes to the model structure.

the Regional Transportation Plan analysis.<sup>5</sup> Although significant growth is forecast by ABAG in the Tri-Valley area, the ABAG 2010 projections do not reflect full buildout of several large-scale developments proposed in the area (including the Dougherty Valley, Eastern Dublin, West Dublin, and North Livermore General Plan Amendments).<sup>6</sup> Sacramento area forecasts rely on updated land use forecasts from SACOG, with significantly greater growth projected by 2010 than previously forecasted. Stanislaus County projections are based on the recent I-5 Corridor Strategic Plan studies (Merced County Council of Governments, 1993).

- The 2010 regional network was revised to correspond to "financially feasible" networks as defined in Regional Transportation Plans (RTP) for each agency. In San Joaquin County, the COG's RTP Balanced Alternative, which is generally similar to the adopted RTP, was used as a starting point. In the Bay Area, MTC's "Track 1" RTP alternative was used, and projects were verified with staff of Alameda and Contra Costa counties.
- The 2010 network in the Tracy area was modified from the FSEIR assumptions to be consistent with the City's adopted Urban Management Plan network.
- Regional transit services and HOV lanes were added to the 2010 network. Projections of San Joaquin County transit services were based on the RTP Balanced Alternative, with some revisions by County staff, while Bay Area transit services were based on MTC's RTP "Track 1" alternative. Key transit improvements include the continuation and expansion of the planned Altamont commuter rail line demonstration project, and the extension of BART to Dublin, currently under construction.
- Transit services to, from, and within the project site were added in accordance with the facilities proposed in the Draft Master Plan.

The model results were used in several ways to analyze potential transportation impacts of the project:

- Overall trip-making characteristics of the project were identified by reviewing trip generation, distribution and mode choice projections from the model. These characteristics directly influence the locations and extent of other impacts of the project on traffic, air quality and noise.

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<sup>5</sup> Person trip ends by mode were imported directly into the 1993 Travel Model, using 2010 auto person trip ends for the Bay Area Regional Transportation Plan, provided by Metropolitan Transportation Commission, October, 1993.

<sup>6</sup> Inclusion of full buildout of these projects (representing a horizon year beyond 2010) would result in higher traffic volume forecasts for I-580, I-680, and other Tri-Valley facilities, but would reduce the share of Mountain House traffic projected on these facilities.

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- Projected daily volumes on all arterial and freeway segments in the project vicinity were compared between the No Project and Project alternatives to provide insight as to where traffic increases due to the project are greatest.
- AM and PM peak hour directional volumes were compared to roadway capacities to determine where level of service deficiencies would occur and where roadway widening would be required to mitigate the deficiencies. This was done for both the No Project and Project alternatives in order to identify locations where the project would require more lanes than otherwise needed to accommodate future traffic. This is the key indicator of level of significance of traffic impacts.
- Projected intersection turn volumes were used to determine levels of service at all key intersections within or adjacent to the project, and to identify potential needs for mitigation. This was done for the Project alternative only.
- "Select Link" analysis was used to identify the number and proportion of project-generated trips on roadways impacted by the project. This process traces the origins and destinations of all trips using a particular roadway segment, and therefore is useful in establishing or reviewing fair share funding responsibilities of the project. Due to the computer processing requirements, it was necessary to select a limited number of roadway/freeway locations for select link analysis in advance of the model runs. Locations were therefore chosen to include all roadways identified as being significantly impacted in the previous FSEIR for the project, and to use segments that are likely to be representative of the roadway as a whole.

### Impact M4.12-1

**At buildout, the project would generate approximately 273,000 daily vehicle trips to, from, or within the site. The added vehicle trips would contribute significantly to projected traffic growth, increases in vehicle miles traveled, and LOS deficiencies on the road system, particularly in the vicinity of the site. Some of these associated impacts would be unavoidable. The project would also generate the need for public transit services to, from, and within the site. Since transit services are proposed in the Master Plan to accommodate the projected transit ridership, this trip generation impact is not significant or unavoidable.**

The project's potential trip generation was estimated using the 1993 COG Travel Model. The model first estimates person trips by all modes, and then allocates person trips to vehicle and transit.

passenger modes. Person trip ends and vehicle trips<sup>7</sup> generated by the project are shown in Tables 4.12-2 and 4.12-3.

Table 4.12-2 summarizes person trip ends generated by mode. At full buildout, the project would generate almost 590,000 person trip ends by all modes. A high proportion of trip ends is projected to be in vehicles, either as drivers or passengers. Vehicle drivers are projected to account for 70% of all trip ends (407,000 out of 589,950).

Table 4.12-3 shows daily and peak hour vehicle trips to, from, and within the project. The project is projected to generate approximately 273,000 vehicle trips to, from, or within the site over the day.<sup>8</sup> Internal trips (those that do not leave the project site) were projected by the COG Travel Model based on the projected 2010 land uses and accessibility between zones within the modelling region. Internal trips are projected to account for 49 percent of the total vehicle trips generated on-site. The remaining 51 percent are trips entering or leaving the project boundaries. The high rate of internal travel is because the project includes both residential and non-residential uses, including retail, school and other activities, and because of the project's jobs/housing balance.

The rate of internal travel would vary depending on the type of trip. With the full buildout of all the employment proposed, about 45 percent of the work trips would be internal. Shopping trips would be nearly 90 percent internal, and school trips would also be largely internal. This projected rate of internal travel is highly dependent on achieving the assumed full buildout of employment and the proposed mix of commercial, school, and other non-residential land uses within the site. The rate of internal travel is also dependent on the affordability of on-site housing to a sufficient number of the employees. A detailed analysis of the project's proposed Jobs/Housing and Affordable Housing programs is included in Section 4.9, Population, Housing, and Employment.

The rate of internal travel would also vary over time, with a lower rate during interim phases of the project. For example, at buildout of Specific Plan I, about 37 percent of all project trips are projected to be internal (Tables 4.12-15 and 4.12-16, presented later in this section), as compared to 49 percent upon buildout of the Master Plan.

Transit passengers would account for 2.4 percent of the work trip ends and 0.4 percent of all trip ends. The projected daily vehicle trip generation of the project is about five percent higher than

<sup>7</sup> Each one-way trip is considered to have two trip ends: one at the origin and the other at the destination. Trip generation in the model is based on trip ends. The number of trip ends generated on-site is the sum of all origins and destinations at homes, businesses, and other activities on the site. If a trip stays on the site (i.e., an internal trip), both of its trip ends are included in the total. If a trip leaves the site, only the trip end generated on site is included in the trip end total, whether it is an origin or a destination.

<sup>8</sup> The number of daily vehicle trips (273,300) is less than the number of vehicle trip ends in Table 4.12-2 (407,000) because each internal trip generates two trip ends on site. For example, a resident driving from home to shop within the project site generates two trip ends in Table 4.12-2: one at home and one at the store. However, these two trip ends represent only one car on the roadway system (one vehicle trip) in Table 4.12-3.

TABLE 4.12-2

**PROJECT TRIP ENDS BY MODE AT BUILDOUT**  
**2010 Daily Trip Ends Generated On-Site**

	Person Trip Ends		Vehicle Trip Ends	Number of Persons per Vehicle
	Number	Percent		
<u>Home-Based Work:</u>				
Drive alone	59,390	82.8	59,390	1.12
Shared ride	10,620	14.8	4,750	1.12
Transit	1,740	2.4	--	
<b>Total</b>	<b>71,750</b>	<b>100.0</b>	<b>64,140</b>	
<u>Other:</u>				
Drive alone/shared ride	517,380	99.8	342,860	1.51
Transit	810	0.2	--	
<b>Total</b>	<b>518,190</b>	<b>100.0</b>	<b>342,860</b>	
<u>Total:</u>				
Drive alone/shared ride	587,400	99.6	407,000	1.45
Transit	2,550	0.4	--	
<b>Total</b>	<b>589,950</b>	<b>100.0</b>	<b>407,000</b>	

Source: DKS Associates.

TABLE 4.12-3

**PROJECT VEHICLE TRIPS AT BUILDOUT**

	Vehicle Trips Generated					
	AM Peak		PM Peak		Daily	
	Number	Percentage	Number	Percentage	Number	Percentage
Inbound	4,900	30.3	5,600	26.5	69,800	25.5
Outbound	4,300	26.5	6,200	29.2	69,800	25.5
Internal <sup>1</sup>	7,000	43.2	9,400	44.3	133,700	49.0
<b>TOTAL</b>	<b>16,200</b>	<b>100.0</b>	<b>21,200</b>	<b>100.0</b>	<b>273,300</b>	<b>100.0</b>

Source: DKS Associates

<sup>1</sup> Trips with both ends within project boundaries.



previously projected in the FSEIR (407,000 trip ends versus 387,400 trip ends in the FSEIR). About half of the difference is due to increased employment in the proposed project. The remaining increase is due to revised trip generation rates in the COG Travel Model. On the other hand, peak hour trip generation at buildout of the proposed project is projected to be 18 percent lower than shown in the FSEIR (30,600 versus 37,200 trip ends in the PM peak hour). The decrease appears to be due to use of locally calibrated peak hour factors built into the revised COG travel model, which were not used in previous analyses.

The transit shares projected for Mountain House are higher than projected for the County as a whole, but not high enough to significantly reduce traffic impacts of the project over an average day. The low transit percentages are typical of suburban development, and may be due to various factors. Only those transit services fully committed in the Draft Master Plan or programmed by other agencies were assumed for forecasting purposes. The 2010 regional network in the COG Travel Model includes an Altamont commuter rail line to the Bay Area, but the closest currently planned station is in downtown or south Tracy. Transfers to bus would be required for commuter rail passenger access to major employment sites in the Tri-Valley area such as Hacienda Business Park and Bishop Ranch. Although the Draft Master Plan provides a rail passenger station on the Southern Pacific Mococo line, no passenger rail service was assumed on the line since there are no currently funded plans for operating the service. BART was assumed to extend only to the Dublin/Pleasanton station, as currently funded. A local bus line was assumed to circulate around the project site as proposed in the Draft Master Plan, but its relatively slow travel speeds, low service frequency, and requirements for transfers would limit its ridership. Transit service improvements for Mountain House beyond those assumed in the DEIR would increase transit usage by project residents and employees, potentially reducing peak period impacts in some major travel corridors such as I-580. However, these increases are not anticipated to be sufficient to avoid traffic impacts of the project.

Although the currently planned transit services would not mitigate overall traffic impacts of the project, provision of the services is important for a number of reasons:

- They would mitigate transit needs generated by the project, for example by project residents who do not have access to automobiles or those who desire to use alternative modes.
- They fulfill County and Congestion Management Program requirements for providing transit services.
- There is a potential air quality benefit.
- Specific congested commute corridors, such as the I-580 corridor, would benefit from having alternative modes of travel available.

- There is potential for greater transit usage than projected in the DEIR if additional regional transit improvements are implemented beyond those assumed in the analysis and/or if other conditions change in the future (e.g., implementation of ~~Microline~~ **Mococo** line service).

One way to mitigate the increase in daily trip generation and reduce associated adverse impacts on the transportation system is to downsize the project. The total amount of the project's allowable housing and employment could be lowered so that traffic generation over the day would not exceed the somewhat lower level projected in the previous FSEIR. However, reducing the size of the project would not mitigate all adverse regional traffic impacts since, on many regional facilities, cumulative traffic levels without the project (the No Project Scenario) are projected to exceed capacities. Also, due to the "replacement" effect,<sup>9</sup> there would not necessarily be a one-to-one reduction of roadway volumes. Even with downsizing of the project, unavoidable adverse impacts would remain. Reducing the overall size of the project has therefore not been proposed as a mitigation measure below.

#### **Mitigation Measure M4.12-1**

*(a) The County should prepare and implement a countywide Transportation Systems Management (TSM) program to promote and facilitate use of alternative modes to the single-occupant vehicle within the County. The program should include measures such as continuation and expansion of the County rideshare program, transportation coordinators at employment sites, provision of park-and-ride lots throughout the County, and development of a network of high occupancy vehicle (HOV) lanes on corridors of high travel demand.*

*(b) The ~~Transit~~ **Transportation** Management Association (TMA) should promote, with State and County assistance, lanes for priority HOV access to/from the project site (e.g., HOV bypass lanes at metered on-ramps to I-580 at Grant Line Road, and at on-ramps to I-205 at Patterson Pass Road). **The TMA should promote the construction of HOV lanes when I-205 is widened. A policy stating this commitment should be added under Freeway Improvements and TDM Measures (Appendix C).***

*(c) Local transit service (using clean fuel-transit buses, if feasible) proposed in the Draft Master Plan should be increased, with more frequent service during peak periods to facilitate non-vehicle travel on internal roads, and more direct routing to destinations and fewer transfers than proposed in the Draft Master Plan.*

~~*(d) The Draft Master Plan provides for transit stops to be located within one quarter mile of the majority of residential, retail and employment sites (Policy (h) under Objective 1 in Bus Transit in Appendix C). This policy should be modified to provide transit stops within one quarter mile walking distance or less, for 90 percent or more of the residences and to provide transit stops at all employment and commercial areas within the site. Such guidelines should also be included in each specific plan.*~~

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<sup>9</sup> With addition of the project, some regional trips that would otherwise use I-580 and I-205 would be "replaced" by project trips because the project would provide jobs for some San Joaquin Valley residents who, in the absence of the project, would commute to jobs further west. The COG Travel Model reflects this redistribution of trips.

~~(e) Additional local serving commercial uses should be provided throughout the project site to facilitate walking and bicycle trips for local shopping. This could be accomplished by revising the Land Use map to include more than one neighborhood commercial area in each neighborhood. Such multiple small local commercial sites provide opportunities for residents' convenience shopping without the need to drive.~~

**(d) A new Policy should be added under Commercial Objective 2 (Appendix C):**

**"f) Neighborhood commercial areas shall be located so as to optimize accessibility for local pedestrians and cyclists and to reduce automobile trips."**

**A new Implementation should be added under Commercial Objective 2 (Appendix C):**

**"c) The Neighborhood Commercial areas shall be sited so that as many homes as possible are located within a one-quarter mile walk of the closest neighborhood or community shopping area."**

~~(f)~~ **(e) To reduce peak hour vehicle trip generation, employers should be required encouraged to provide flexible work hour programs and/or "9/80" and "4/40"<sup>10</sup> week schedules. This mitigation measure should be added as an Implementation to the Transportation Demand Management section (Appendix C).**

~~(g)~~ **(f) The Draft Master Plan should be amended with a policy in the Transportation Demand Management section under Objective 1 (Appendix C), as follows:**

**"j) Transit Oriented Development (TOD) Guidelines shall be considered in the design of each neighborhood center. Review and approval of TOD provisions by the County Community Development Department shall be a condition required prior to approval of the first Development Permit for each specific plan."**

~~(h)~~ **(g) Implementation c) under Objective 2 in Transit (Appendix C) should be amended as follows:**

**"c) The Community, in conjunction with the County, will participate in a location/feasibility analysis for a potential shall contribute on a "fair share" basis to any Altamont Station study. The Community shall contribute a fair share toward the capital costs of building an Altamont Station and to the operating and maintenance costs that are identified. The fair share contribution of the Community toward constructing the station shall be based on ridership projections. Bus service between the Community and the Altamont Station shall be included in the Community's transit commitment. to serve the project. If determined to be feasible, and potential adverse impacts on other riders are not significant, then a proportionate "fair share" contribution...."**

<sup>10</sup> A "9/80" schedule allows workers to work nine-hour days, with every other Friday off. A "4/40" schedule allows workers to work ten-hour days for four days each week.

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~~(i) (h) An i Implementation c) should be added under Objective 1 in Transportation Demand Management should be revised as follows:~~

~~"e c) The applicant shall develop a an annual Transportation Monitoring Program, which would be a part of conducted at the same time as the annual monitoring conducted for the Jobs/Housing and Affordable Housing Programs, as outlined in Implementations (d) and (e) under Objective 1, and Implementations (k) and (l) under Objective 2, of Jobs/Housing and Affordable Housing. The monitoring program would serve as a means of comparing the actual traffic generated by the project to the traffic projections, and would allow revisions to mitigation measures and trigger points for needed transportation improvements. A monitoring program would allow the County to assess the degree to which the applicant's commitment to on site employment opportunities, ridesharing, and transit usage is successful. The monitoring~~

~~program is also critical for monitoring project related impacts to State highways and interchanges.~~

~~Transportation monitoring should be conducted annually as part of the Community Monitoring Program. The annual reports should identify various data including land use occupancy information, traffic counts, and progress of planned transportation improvements and planning studies such as PSRs. Traffic monitoring should include traffic counts and level of service analysis on all community gateways and other impacted County roads. Adequacy of the near-term trigger points and progress toward implementation of the required transportation improvements should also be reviewed. (New COG Travel Model runs are not required as a part of this process.)~~

~~Should traffic impacts of the project be found during the annual monitoring to be different (i.e., higher than projected levels), then the County shall hold hearings, receive testimony, make findings, and take appropriate action. as indicated in Implementations (d) and (e) under Objective 1, and Implementations (k) and (l) under Objective 2, of Jobs/Housing and Affordable Housing. In addition to the issues and actions outlined in those sections, The County shall adopt findings related to whether the adopted trigger points for transportation improvements and the project's fair share of costs should be revised to ensure the timely construction of needed improvements, and incorporated as a condition of further development approvals."~~

**(i) The following Implementation should be added under Objectives 2 and 3 of Telecommunication Systems (Appendix C):**

**"b) One or more telecommuting centers furnished with satellite telecommunication devices and computer equipment shall be constructed within the project site to reduce commuting to off-site locations."**

#### **Impact M4.12-2**

Within 10 miles of the site, the project would typically increase traffic volumes on I-205, I-580 and I-5 by 10,000-23,000 daily vehicles over levels projected in 2010 without the project, representing increases of 8-20 percent. These traffic increases would exacerbate highly deficient levels of service already projected at some locations in 2010 without the project, and would increase the extent and duration of traffic congestion on these freeways. Most of the projected traffic impacts on I-205 could potentially be mitigated with regional improvements, but the impacts on I-580 west of I-205 and on I-5 north of I-205 are unavoidable.

By 2010, total freeway traffic would increase significantly, compared to 1993 conditions, with or without the project. The project would be a significant contributor to future traffic growth on

## 4.12 TRANSPORTATION

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regional freeways. Future freeway volumes are identified in Figure 4.12-7 and Table 4.12-4 for an area up to 10 miles from the project site.<sup>11</sup> Proportions of total daily traffic to or from the project site are shown in Table 4.12-5. Peak hour volumes and levels of service on I-205, I-580 and I-5 in the project vicinity are summarized in Table 4.12-6. Much of the projected 2010 traffic is associated with inter-regional growth. Deficient LOS is projected at a number of locations, indicating that the 2010 traffic demand cannot be fully met, with or without the project. Additional freeway lanes,

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<sup>11</sup> General impacts of the project on other freeway volumes farther away were also considered. The impacts of construction-related traffic have not been included in the following projections because it is difficult, if not impossible, to determine the origin of such traffic. The applicant estimates that up to approximately 2,000 construction workers may be employed on the site annually.

# 2010 TOTAL DAILY TRAFFIC VOLUMES ON AREA FREEWAYS PROPOSED PROJECT AND NO PROJECT SCENARIOS

Figure 4.12-7

4.12-22

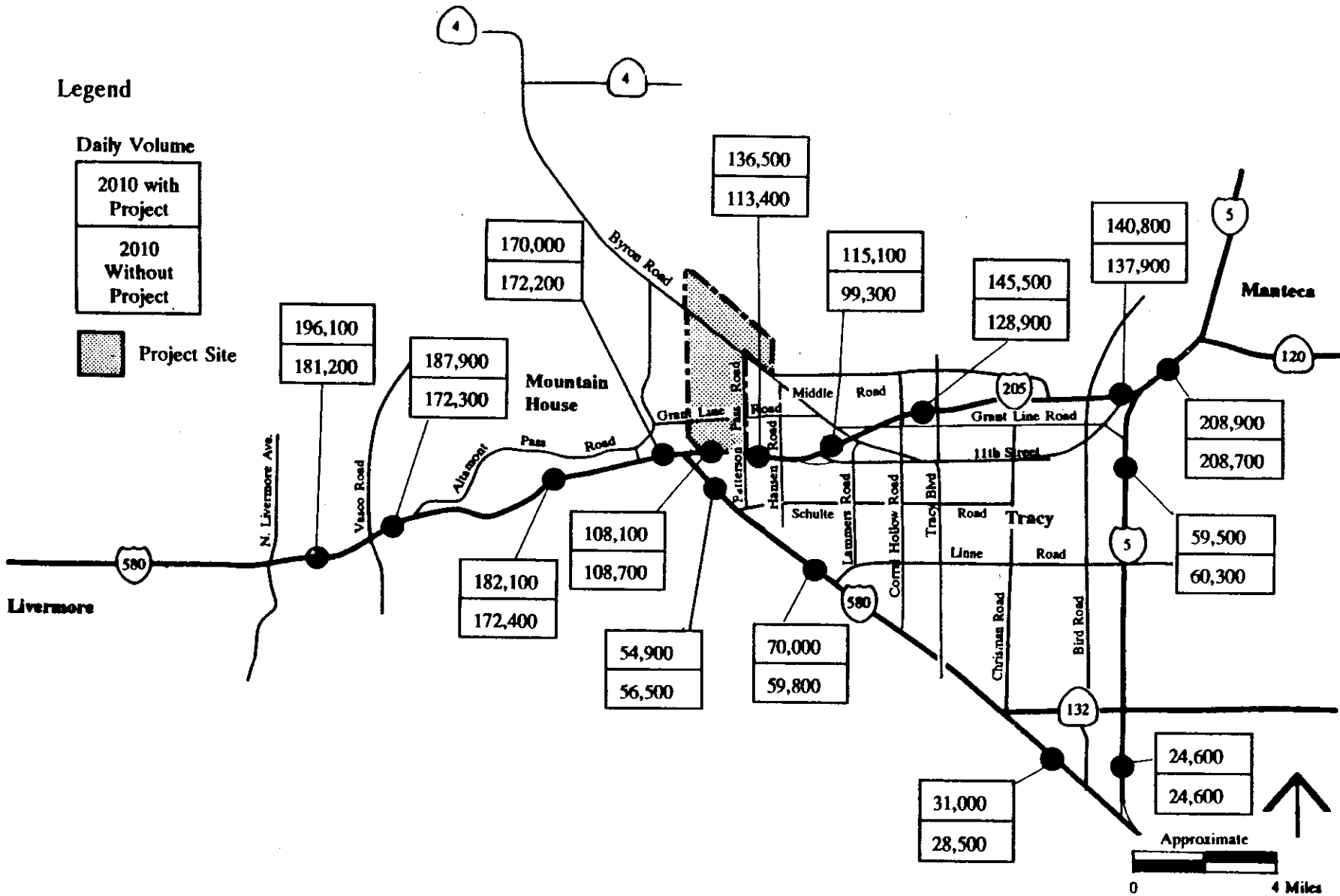


TABLE 4.12-4

**TOTAL DAILY TRAFFIC VOLUME CHANGES ON FREEWAYS IN PROJECT VICINITY  
(2010 Growth with and without the Proposed Project)**

Freeway	Location	1993 Daily Traffic Volume	2010 Daily Traffic Volume		
			No Project	Project	Difference <sup>1</sup>
I-580	In Livermore between Vasco Road and North Livermore Avenue	103,000	181,200	196,100	14,900
	At the Altamont Pass	91,000	172,400	182,100	9,700
	West of I-205 Interchange	105,800	172,200	170,000	(2,200)
	North of Patterson Pass Road	28,500	56,500	54,900	(1,600)
I-205	West of Patterson Pass Road	65,000	108,700	108,100	(600)
	East of Patterson Pass Road	77,300	113,400	136,500	23,100
	East of 11th Street	56,000	99,300	115,100	15,800
	East of Grant Line Road	56,000	128,900	145,500	16,600
I-5	Between I-205 and SR 120	84,000	208,700	208,900	200

Source: DKS Associates.

<sup>1</sup> Project volume compared to "No Project" volume. Volumes in parentheses indicate segments where a decrease in traffic is projected due to the project's effects on regional job location and commuting patterns. See Table 4.12-5 for projections of 2010 daily traffic to and from project.

TABLE 4.12-5

**PROJECT AND NON-PROJECT TRIPS ON I-580 AND I-205<sup>1</sup>  
(2010 DAILY TRAFFIC)**

Location	No Project	Project
<u>I-580 at Altamont Pass</u>		
Vehicles to/from Mountain House	0	21,100
Vehicles to/from other areas east of Altamont Pass	<u>172,400</u>	<u>161,000</u>
<b>Total Daily Vehicles</b>	172,400	182,100
<u>I-205 East of Grant Line Road</u>		
Vehicles to/from Mountain House	0	27,900
Vehicles to/from other areas to the east	<u>128,900</u>	<u>117,600</u>
<b>Total Daily Vehicles</b>	128,900	145,500

Source: DKS Associates.

<sup>1</sup> Based on select link analysis using the COG Travel Model. This analysis traces origins and destinations of all trips using the particular roadway link.



TABLE 4.12-6

## YEAR 2010: PEAK HOUR, PEAK DIRECTION LEVEL OF SERVICE ON FREEWAYS

Freeway Location	Total Lanes	Without Project						With Project					
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
		Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS
I-580 north of Linne Road	4	4,110	1.03	<u>F</u>	4,720	1.18	<u>F</u>	4,580	1.15	<u>F</u>	5,210	1.30	<u>F</u>
I-580 south of I-205	4	4,000	1.00	<u>F</u>	4,060	1.02	<u>F</u>	3,990	1.00	<u>F</u>	4,010	1.00	<u>F</u>
I-580 at Altamont Pass	8	9,780	1.22	<u>F</u>	10,710	1.34	<u>F</u>	10,470	1.31	<u>F</u>	11,670	1.46	<u>F</u>
I-580 west of Vasco Road	8	12,210	1.53	<u>F</u>	13,740	1.72	<u>F</u>	12,790	1.60	<u>F</u>	14,260	1.78	<u>F</u>
I-205 west of I-5	6+HOV	7,450	0.93	D	7,740	0.96	<u>E</u>	7,780	0.97	<u>E</u>	8,230	1.03	<u>F</u>
I-205 west of Tracy Blvd.	6+HOV	6,840	0.86	D	6,590	0.82	D	7,320	0.92	D	7,410	0.93	D
I-205 south of Grant Line Road	6+HOV	5,430	0.68	C	5,920	0.74	C	5,960	0.75	C	6,670	0.83	D
I-205 west of 11th Street	6+HOV	6,620	0.83	D	7,210	0.90	D	7,400	0.93	D	8,240	1.03	<u>F</u>
I-205 west of Patterson Pass Rd.	6+HOV	6,190	0.77	C	6,720	0.84	D	6,380	0.80	D	7,240	0.91	D
I-5 south of State Route 132	4	970	0.24	A	1,130	0.28	A	940	0.24	A	1,110	0.28	A
I-5 south of Grant Line Road	4	2,440	0.61	C	2,920	0.73	C	2,400	0.60	C	2,890	0.72	C
I-5 north of I-205	8	10,260	1.28	<u>F</u>	11,070	1.38	<u>F</u>	10,730	1.34	<u>F</u>	11,810	1.48	<u>F</u>

Notes: Freeway capacity assumed at 2,000 vehicles per hour per lane. Under ideal conditions, capacities may be as high as 2,200 vehicles per hour per lane.  
V/C = Volume to capacity ratio.

**Bold** and underlined letters indicate locations where County standards for acceptable LOS are not met.

Volumes represent peak hour demand volumes assuming existing peaking characteristics of travel. Where demands exceed capacities, actual throughput volumes would be reduced due to peak spreading and other factors, and queues would form upstream of bottleneck locations.

reduction of traffic demand through TDM efforts and transit improvements, and spreading of the peak period would be needed to accommodate the projected traffic demands.

#### **I-205 Freeway**

The San Joaquin County COG Regional Transportation Plan includes the widening of I-205 to six lanes as a high priority project. However, the General Plan 2010 FEIR (BASELINE, 1992b) projected a need for eight lanes by 2010. To avoid understating potential traffic demand on I-205, this analysis assumes that I-205 would be widened to six mixed flow and two HOV lanes by 2010, with or without the project.

East of the project site, the greatest net increase in freeway volumes due to adding the project would occur on I-205 between Patterson Pass Road and 11th Street. The project would result in a net increase of over 23,000 daily vehicles on this segment of I-205 (Table 4.12-4).

The highest total traffic volume on I-205 is projected to occur east of Grant Line Road. At this location, 128,900 daily vehicles are projected by 2010, without the project. The project would add 16,600 daily vehicles to I-205 east of Grant Line Road, for a total of 145,500 daily vehicles (Table 4.12-4). Based on "select link"<sup>12</sup> analysis, it is projected that 19.2 percent of all trips, or 27,900 daily vehicles, would be to or from the project (Table 4.12-5). This indicates that the project would "replace" about 11,300 trips (27,900 minus 16,600) that are projected to use I-205 in the "No Project" alternative. This replacement would occur because the project would provide jobs for some of the San Joaquin County residents who would otherwise commute on I-205 to Bay Area jobs further west.

For the No Project alternative, a deficient level of service (LOS E) is projected on I-205 during the PM peak in the segment west of I-5. Addition of the project would degrade the segment of I-205 west of I-5 from LOS E to LOS F in the PM peak and from LOS D (acceptable) to LOS E (deficient) in the AM peak. Addition of the project would also degrade the segment from 11th Street to Patterson Pass Road from LOS D (acceptable) to LOS F (deficient) in the PM peak. Other segments would maintain LOS D or better with or without the project. As noted above, these projections assume widening of I-205 to 8 lanes (6 mixed flow and 2 HOV) by 2010. With I-205 widened to only 6 lanes as currently programmed, LOS F conditions are projected along the entire I-205 corridor, with or without the project.

#### **I-580 Freeway**

No freeway improvements are assumed by 2010 for the I-580 freeway in San Joaquin and Alameda counties in this analysis. However, introduction of an Altamont Pass commuter rail line and express bus services between the project site and the Tri-Valley are included. These assumptions are

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<sup>12</sup> "Select link" analysis traces the origins and destinations of all trips projected by the Travel Model to use a designated roadway segment.

consistent with current Alameda County Policy 164A regarding improvements at Altamont Pass and Vasco Road gateways.<sup>13</sup>

At the Altamont Pass, 172,400 daily vehicles are projected on I-580 by 2010 without the project.<sup>14</sup> The project would add about 9,700 vehicles for a total of 182,100 (Figure 4.12-7 and Table 4.12-4). (This does not include an additional 8,000 vehicles added to Altamont Pass Road by the project.) The increase due to the project and the resulting daily volume is lower than previously projected in the FSEIR (191,000 daily vehicles). The difference appears to be due to recalibration of the COG Travel Model to reflect observed 1990 commute patterns, updating of 2010 land use inputs for the Bay Area and Sacramento regions, and inclusion of transit improvements in the current analysis. Select link analysis of I-580 at the Altamont Pass indicates that 11.6 percent of all daily trips in 2010, or 21,100 vehicles, are either to or from the project site (Table 4.12-5).

Higher traffic volumes are projected on I-580 west of the Altamont Pass, with 181,200 daily vehicles just west of Vasco Road without the project. At this location, the project would increase 2010 volumes by about 14,900 daily vehicles, for a total of 196,000 daily vehicles.

South of the I-205 junction, projected volumes on I-580 are much lower than to the west. Between Grant Line Road and Patterson Pass Road, a small decrease in 2010 freeway volumes is projected with addition of the project (Table 4.12-4). The decrease is attributable to shifts in regional travel distribution. South of Patterson Pass Road, addition of the project would increase 2010 volumes by about 10,000 daily vehicles.

Unacceptable peak period levels of service, generally LOS F, are projected along most of I-580 west of the I-205 connection (Table 4.12-6), and some peak period traffic would divert to Altamont Pass Road, causing similar LOS F conditions. These conditions are projected with or without the project,

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<sup>13</sup> Policy 164A of the East County Area Plan, adopted by the Alameda County Board of Supervisors, May 5, 1994, states that "The County shall assign priority in funding decisions to arterial and transit improvements that would improve local circulation, and to improvements that would facilitate movement of commercial goods. Improvements that would expand the capacity of the Altamont Pass and Vasco Road gateways leading into the planning area from San Joaquin and Contra Costa Counties would be inconsistent with the policies of this plan. This policy shall not preclude the County from supporting or approving any rail projects or improvements required for roadway safety."

<sup>14</sup> The 2010 peak hour/peak direction traffic volumes on I-580 at Altamont Pass shown in this DEIR compare closely with similar projections reported in Alameda County's East County Area Plan (ECAP) DEIR (June 1993). Table 4.12-6 of this DEIR shows PM peak hour/peak direction volumes of 10,710 (No Projection alternative), which is within 5 percent of the projection of 11,309 vehicles shown in Table 5.4-2 of the ECAP DEIR. Resulting levels of service are therefore comparable. Daily traffic projections, however, differ significantly between the two DEIRs. The ECAP projects 131,500 daily vehicles, which is about 25 percent lower than the 172,400 daily vehicles projected for the No Project alternative in this DEIR (Table 4.12-4). The higher projection shown in this DEIR is based on a calibrated "gravity model" reflecting specific regional projections of 2010 population and employment distribution. The daily traffic projections in the ECAP DEIR are understood to be factored up from peak hour projections, and appear to assume relatively little non-peak direction or off-peak travel growth in the corridor. Since the daily traffic projections are not used to characterize level of service, the disparity between the two projections is not critical. Moreover, the projections in this DEIR appear to be more conservative (higher) than those reported in the ECAP DEIR.

but the project would exacerbate them. The excess traffic demand on I-580 would cause spreading of the peak period in the peak direction of travel, resulting in a lower percentage of the daily traffic occurring in the peak hour than projected by the Travel Model. In the AM period, excess demand would cause standing queues on the east side of the Altamont Pass, limiting the rate of traffic entering the Tri-Valley. In the PM, queues would occur on the west side of the Altamont Pass and reduce eastbound traffic flows on I-205 farther east.

An intensive multi-regional effort to reduce single-occupant vehicle trips generated by the proposed project and other cumulative development on both sides of Altamont Pass would be needed to mitigate future traffic growth on I-580 through Altamont Pass. The 2010 projections include potential effects of on- and off-site transit service improvements currently planned by 2010. However, the COG Travel Model does not have the capability to project traffic reduction potential associated with countywide TDM efforts such as carpool/vanpool incentive programs and flexible work hours. The project has the potential to be more effective in reducing peak hour traffic than the County as a whole due to locational advantages, the scale of the project and the comprehensive TDM program proposed in the Draft Master Plan. Emphasizing single-occupant trip reduction on both ends of the work trip would be likely to substantially reduce traffic for the project as a whole. However, recognizing the uncertainty in achieving any traffic reduction beyond that already reflected in the Travel Model, no further traffic reduction was assumed. Should further trip reduction be achieved, the impacts would be reduced from those indicated in this DEIR.

The proposed Land Use Plan seeks to maximize the proportion of work trips and shopping trips that stay within the site. A monitoring program that measures the amount of employment actually created within the site at each phase of development is essential to ensure that the projections for a high rate of internal travel remain valid. If the development and occupancy of industrial and commercial land uses were to lag substantially behind residential development, or if housing were not affordable to a sufficient number of on-site employees, more project residents would travel away from the project site than projected by the travel model, resulting in potentially greater impacts in the year 2010 than indicated above.

The feasibility of constructing truck-climbing lanes in each direction over the Altamont Pass segment of I-580 has been studied in a Project Study Report by Caltrans District 4 as part of the Inter-regional Route System 10-year plan. At this time, only Stage I of this project, consisting of adding a westbound truck lane at the I-205 junction, is included in MTC's Regional Transportation Plan. No approvals or funding have been obtained for the remaining portions of the project (Satow, 1994). This project may or may not be inconsistent with Alameda County's Policy 164A, which opposes capacity improvements to I-580 but which supports improvement to facilitate goods movement. Even with the addition of truck-climbing lanes, projected 2010 traffic demand on this section of I-580 would exceed capacity during the PM peak period due to cumulative growth, with or without the proposed project.

To maintain acceptable freeway mainline speeds, Caltrans may require installation of ramp metering at the intersections of I-205 with Patterson Pass Road and of I-580 with Grant Line Road. If ramp metering were installed, HOV bypass lanes should be provided to encourage carpooling. **Other strategies such as traveler information systems, congestion pricing, and mainline HOV lanes should also be considered.**

A Mid-State Toll Road, which has been proposed by a private company, could accommodate a portion of the excess travel demand over the Altamont Pass and on I-580 through Livermore. The Toll Road as earlier proposed would extend a new four-lane facility northeast from the I-680/SR 84 interchange in Sunol (between Fremont and Pleasanton), cross I-580 between Livermore and Pleasanton, continue northward through Oakley and Brentwood in Contra Costa County, and then connect to I-80 near Vacaville in Solano County. Preliminary analysis by proponents of that project indicates that the Toll Road could divert up to 10 percent of the total I-580 traffic through the Altamont Pass (Parsons De Leuw, 1992). Based on this estimate, the Mid-State Toll Road by itself would not reduce traffic over the Altamont Pass to acceptable levels, but in combination with further TDM efforts and some peak period spreading, LOS E could potentially be maintained in the year 2010. More recent proposals have been to extend the toll road only as far north as State Route 4. However, no approvals for the project have been received and numerous local jurisdictions and agencies involved in the planning and approval of the Mid-State Toll Road have voiced opposition to the project (McCallum, 1994). Therefore, the Mid-State Toll Road project is not assumed in any of this analysis or included in the mitigation measures below.

Altamont Pass Road could be widened from its existing two lanes to four lanes to accommodate some of the projected excess traffic demand on I-580. However, this improvement appears to be inconsistent with Alameda County Policy 164A, which opposes roadway capacity improvements to the Altamont Pass gateway, and no engineering or environmental studies have been done to determine its feasibility or cost. **Widening of Altamont Pass Road for trucks and/or high occupancy vehicles only may be consistent with the County's policy, and would free up some capacity on I-580 for other vehicles. In any case, widening of Altamont Pass Road to four lanes is not proposed as a mitigation measure unless requested by Alameda County.**

Caltrans may initiate two regional studies in 1994 to address transportation needs in the I-580 corridor, using State Planning and Research grants (Allen, 1994). One of these is to coordinate interregional travel forecasts and study goods movements between the Bay Area, Sacramento, and Central Valley areas (the Tri-Regional Intermodal Planning Study). The other is ~~a study of the Altamont Corridor~~ **the I-580/I-205 Interregional Transportation Corridor Study, which is addressing mobility improvements in the corridor, particularly for freight and high-occupancy vehicles; this study involves jurisdictions on both sides of the Altamont Pass.** The Draft Master Plan provides for participation in such studies and resulting implementation, but no implementation measures address fair share participation beyond the study phase.

#### **I-5 Freeway**

No improvements were assumed on I-5 in the project vicinity for this traffic analysis. In the segment between I-205 and SR 120, the daily traffic volume on I-5 is projected to reach 209,000 daily vehicles by 2010 without the project. Addition of the project would not significantly increase total daily traffic on this freeway segment, but a six percent increase in PM peak hour/peak direction traffic is projected.

In this segment, the projected 2010 peak hour traffic demand without the project well exceeds capacity, resulting in LOS F during both the AM and PM peak periods (Table 4.12-6). This is due to cumulative growth in the County, including development in Stockton, Manteca, and Lathrop. The project would degrade Level of Service further due to an increase in the theoretical volume/capacity ratio. As discussed for I-580 above, the peak hour demand could not be fully accommodated, resulting in standing queues, peak period spreading and reduction of traffic flows downstream.

#### **Effects of Reduced Number of Planned Lanes on I-205**

The DEIR assumes that the I-205 freeway will be widened to eight lanes (six mixed flow, two HOV lanes) by the time of buildout of the Master Plan. This assumption was based on previous General Plan 2010 and Mountain House EIR studies that indicated the need for eight or more lanes with or without the Mountain House project. However, no widening of I-205 beyond six lanes is currently planned. Accordingly, a revised County model projection was prepared assuming I-205 were widened to six lanes only to test the potential traffic shifts and LOS implications of not completing the widening to eight lanes by the time of Master Plan buildout. All other land use and network assumptions were unchanged.

Table 4.12-6A compares freeway traffic volumes for the six-lane I-205 to comparable results assuming eight lanes. Volume reductions on I-205 of as many as 7,700 daily vehicles are projected with the narrower width, representing up to 5 percent less daily traffic in 2010. A volume reduction of 6,800 daily vehicles is projected on I-5 between I-205 and SR 120. Volume changes on I-580 are relatively minor.

Table 4.12-6B shows resulting AM and PM peak hour volumes and levels of service. The primary LOS impact of the narrower width of I-205 is on I-205 itself, where a degradation from LOS D with eight lanes to LOS F with six lanes is projected. The LOS conditions on I-205 would approach conditions projected on I-580 to the west. These conditions would cause spreading of the peak period and substantial traffic queues in the peak direction of travel.

Widening of I-205 to eight lanes, as assumed in this DEIR, would mitigate much of the impact. However, according to Caltrans and the San Joaquin Council of Governments (COG), major costs and impacts would be incurred to widen the freeway beyond six lanes and connect it to I-5 to and from the north. Since the eight lane widening is unfunded, it is not included in the current COG Regional Transportation Plan. Due to the lead time involved and the need for major new funding, it is unlikely that the widening could be completed by 2010. In the absence of any improvements beyond widening of I-205 to six lanes, a significant adverse impact would occur with or without the Mountain House project.

An alternative to widening I-205 beyond six lanes is to develop a parallel, high capacity east-west arterial road north of I-205, preferably extending all the way from the City of Lathrop's Gold Rush City project to Mountain House. This arterial or expressway would follow an alignment along the existing Middle and Arbor roads, and would connect via an access road into Gold Rush City (Stanford Boulevard). A two- to four-lane arterial was assumed for this route in the DEIR analysis; this route is projected to be overloaded in 2010, with or without development of Mountain House. Widening of this route to six lanes would increase capacity in the I-205 corridor, thereby partially compensating for not widening the I-205 freeway beyond six lanes.

TABLE 4.12-6A

TOTAL DAILY TRAFFIC VOLUME CHANGES ON FREEWAYS IN PROJECT VICINITY  
(2010 Volume with Six Lanes versus Eight Lanes on I-205)

Freeway	Location	2010 Daily Traffic Volume		
		Eight Lanes	Six Lanes	Difference
I-580	In Livermore between Vasco Road and North Livermore Avenue	196,100	195,300	(800)
	At the Altamont Pass	182,100	181,600	(500)
	West of I-205 Interchange	170,000	168,000	(2,000)
	North of Patterson Pass Road	54,900	56,100	1,200
I-205	West of Patterson Pass Road	108,100	107,700	(400)
	East of Patterson Pass Road	136,500	132,700	(3,800)
	East of 11th Street	115,100	110,900	(4,200)
	East of Grant Line Road	145,500	137,800	(7,700)
I-5	Between I-205 and SR 120	208,900	202,100	(6,800)

Source: DKS Associates.

TABLE 4.12-6B

YEAR 2010: PEAK HOUR, PEAK DIRECTION LEVEL OF SERVICE ON FREEWAYS  
I-205 AS EIGHT LANES VERSUS I-205 AS SIX LANE

Freeway Location	With Eight Lanes on I-205						With Six Lanes on I-205					
	AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS
I-580 north of Linne Road	4,580	1.15	<u>F</u>	5,210	1.30	<u>F</u>	4,690	1.17	<u>F</u>	5,350	1.34	<u>F</u>
I-580 south of I-205	3,990	1.00	<u>F</u>	4,010	1.00	<u>F</u>	4,090	1.02	<u>F</u>	4,130	1.03	<u>F</u>
I-580 at Altamont Pass	10,470	1.31	<u>F</u>	11,670	1.46	<u>F</u>	10,440	1.31	<u>F</u>	11,640	1.46	<u>F</u>
I-580 west of Vasco Road	12,790	1.60	<u>F</u>	14,260	1.78	<u>F</u>	12,760	1.60	<u>F</u>	14,250	1.78	<u>F</u>
I-205 west of I-5	7,780	0.97	<u>E</u>	8,230	1.03	<u>F</u>	7,110	1.19	<u>F</u>	7,740	1.29	<u>F</u>
I-205 west of Tracy Blvd.	7,320	0.92	<u>D</u>	7,410	0.93	<u>D</u>	6,900	1.15	<u>F</u>	7,560	1.26	<u>F</u>
I-205 south of Grant Line Road	5,960	0.75	<u>C</u>	6,670	0.83	<u>D</u>	5,620	0.94	<u>E</u>	6,280	1.05	<u>F</u>
I-205 west of 11th Street	7,400	0.93	<u>D</u>	8,240	1.03	<u>F</u>	7,040	1.18	<u>F</u>	7,830	1.31	<u>F</u>
I-205 west of Patterson Pass Rd.	6,380	0.80	<u>D</u>	7,240	0.91	<u>D</u>	6,230	1.04	<u>F</u>	7,030	1.17	<u>F</u>
I-5 south of State Route 132	940	0.24	<u>A</u>	1,110	0.28	<u>A</u>	940	0.24	<u>A</u>	1,100	0.28	<u>A</u>
I-5 south of Grant Line Road	2,400	0.60	<u>C</u>	2,890	0.72	<u>C</u>	2,370	0.59	<u>C</u>	2,850	0.71	<u>C</u>
I-5 north of I-205	10,730	1.34	<u>F</u>	11,810	1.48	<u>F</u>	10,540	1.32	<u>F</u>	11,670	1.46	<u>F</u>

Notes: Freeway capacity assumed at 2,000 vehicles per hour per lane. Under ideal conditions, capacities may be as high as 2,200 vehicles per hour per lane.

V/C = Volume to capacity ratio.

Bold and underlined letters indicate locations where County standards for acceptable LOS are not met.

Volumes represent peak hour demand volumes assuming existing peaking characteristics of travel. Where demands exceed capacities, actual throughput volumes would be reduced due to peak spreading and other factors, and queues would form upstream of bottleneck locations.



Even with this mitigation measure, a significant adverse impact is projected along I-205 by 2010.

#### Other Regional Facilities

West of North Livermore Avenue, net impacts of the project on I-580 traffic levels are projected to be insignificant (one to two percent over No Project volumes). The relatively low impact of the project on I-580 west of Livermore is primarily due to the underlying assumption that the amount of employment growth in the Bay Area, as projected by the Association of Bay Area Governments, would occur with or without the project.

On I-580, west of SR 84, net traffic volume increases of 1,000 to 4,500 daily vehicles are projected in comparing the No Project to the Project scenarios. This represents 0.5 to 2.3 percent of the traffic projected on I-580. The actual number of project-generated trips on I-580 would be greater than this, but the project trips would replace some non-project trips that would otherwise use I-580, as discussed above.

Similar results are observed on I-680 freeway north and south of I-580 and on other regional facilities in Alameda and Contra Costa counties, where net traffic increases of the project over 2010 traffic volumes without the project are insignificant.

#### Fair Share Funding of Improvements

The Draft Master Plan proposes "fair share" funding of I-205 and I-580 mainline freeway improvements, but does not indicate the amount anticipated. One possible approach for establishing a fair share for a specific improvement project is to determine the proportion that project trips represent of all traffic growth between 1990 and project buildout.<sup>15</sup> The projected shares of traffic growth on I-205 and I-580 that are due to the project are summarized on Table 4.12-7. **These are initial estimates that are subject to refinement in the future.** Based on select link analysis (Table 4.12-5), 27,900 daily trips on I-205 east of Grant Line Road would have origins or destinations at the project; half of these would be trip origins at the site. Daily traffic on I-205 is projected to increase from 56,000 in 1990 to 145,500 in 2010 with Master Plan buildout, an increase of 89,500 daily vehicles. Therefore, the project trip origins would account for 16 percent

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<sup>15</sup> Only the origins are considered here because use of both origins and destinations would potentially double count trips. It is assumed that, for trips with destinations in the project site, the locations of the origins would similarly be responsible for "fair share" funding of the regional improvements, including other jurisdictions such as Alameda County or, alternatively, other funding sources (e.g., State, Federal, regional fees) would be used to fund the other half of the costs. Also, only the projected increase in traffic is considered since existing traffic is accommodated by the existing roadway. This estimate could be refined in the future by calculating fair shares at additional locations along I-205 and averaging the results, and/or by using peak hour traffic projections rather than daily.

TABLE 4.12-7

**PROJECT'S PERCENTAGE OF ADDED TRIPS ON  
REGIONAL AND COUNTY FACILITIES IN PROJECT VICINITY**

<b>Roadway</b>	<b>Location/Segment</b>	<b>Percent Project Trips<sup>1</sup></b>
<b><u>Freeway Mainline:</u></b>		
I-205	Patterson Pass Road to I-5	16
I-580	Altamont Pass	12
<b><u>Freeway Interchanges:</u></b>		
I-205/Patterson Pass Road		87
I-580/Grant Line Road		55
I-580/Patterson Pass Road		32
<b><u>County Arterial Roads:</u></b>		
Patterson Pass Road	Byron Road to I-205	100 <sup>2</sup>
Patterson Pass Road	I-205 to I-580	36
Byron Road	County line to Patterson Pass Road	35
Byron Road	Patterson Pass Road to I-205	40
Byron Road	Mountain House Road to County line	28
Grant Line Road	I-580 to Byron Road	48
Grant Line Road	Byron Road to I-205	48
Grant Line Road (new)	Byron Road to I-205	36
Altamont Pass Road	Mountain House Road to I-580	50
11th Street	I-205 to Tracy Boulevard	22
Tracy Boulevard	North of Lammers	12

Source: DKS Associates.

**Note:** The use of these estimates for fair share contributions assume participation by other jurisdictions on a similar basis or, alternatively, use of other funding sources. Only major project impacts are included; other improvements farther from site would be funded through regional fees. Estimates may be refined in the future to consider additional locations in each segment.

<sup>1</sup> Percentage of daily trips added (1990-2010) that have origins at Mountain House (except for I-205/Patterson Pass Road and I-580/Grant Line Road interchanges where both origins and destinations are included).

<sup>2</sup> Percentage of added trips with origins within Mountain House not determined from select link analysis, but would be slightly less than 50%. However, the project is assumed to have full responsibility for improving this roadway segment since few trips are projected to use it in the No Project scenario, and because it is an on-site roadway.

of the projected traffic increase (13,950 project trips divided by 89,500 total trips), and this is a reasonable fair share estimate for I-205 mainline improvements.

Similarly, with buildout of the project, about 21,100 daily trips are projected on I-580 at Altamont Pass with origins or destinations there (Table 4.12-5), based on select link analysis. Half of these, or 10,550 vehicles would represent trip origins at the site. The daily volume is projected to increase from 91,000 vehicles in 1990 to 182,100 vehicles, an increase of 91,100 vehicles. The project trip origins would therefore account for 12 percent of the projected increase.

The project would impact other regional facilities throughout the County beyond those included in Table 4.12-7. These impacts are likely to be small in percentage terms at any single location, but their cumulative results on the Countywide regional system could be significant. Fair share contributions to mitigate these impacts could be determined through existing procedures for regional impact fees included in the County's Traffic Impact Mitigation Fee program (San Joaquin County, 1990), with appropriate credits applied for project funded improvements on ~~I-205 and I-580~~ **eligible facilities**.

#### **Mitigation Measure M4.12-2**

*The following mitigation measures should be implemented to reduce impacts of the project on freeways; however, the impact would remain an unavoidable adverse impact.*

~~Two Policies~~ **Three Implementations** should be included under Objective 1 in Freeway Improvements (Appendix C), as follows:

- "d) ~~The project will~~ **shall fund its fair share of the cost of widening I-205 from four lanes to six lanes, and from six lanes to eight lanes between ~~Patterson Pass Road~~ I-580 and I-5, either as HOV lanes or mixed flow lanes. As an alternative to widening the I-205 freeway beyond six lanes, the project sponsor shall contribute a fair share to development of a parallel east-west roadway system north of I-205, extending between Mountain House and the City of Lathrop's Gold Rush City development, including the necessary multi-jurisdictional alternative/feasibility studies.**
- "e) ~~As an alternative to widening the I-580 freeway, the project sponsor shall contribute a fair share to safety and operational improvements and/or to the widening of Altamont Pass Road west of Grant Line Road to four lanes (as HOV or truck lanes), if determined to be consistent with Alameda County policy and if jointly funded on a fair share basis by Alameda County.~~
- "f) **The Public Financing Plan shall reflect the most current cost estimates and fair share contributions, based on refined San Joaquin County Travel Model estimates."**

**Impact M4.12-3**

**The project would increase traffic volumes on freeway interchanges near the site and would require interchange improvements at Grant Line Road/I-580, Patterson Pass Road/I-205 and Patterson Pass Road/I-580.**

The project would primarily impact three existing freeway interchanges: I-205/Patterson Pass Road, I-580/Grant Line Road, and I-580/Patterson Pass Road. All three are currently low capacity interchanges built to rural standards, and would require substantial upgrading to accommodate projected 2010 traffic volumes with the project. The Draft Master Plan includes policies for fair share participation in the I-205/Patterson Pass Road and I-580/Grant Line Road interchange improvements, but no specific provisions are included for the I-580/Patterson Pass Road interchange.

### **I-205/Patterson Pass Road Interchange**

The Draft Master Plan proposes the following improvements for this interchange, staged over time:

- Bridge widening, ultimately to 6 lanes
- Addition of two loop ramps (northbound to westbound on, southbound to eastbound on)
- Signals at ramp intersections
- Off-ramp widening

The ultimate interchange improvements would meet the County's LOS standards at buildout of the project site. The controlling signalized ramp intersections would provide LOS B or better service during both AM and PM peak hours (Table 4.12-11, presented later in this section), and all ramps are projected to operate satisfactorily. During preparation of the Project Study Report (PSR), further analysis would need to be conducted to determine storage lane requirements. Also, provisions need to be made for installing ramp metering with an HOV bypass lane at the southbound to westbound on ramp.

The Draft Master Plan does not quantify a fair share cost for the project. Table 4.12-7 indicates a possible fair share based on the proportion of total vehicles to or from Mountain House. About 87 percent of all vehicles entering or leaving the freeway at this interchange are projected to be to or from Mountain House and other points north of I-205, with the remainder directed to or from the south. Based on this measure, a reasonable estimate of fair share is 87 percent of total costs for upgrading the interchange.

### **I-580/Grant Line Road Interchange**

The Draft Master Plan proposes the following interchange improvements, staged over time:

- Underpass widening to 4 lanes
- Addition of a loop ramp (southbound to eastbound on)
- Realignment and widening of other ramps
- Signals at ramp intersections

The interchange improvements would meet the County's LOS D standard at buildout of the Master Plan. The controlling signalized ramp intersections indicate that the ultimate improvements would provide LOS D or better service during both AM and PM peak hours (Table 4.12-11, presented later in this section), and all ramps would accommodate the projected ramp volumes. During preparation of the Project Study Report (PSR), further analysis should be conducted to determine storage lane requirements. Also, provisions should be made for installing ramp metering with an HOV bypass lane at the southbound to westbound on ramp.

The Draft Master Plan does not quantify a fair share for the project. A reasonable fair share, based on the proportion of all vehicles entering or leaving the freeway at this interchange to or from Mountain House, is 55 percent of the total cost of upgrading this intersection (Table 4.12-7).

### **I-580/Patterson Pass Road Interchange**

The I-580/Patterson Pass Road freeway interchange would also be significantly impacted by the project, although a majority of the projected traffic growth at these locations appears to be attributable to other cumulative growth. The Draft Master Plan does not include specific policies for improving this interchange. Comparisons of projected 2010 traffic volumes on Patterson Pass Road with and without the project (Figure 4.12-7) indicate the potential need for improvements. Based on the Specific Plan I analysis presented later in this chapter, these improvements do not appear to be needed until some time after buildout of Specific Plan I. More detailed analysis is necessary to determine the optimal set of improvements and their phasing.

The Draft Master Plan does not quantify a fair share for the project. A preliminary estimate, based on the projected proportion of trips on Patterson Pass Road with origins at the project, is 32 percent (Table 4.12-7). This estimate should be updated at such time that further interchange studies are completed. The fair share estimate should be coordinated with the significant industrial development that is planned at the Patterson Pass Business Park.

#### **Mitigation Measure M4.12-3**

(a) *Table 9.1 in the Draft Master Plan, Schedule of Freeway Interchange Improvements, should be expanded to add "Upgrade interchange, PPR/I580" with a footnote indicating that "Extent and phasing of improvements to be determined prior to approval of second Specific Plan."*

(b) *Table 9.1 in the Draft Master Plan should be expanded to ~~indicate~~ **include a PSR for Grant Line/I-580 interchange improvements and a trigger point for its completion of a PSR for Grant Line/I-580 interchange improvements. The PSR should explicitly consider other planned projects affecting the interchange such as truck climbing lanes.***

(c) *Two Implementations should be added under Freeway Improvements (Appendix C) as follows:*

*"Interchange improvements on I-205 and on I-580 (west of I-205 junction) shall provide for ramp metering with HOV bypass lanes."*

*"Prior to approval of the first Development Permit in Specific Plan I and prior to approval of each subsequent Specific Plan, the County shall review and, if appropriate, revise the trigger points listed in Table 9.1 of the Draft Master Plan. These reviews shall use the latest version of the COG Travel Model and most current projections of growth, and shall be funded by the applicant. ~~Revisions shall be incorporated into subsequent specific plans.~~"*

#### **Impact M4.12-4**

**The project would contribute to the need for improvements on several County and other roads in the project vicinity, including portions of Grant Line Road, Patterson Pass Road, Byron Highway, Altamont Pass Road, 11th Street, State Route 4, and Tracy Boulevard leading to**

**SR 4. Most of these impacts could be mitigated by widening or upgrading the roadways to increase their capacities.**

The proposed project would contribute to projected cumulative traffic growth, as shown in Table 4.12-8 and Figure 4.12-8. Project trips could represent a higher proportion of the total traffic on a specific road than indicated in Table 4.12-8, due to replacement of some non-project traffic that would otherwise use the facility were the project not built. To quantify the number of trips to or from the project, select link analysis was performed at a number of roadway locations (Table 4.12-9). Projected peak hour levels of service based on typical roadway capacities are shown in Table 4.12-10. The roadway capacities indicated in this table are based on generalized capacities used in the COG travel model, and may be conservatively low at some locations, particularly where raised medians, turn pockets, and roadway access controls are planned. **It should be noted that impacts due to construction-related traffic have not been included in the projections, because it is difficult, if not impossible, to determine the origin of such traffic.**

Impacts of the project are considered significant when the County's LOS C standard is not met. Locations not meeting the LOS C standard during either the AM or PM peak hour are flagged on Table 4.12-10 (bold, underlined). As noted above, the roadway capacities are generalized values that may be conservatively low; consequently, V/C ratios and LOS could be better than shown in the table. As indicated on the table, the following roadways may violate the County's current LOS C standard, requiring additional widening or upgrading to increase their capacities:

- Grant Line Road west of Marina Boulevard
- Grant Line Road east of Patterson Pass Road
- Grant Line Road east of Byron Road
- Patterson Pass Road north of I-205
- Patterson Pass Road south of I-205
- 11th Street
- Altamont Pass Road
- Byron Road west of Mountain House Road
- **Byron Road east of Lammers Road**

The Draft Master Plan proposes that LOS D be accepted on "community gateways" including portions of Grant Line Road, Patterson Pass Road, and Byron Road. Mitigation Measure M4.12-5(f) proposes an amendment to the County General Plan LOS policy for consistency with the Draft Master Plan. If the revised LOS standard is approved for community gateways, the following roadways would remain in violation of the LOS policy:

- Grant Line Road east of Patterson Pass Road
- Grant Line Road east of Byron Road
- Patterson Pass Road south of I-205
- 11th Street
- Altamont Pass Road
- Byron Road west of Mountain House Road

4.12 TRANSPORTATION

TABLE 4.12-8

**TRAFFIC VOLUME INCREASES ON ARTERIALS ON  
PROJECT SITE AND PROJECT VICINITY  
(Total Two-Way Daily Traffic)**

Road	Location	1993 Daily Traffic Volume	2010 Daily Traffic Volume		
			No Project	Proposed Project	Differ- ence <sup>1</sup>
11th Street	West of Lammers Road	11,000	15,600	22,800	7,200
Altamont Pass Road	East of Dyer Road	3,100	4,000	11,700	7,700
Grant Line Road (new)	East of Byron Road	N/A	8,700	21,100	12,400
Grant Line Road (old)	East of Byron Road	6,120	17,000	24,200	7,200
Grant Line Road	North of I-580	3,500	7,700	20,000	12,300
SR-4	West of Tracy Boulevard	5,700	12,300	15,100	2,800
SR-4	East of Tracy Boulevard	6,000	11,800	11,200	(600)
Patterson Pass Road	North of Schulte Road	1,900	7,400	18,300	10,900
Tracy Boulevard	North of Lammers Road	2,800	5,400	12,200	6,800
Corral Hollow Road	South of Lammers Road	1,200	2,900	8,300	5,400
Byron Road	North of Grant Line Road	8,300	11,600	29,000	17,400
Byron Highway	North of County Line	6,400	20,600	23,400	2,800

Source: DKS Associates.

Notes: See Figure 4.12-8 for specific locations.

Numbers in parentheses are volumes that decreased with the Proposed Project.

N/A = Not applicable.

<sup>1</sup> Proposed Project compared to No Project volume.

TABLE 4.12-9

**PROJECT TRIPS ON SELECTED ROADWAY SEGMENTS  
2010 Daily Traffic - Master Plan Buildout**

Roadway	Location	Total Daily Vehicles	Vehicles Originating from Project	Percent of Total Daily Vehicles Originating from Project <sup>1</sup>
Byron Highway	North of County line	23,400	4,800	21
Byron Road	South of Grant Line Road	29,000	10,600	37
Altamont Pass Road	West of Grant Line Road	11,700	3,100	26
New Grant Line Road	East of Byron Road	21,100	7,600	36
11th Street	East of Lammers Road	23,700	2,800	12
Tracy Boulevard	North of Lammers Road	12,200	1,100	9

Source: San Joaquin County Travel Demand Model, DKS Associates.

<sup>1</sup> Based on select link analysis using County Travel Model. The select link analysis traces origins and destinations of all trips projected to use the particular roadway link.




# 2010 TOTAL DAILY TRAFFIC VOLUMES ON ARTERIAL ROADS PROPOSED PROJECT AND NO PROJECT SCENARIOS

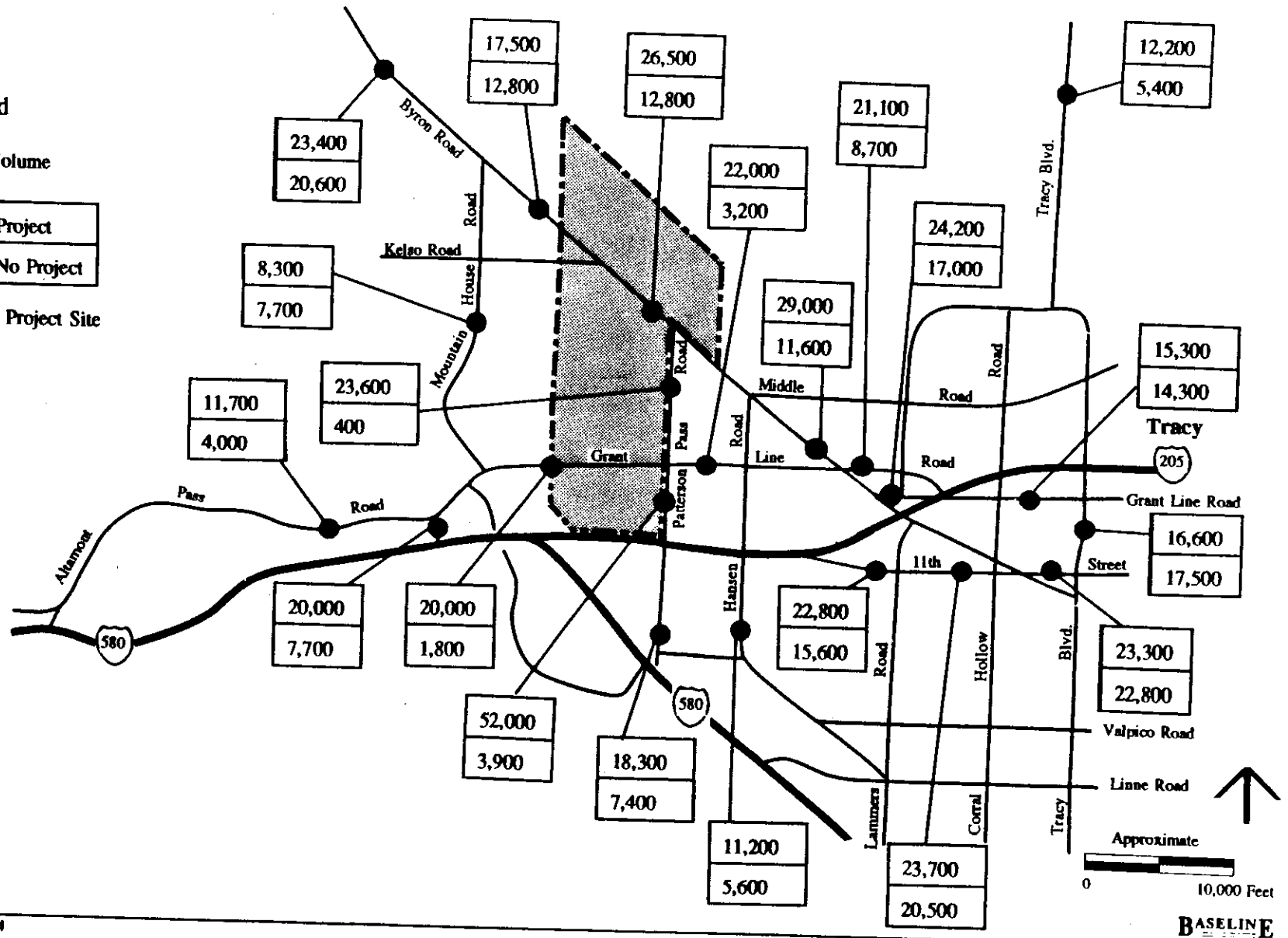
Figure 4.12-8

**Legend**

Daily Volume

2010 Project
2010 No Project

 Project Site



4.12-36

TABLE 4.12-10

## YEAR 2010 PEAK HOUR LOS ON ARTERIAL ROADS

Road	Location	Directional Lanes	Hourly Directional Capacity <sup>1</sup>	Time of Day	No Project			Project		
					Volume	V/C	LOS	Volume	V/C	LOS
Altamont Pass Road	West of Grant Line Road	1	900	AM	1,180	1.31	<u>F</u>	1,190	1.32	<u>F</u>
				PM	1,510	1.68	<u>F</u>	1,560	1.73	<u>F</u>
Mountain House Road	South of Kelso	1	900	AM	520	0.58	C	540	0.60	C
				PM	400	0.44	B	550	0.61	C
Byron Highway	West of Mountain House Road	1	900	AM	1,100	1.22	<u>F</u>	1,140	1.27	<u>F</u>
				PM	1,230	1.37	<u>F</u>	1,310	1.46	<u>F</u>
Byron Road	East of Mountain House Road	2	1,800	AM	890	0.49	B	840	0.47	B
				PM	1,030	0.57	C	1,010	0.56	C
Byron Road	East of Patterson Pass Road	3	2,250	AM	890	0.40	B	1,160	0.52	C
				PM	1,030	0.46	B	1,380	0.61	C
Byron Road	South East of Grant Line Road	2	1,800	AM	760	0.42	B	1,010	0.56	C
				PM	1,040	0.58	C	1,020	0.57	C
Byron Road	East of Lammers Road	1	900	AM	530	0.59	C	720	0.80	<u>D</u>
				PM	760	0.84	<u>D</u>	750	0.83	<u>D</u>
Hansen Road	South of I-205	1	900	AM	270	0.3	A	230	0.26	A
				PM	380	0.42	B	660	0.73	C
Patterson Pass Road	South of I-205	2	1,500	AM	680	0.45	B	990	0.66	C
				PM	730	0.49	B	1,130	0.75	<u>D</u>
Patterson Pass Road	North of I-205	4	3,000	AM	170	0.06	A	2,070	0.69	C
				PM	450	0.15	A	2,610	0.87	<u>D</u> <sup>2</sup>
Patterson Pass Road	North of Central	3	2,250	AM	170	0.08	A	1,180	0.52	C
				PM	330	0.15	A	1,380	0.61	C
Patterson Pass Road	North of Grant Line Road	2	1,500	AM	140	0.09	A	1,060	0.71	C
				PM	280	0.19	A	1,230	0.82	<u>D</u> <sup>2</sup>
Grant Line Road	North of I-580	2	1,800	AM	700	0.39	B	1,170	0.65	C
				PM	330	0.18	A	1,000	0.56	C

Table 4.12-10 Year 2010 Peak Hour LOS of Arterial Roads - *continued*

Road	Location	Directional Lanes	Hourly Directional Capacity <sup>1</sup>	Time of Day	No Project			Project		
					Volume	V/C	LOS	Volume	V/C	LOS
Grant Line Road	West of Marina	2	1,800	AM	620	0.34	A	1,220	0.68	C
				PM	1,000	0.56	C	1,470	0.82	<u>D</u> <sup>2</sup>
Grant Line Road	East of Patterson Pass Road	2	1,500	AM	680	0.45	B	1,160	0.77	<u>D</u> <sup>2</sup>
				PM	970	0.65	C	1,540	1.03	<u>F</u> <sup>2</sup>
Grant Line Road (Ex.)	East of Byron Road	2	1,500	AM	510	0.34	A	780	0.52	C
				PM	760	0.51	C	1,160	0.77	<u>D</u>
Grant Line Road (New)	East of Byron Road	2	1,500	AM	780	0.52	C	1,070	0.71	C
				PM	1,150	0.77	<u>D</u>	1,110	0.74	C
11th Street	East of I-205	2	1,800	AM	1,180	0.66	C	1,440	0.80	<u>D</u>
				PM	1,290	0.72	C	1,570	0.87	<u>D</u>
11th Street	East of Corral Hollow	2	1,500	AM	1,070	0.71	C	1,070	0.71	C
				PM	1,150	0.77	<u>D</u>	1,220	0.81	<u>D</u>
11th Street	West of Tracy Boulevard	2	1,500	AM	1,000	0.67	C	1,060	0.71	C
				PM	1,230	0.82	<u>D</u>	1,260	0.84	<u>D</u>
Tracy Boulevard	North of 11th Street	2	1,800	AM	700	0.39	B	720	0.40	C
				PM	980	0.54	C	930	0.52	C
Tracy Boulevard	North of Lammers Road	1	900	AM	260	0.29	A	380	0.42	B
				PM	440	0.49	B	620	0.69	C

Source: DKS Associates.

Notes: LOS = Level of service.

V/C = Volume-to-capacity ratio.

**Underlined** letters indicate Level of Service does not meet County prevailing standard of the jurisdiction in which the roadway segment lies.

<sup>1</sup> Hourly capacities are generalized estimates based on COG travel model. Capacities may be higher (and therefore V/C ratios and LOS better) where raised medians, turn pockets, and access controls are used.

<sup>2</sup> Community gateways where LOS D is proposed standard in Draft Master Plan, rather than more restrictive LOS C.

Below is a discussion of the projected traffic increases, LOS impacts and mitigation for off-site roadways in the project vicinity.

Off-site project impacts would be greatest on the section of Grant Line Road between Altamont Pass Road and I-580, where daily traffic volumes would increase from 7,700 ADT without the project to approximately 20,000 ADT with the project in 2010, an increase of about 260 percent. One additional lane in each direction would be needed on the segment of Grant Line Road between I-580 and Mountain House Road to accommodate 2010 traffic with the project. The additional southbound lane on Grant Line Road could be an HOV lane, as long as projected HOV usage is high enough to provide the same or more people-moving capacity as an additional mixed-flow lane. In the northbound direction, an additional lane also would be needed to accommodate multiple turn lanes from the eastbound off-ramp at the Grant Line Road/I-580 interchange. However, this lane should not be reserved for HOV.

LOS F is projected in 2010 on Grant Line Road between Patterson Pass Road and Byron Road. This assumes widening of Grant Line Road to a four lane minor arterial (undivided). However, with a higher capacity 4-lane divided arterial having access controls (i.e., few driveways and cross-streets), LOS D could potentially be achieved.

East of Byron Road, Grant Line Road provides a key route between the project and the City of Tracy which would be a primary destination for project-generated traffic. An extension of Grant Line Road across Byron Road to the east has been assumed to occur by 2010. By 2010, the new Grant Line Road extension would be expected to carry nearly 21,100 daily vehicles (Figure 4.12-8), of which 36 percent would originate from the project site, based on select link analysis summarized in Table 4.12-9. Existing Grant Line Road East would also carry over 24,000 daily vehicles. LOS D is projected on both routes in 2010 with the project.

LOS D is projected on several segments of Patterson Pass Road, both north and south of I-205. South of I-205, the level of service closely approaches LOS C and, since the assumed capacity is conservatively low, additional lanes are not recommended beyond the 4 lanes assumed for 2010. North of I-205, the assumed capacity is also conservative for a divided major arterial, and the projected levels of service at controlling intersections along Patterson Pass Road (Table 4.12-11) indicate that LOS C or better would be maintained in 2010. Therefore, no additional mitigation is proposed for Patterson Pass Road beyond what is proposed in the Draft Master Plan.

Projected travel demand for Altamont Pass Road indicates that an additional lane in each direction between Grant Line Road and Livermore would be necessary with or without the proposed project by 2010. As congestion on I-580 increases in the future, drivers will seek alternative routes, the most likely of which is Altamont Pass Road. During the PM peak hour it is estimated that Altamont Pass Road will have 1,500 vehicles without the project and 1,600 vehicles with the project, resulting in LOS F in either case. Widening of Altamont Pass Road to four lanes would accommodate the projected traffic volumes at LOS D but may not be feasible or acceptable due to potential costs and

TABLE 4.12-11

**INTERSECTION LEVEL OF SERVICE SUMMARY  
AT PROJECT BUILDOUT**

Locations	AM Peak Hour		PM Peak Hour	
	V/C Ratio <sup>1</sup>	LOS <sup>2</sup>	V/C Ratio	LOS
<b>Signalized</b>				
I-205 Eastbound Ramps/Patterson Pass Rd.	0.34	A	0.54	A
I-205 Westbound Ramps/Patterson Pass Rd.	0.58	A	0.68	B
Patterson Pass Rd./Central Pkwy. (South)	0.70	B	0.70	B
Patterson Pass Rd./Von Sosten	0.38	A	0.53	A
Patterson Pass Rd./Grant Line Rd.	0.59	A	0.79	C
Patterson Pass Rd./Mascot Blvd.	0.40	A	0.54	A
Patterson Pass Rd./Mountain House Blvd.	0.45	A	0.52	A
Patterson Pass Rd./Main St.	0.33	A	0.45	A
Patterson Pass Rd./Byron Rd.	0.84	D	0.89	D
Patterson Pass Rd. North/Central Pkwy.	0.63	B	0.98	<u>E</u>
Patterson Pass Rd. North/Marina Blvd.	0.50	A	0.49	A
Marina Blvd./Byron Rd.	0.71	C	0.60	A
Marina Blvd./Kelso Rd.	0.64	B	0.76	C
Marina Blvd./De Anza Blvd.	0.11	A	0.11	A
Marina Blvd./Main St.	0.12	A	0.17	A
Marina Blvd./Mascot Blvd.	0.21	A	0.33	A
Marina Blvd./Grant Line Rd.	0.59	A	0.49	A
Central Pkwy./Grant Line Rd.	0.50	A	0.84	D
Central Pkwy./Mascot Blvd.	0.35	A	0.54	A
Central Pkwy./Mountain House Blvd.	0.31	A	0.43	A
Central Pkwy./Main St.	0.51	A	0.56	A
Central Pkwy./De Anza Blvd. (north)	0.43	A	0.65	B
De Anza Blvd./Central Pkwy. (south)	0.62	B	0.85	D
De Anza Blvd./Grant Line Rd.	0.58	A	0.84	D
De Anza Blvd./Mascot Blvd.	0.53	A	0.77	C
De Anza Blvd./Mountain House Blvd.	0.67	B	0.83	D
De Anza Blvd./Main St.	0.43	A	0.75	C
I-580 Eastbound Ramp/Grant Line Rd.	0.18	A	0.53	A
I-580 Westbound Ramp/Grant Line Rd.	0.85	D	0.37	A

Table 4.12-11 Intersection Level of Service - *continued*

Locations <sup>3</sup>	AM Peak Hour		PM Peak Hour	
	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS
<b>Unsignalized</b>				
Patterson Pass Rd./A St.	A	<u>E</u>	C	<u>E</u>
De Anza Blvd./Von Sostan	B	D	A <sup>4</sup>	<u>E</u>
C St./Mountain House Blvd.	A	<u>F</u>	A <sup>4</sup>	<u>F</u>
D St./Mountain House Blvd.	A	<u>E</u>	A <sup>4</sup>	<u>F</u>

Source: DKS Associates.

**Note:** **Underlined** and **underlined** letters indicate locations where County standards for acceptable LOS are not met.

<sup>1</sup> V/C = Volume-to-capacity ratio.

<sup>2</sup> LOS = Level of service.

<sup>3</sup> Level of service shown for worst movement from minor and major street approaches.

<sup>4</sup> Meets peak hour signal warrant.

environmental impacts. **As mentioned previously, the Alameda County Board of Supervisors has adopted a policy that opposes roadway capacity improvements to the Altamont Pass gateways. This policy does not preclude the County from supporting or approving improvements to roadway safety.** However, roadway upgrading (e.g., passing lanes, shoulder widening, realignment) may be needed for safety with the higher traffic volumes projected.

Eleventh Street in the City of Tracy is an important connection between Tracy and the project site. LOS D is projected in 2010, with the project. To accommodate cumulative 2010 development with LOS C, Eleventh Street would need to be widened to 6 lanes or upgraded to increase its capacity. However, under the City of Tracy's General Plan, LOS D would be acceptable on Eleventh Street within 1/4 mile of I-205, and may also be acceptable farther east since this is not an intra-city travel route. Based on select link analysis, traffic from the project site would account for approximately 12 percent of the expected 2010 daily traffic demand on 11th Street between I-205 and Corral Hollow Road.

Tracy Boulevard is an alternative route from the project area to East Contra Costa County, Stockton, and I-5 to the north via State Route 4. A sizable traffic increase is projected between now and 2010 on the segment of Tracy Boulevard between Howard Road and Corral Hollow Road with the No Project alternative (5,400 daily vehicles in 2010 compared to 2,800 daily vehicles in 1990), and a further increase due to the project (up to 12,200 daily vehicles in 2010). However, based on select link analysis for this roadway segment, only about 1,100 daily vehicles, or 9 percent, would be from the project. The remainder of the increase represents traffic diverted from other routes due to shifts in travel patterns when the project is added. Since much of the projected traffic increase appears to be related to diversion from the freeway or other more direct routes, the traffic increase would be overstated if peak period spreading occurs in the future. For this reason, widening of Tracy Boulevard is not proposed as a mitigation measure. A modest increase due to the project (about 3,000 daily vehicles) is also projected on SR4 west of Tracy Boulevard; this increase appears to be related to the Tracy Boulevard traffic increase. No mitigation is proposed for SR4.

One additional lane in each direction would be needed on Byron Highway from Mountain House Road in Alameda County to State Route 4 in Contra Costa County to accommodate 2010 cumulative development. Daily traffic volumes on this section of Byron Highway are projected to increase to 23,400 vehicles by 2010 (Figure 4.12-8). About 21 percent of the total traffic volume would be from the project, as shown in Table 4.12-9.

The Draft Master Plan is not anticipated to significantly impact 2010 traffic volumes on other arterial routes in Alameda and Contra Costa Counties such as Patterson Pass (Midway) Road, Vasco Road, and the SR4 Bypass (Delta Expressway). Since the overall growth in the Tri-Valley and East Contra Costa County is assumed to be the same with or without the project, addition of the project would redistribute some traffic on these routes but is not anticipated to increase traffic beyond the No Project levels.

The project would potentially increase traffic volumes over those projected without the project on a number of local rural roads in the vicinity of the project. These routes include Bethany Road (Wicklund to Corral Hollow); Kelso Road (Marina Boulevard to Mountain House Road in Alameda County); Hansen Road (south of Byron Road); Von Sosten Road (Patterson Pass Road to Hansen Road); Reeve Road (north of Byron Road); Middle Road (east of Reeve Road); and Tracy Boulevard (north of I-205). Projected traffic volumes on these roads are typically under 5,000 daily vehicles and do not warrant roadway widening. However, the increased traffic would potentially warrant pavement upgrading and/or safety improvements, particularly if used by trucks.

The development of employment opportunities within the project site would be a critical factor in the amount of traffic added to County roads adjacent to the project site. The proposed land use mix, which strives to balance housing, employment, and commercial facilities, would serve to maximize the level of internal travel.

#### **Effects of Reduced Number of Planned Lanes on I-205**

The DEIR assumes that the I-205 freeway will be widened to eight lanes (six mixed flow, two HOV lanes) by the time of Master Plan buildout. However, funding and lead time requirements may preclude widening beyond six lanes by 2010. For this reason, a separate analysis was done to evaluate potential impacts of the Mountain House project on arterial roads assuming I-205 is widened only to six lanes, as currently planned.

Table 4.12-11A indicates the 2010 daily traffic volumes on arterials assuming I-205 is widened to six lanes only, and compares the volumes to volumes projected assuming widening of I-205 to eight lanes. The primary change in arterial volumes occurs on the Middle Road extension, a two- to four-lane east-west arterial parallel to and north of I-205 that connects the City of Lathrop's Gold Rush City development to Tracy and County lands to the west. Increases of up to 7,200 daily vehicles are projected in 2010 on this arterial roadway if I-205 is widened to only six rather than eight lanes. Traffic increases are also projected on most other arterial roads in the area, including 11th Street and Grant Line Road, which parallel I-205; however, the increases are relatively minor.

Table 4.12-11B shows the effects on 2010 peak hour arterial volumes and levels of service if I-205 is widened to six rather than the assumed eight lanes. These effects are relatively minor, with volumes and volume/capacity ratios typically varying by only 1 percent or less, and levels of service remaining unchanged. The only exceptions are along the Middle Road extension paralleling I-205 where, east of Tracy Boulevard, a degradation from LOS D to E is projected in the AM and a LOS F condition is worsened in the PM peak. The results indicate that, except for the Middle Road route, arterial routes are not sufficiently attractive as alternative routes to divert significant volumes of regional traffic from I-205, either because they involve too much out-of-direction travel, are too slow in speed, or are too heavily used by local traffic. Mitigation Measure M4.12-2 addresses the applicant's fair share contribution to development of the Middle Road corridor.



TABLE 4.12-11A

TRAFFIC VOLUME COMPARISONS ON ARTERIALS ON  
PROJECT SITE AND PROJECT VICINITY  
I-205 AS EIGHT LANES VERSUS SIX-LANES  
(Total Two-Way Daily Traffic)

Road	Location	2010 Daily Traffic Volume		
		I-205 as Eight Lanes	I-205 as Six Lanes	Differ- ence
11th Street	West of Lammers Road	22,800	23,100	300
Altamont Pass Road	East of Dyer Road	11,700	11,600	(100)
Grant Line Road (new)	East of Byron Road	21,100	21,700	600
Grant Line Road (old)	East of Byron Road	24,200	24,000	(200)
Grant Line Road	North of I-580	20,000	19,800	(200)
SR-4	West of Tracy Boulevard	15,100	15,300	200
SR-4	East of Tracy Boulevard	11,200	11,400	200
Patterson Pass Road	North of Schulte Road	18,300	18,100	(200)
Tracy Boulevard	North of Lammers Road	12,200	12,400	200
Corral Hollow Road	South of Lammers Road	8,300	8,900	600
Byron Road	North of Grant Line Road	29,000	29,100	100
Byron Highway	North of County Line	23,400	23,500	100
Middle Road	East of Byron Road	4,500	5,000	500
Middle Road/Arbor	East of Tracy Boulevard	15,300	22,500	7,200
Stanford Extension	East of Paradise Road	22,200	26,800	4,600

Source: DKS Associates.

Notes: See Figure 4.12-8 for specific locations.  
Numbers in parentheses are volumes that decreased with I-205 assumed as six lanes.

TABLE 4.12-11B

YEAR 2010 PEAK HOUR LOS ON ARTERIAL ROADS  
I-205 AS EIGHT LANES VERSUS I-205 AS SIX LANES

Road	Location	Directional Lanes	Hourly Directional Capacity <sup>1</sup>	Time of Day	I-205 as Eight Lanes			I-205 as Six Lanes		
					Volume	V/C	LOS	Volume	V/C	LOS
Altamont Pass Road	West of Grant Line Road	1	900	AM	1,190	1.32	<u>F</u>	1,180	1.32	<u>F</u>
				PM	1,560	1.73	<u>F</u>	1,550	1.73	<u>F</u>
Mountain House Road	South of Kelso	1	900	AM	540	0.60	C	550	0.60	C
				PM	550	0.61	C	510	0.61	C
Byron Highway	West of Mountain House Road	1	900	AM	1,140	1.27	<u>F</u>	1,140	1.27	<u>F</u>
				PM	1,310	1.46	<u>F</u>	1,310	1.46	<u>F</u>
Byron Road	East of Mountain House Road	2	1,800	AM	840	0.47	B	830	0.47	B
				PM	1,010	0.56	C	1,010	0.56	C
Byron Road	East of Patterson Pass Road	3	2,250	AM	1,160	0.52	C	1,180	0.52	C
				PM	1,380	0.61	C	1,390	0.61	C
Byron Road	South of Grant Line Road	2	1,800	AM	1,010	0.56	C	990	0.56	C
				PM	1,020	0.57	C	1,010	0.57	C
Hansen Road	South of I-205	1	900	AM	230	0.26	A	220	0.26	A
				PM	660	0.73	C	670	0.74	C
Patterson Pass Road	South of I-205	2	1,500	AM	990	0.66	C	1,000	0.66	C
				PM	1,130	0.75	<u>D</u>	1,140	0.75	<u>D</u>
Patterson Pass Road	North of I-205	4	3,000	AM	2,070	0.69	C	2,000	0.69	C
				PM	2,610	0.87	<u>D</u> <sup>2</sup>	2,520	0.84	<u>D</u> <sup>2</sup>
Patterson Pass Road	North of Central	3	2,250	AM	1,180	0.52	C	1,170	0.52	C
				PM	1,380	0.61	C	1,340	0.61	C
Patterson Pass Road	North of Grant Line Road	2	1,500	AM	1,060	0.71	C	1,050	0.71	C
				PM	1,230	0.82	<u>D</u> <sup>2</sup>	1,220	0.82	<u>D</u> <sup>2</sup>
Grant Line Road	North of I-580	2	1,800	AM	1,170	0.65	C	1,180	0.65	C
				PM	1,000	0.56	C	890	0.56	C
Grant Line Road	West of Marina	2	1,800	AM	1,220	0.68	C	1,200	0.68	C
				PM	1,470	0.82	<u>D</u> <sup>2</sup>	1,520	0.84	<u>D</u> <sup>2</sup>

Table 4.12-11B Year 2010 Peak Hour LOS of Arterial Roads, I-205 as Eight versus Six Lanes - *continued*

Road	Location	Directional Lanes	Hourly Directional Capacity <sup>1</sup>	Time of Day	I-205 as Eight Lanes			I-205 as Six Lanes		
					Volume	V/C	LOS	Volume	V/C	LOS
Grant Line Road	East of Patterson Pass Road	2	1,500	AM	1,160	0.77	<u>D</u> <sup>2</sup>	1,250	0.83	<u>D</u> <sup>2</sup>
				PM	1,540	1.03	<u>F</u> <sup>2</sup>	1,630	1.12	<u>F</u> <sup>2</sup>
Grant Line Road (Ex.)	East of Byron Road	2	1,500	AM	780	0.52	C	850	0.57	C
				PM	1,160	0.77	<u>D</u>	1,300	0.87	<u>D</u>
Grant Line Road (New)	East of Byron Road	2	1,500	AM	1,070	0.71	C	1,090	0.73	C
				PM	1,110	0.74	C	1,100	0.74	C
11th Street	East of I-205	2	1,800	AM	1,440	0.80	<u>D</u>	1,470	0.82	<u>D</u>
				PM	1,570	0.87	<u>D</u>	1,570	0.87	<u>D</u>
11th Street	East of Corral Hollow	2	1,500	AM	1,070	0.71	C	1,080	0.71	C
				PM	1,220	0.81	<u>D</u>	1,230	0.82	<u>D</u>
11th Street	West of Tracy Boulevard	2	1,500	AM	1,060	0.71	C	1,100	0.73	C
				PM	1,260	0.84	<u>D</u>	1,260	0.84	<u>D</u>
Tracy Boulevard	North of 11th Street	2	1,800	AM	720	0.40	B	730	0.40	B
				PM	930	0.52	C	910	0.52	C
Tracy Boulevard	North of Lammers Road	1	900	AM	380	0.42	B	400	0.44	B
				PM	620	0.69	C	630	0.70	C
Middle/Arbor	East of Byron Highway	1	750	AM	300	0.40	B	340	0.45	C
				PM	460	0.61	C	520	0.69	C
Middle/Arbor	East of Tracy Boulevard	1	750	AM	650	0.87	<u>D</u>	740	0.99	<u>E</u>
				PM	910	1.21	<u>E</u>	1,030	1.37	<u>F</u>
Stanford Extension	East of Paradise Road	2	1,800	AM	980	0.54	C	980	0.54	C
				PM	1,450	0.81	<u>D</u>	1,430	0.80	<u>D</u>

Source: DKS Associates.

<sup>2</sup>

Community gateways where LOS D is proposed standard in Draft Master Plan, rather than more restrictive LOS C.

Notes: LOS = Level of service.

V/C = Volume-to-capacity ratio.

Bold underlined letters indicate Level of Service does not meet County standard.

Hourly capacities are generalized estimates based on COG travel model.

Capacities may be higher (and therefore V/C ratios and LOS better) where raised medians, turn pockets, and access controls are used.

**Fair Share Funding of Improvements**

The establishment of fair share responsibilities for the project and specific Traffic Impact Mitigation Fees for county arterial improvements in the project vicinity are subject to review and approval of the County. To assist in reviewing initial fair share estimates of improvement costs, this DEIR identifies the proportion of added traffic due to the project on roadways in the project vicinity anticipated to require improvements (Table 4.12-7). The table does not necessarily represent the total potential contribution to transportation improvements by the applicant that would need to be included in the Public Financing Plan since only primary impacts on local streets and nearby regional facilities are included. As indicated above, these estimates are subject to refinement at the time an individual project is designed. Also, the project would be subject to any fees for regional improvements which are included in the county's Traffic Impact Mitigation Fee program.

The following mitigation measures are similar to those included in the FSEIR, with additional measures for certain roads to reflect the results of the updated traffic analysis.

**Mitigation Measure M4.12-4**

(a) Policy f) under Objective 1 in County Arterials should be amended to specifically call out 11th Street, **Grant Line Road (east)**, Altamont Pass Road, and Byron Highway, as follows:

"f) The community shall, to the extent of its fair share, participate in appropriate traffic studies and improvement measures with other counties or cities whose roadways are impacted by the community. The specific roadway improvements that shall be studied include 11th Street and **Grant Line Road (east of Patterson Pass Road)** (City of Tracy), Altamont Pass Road (Alameda County), and Byron Highway (Alameda and Contra Costa counties). Where roadway widening for additional capacity is not feasible or acceptable, safety and operational improvements shall be considered in order to better accommodate increased traffic."

(b) ~~A new Implementation a) should be added under Objective 1 in County Arterials Transit (Appendix C) should be amended as follows:~~

~~"h) Local transit service from the City of Tracy shall be extended to the project site to reduce the number of project vehicle trips on 11th Street and Grant Line Road East. The Community shall contribute a fair share for funding and operating the transit service. The fair share arrangements shall be determined by the County, the City of Tracy, and the project sponsor, and shall be consistent with Countywide transit service arrangements. No later than occupancy of the twenty-fifth dwelling unit, a service agreement shall be executed to establish bus service between Mountain House and Tracy."~~

(c) Table 9.2 of the Draft Master Plan should be revised to include the realignment of Grant Line Road to form a continuous segment where it meets Byron Road. A trigger point should be established for this improvement. Also, a new Implementation should be added under Objective 1 in County Arterials (Appendix C):

- "g) The community shall, to the extent of its fair share, participate in study and implementation of a grade-separated crossing of the existing Southern Pacific railroad tracks at Grant Line Road to accommodate traffic associated with the proposed project and the proposed Tracy regional mall."*
- (d) Table 9.2 of the Draft Master Plan should be revised to include the road segment of Grant Line Road, Patterson Pass Road to the Tracy regional mall. The "Lanes" column should read "To 4", and a trigger point should be established for this improvement. A footnote to Table 9.2, referring to the new segments, should state: "The Master Developer shall provide fair share funding for the widening of Grant Line Road, based on more detailed studies that identify both Mountain House and City of Tracy fair share contributions to the widening."**
- (e) Table 9.2 of the Draft Master Plan should be revised to include Byron Road, east of Lammers Road with a footnote to indicate this improvement would be required if the County does not accept LOS D on this route. The "lane" column should read "To 4" and a trigger point should be established.**
- (f) Table 9.2 of the Draft Master Plan should be revised to include the road segment of Altamont Pass Road, Greenville Road to Grant Line Road. Under the "Lanes" and "Trigger DU's" columns, the notation "n.a." (not applicable) should be entered. A footnote to Table 9.2, referring to the new segment, should state: "Safety and operational improvements may include passing lanes, realignments, and shoulder widening. No additional capacity improvements may be constructed on Altamont Pass Road if it is determined that such improvements would violate Alameda County policy."**
- (d) (g) ~~Two~~ Three new Implementations should be added under Objective 1 in County Arterials (Appendix C), as follows:**
- "h) The community shall, to the extent of its fair share, participate in upgrading of existing pavement sections and/or safety improvements (e.g., standard pavement widths and paved shoulders) on rural County roads (such as Bethany, Kelso, Hansen, Von Sosten, Reeve, Middle, and Tracy Boulevard north of I-205), where necessary to accommodate additional traffic caused by the project."*
- "i) Prior to initial occupancy of any specific plan, the County shall review and, if appropriate, revise the trigger points listed in Table 9.2 of the Draft Master Plan. These revisions shall use the latest version of the COG Travel Model and most current projections of growth, and shall be funded by the applicant. Revisions shall be incorporated into subsequent specific plans. Improvements shall be constructed at or before ~~occupancy~~ issuance of building permits for the number of units specified in the applicable trigger point."*
- "j) The community shall submit a Construction Truck Traffic Management Plan to the County prior to the issuance of the first Development Permit. The plan shall**

#### 4.12 TRANSPORTATION

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*Identify the preferred routes for trucks bringing construction materials to the site, and shall include measures to ensure compliance by general contractors."*

*(h) The existing footnote to Table 9.2 of the Draft Master Plan should be revised to delete the reference to "the Mountain House EIR traffic model," because it was not used to determine the "trigger DU's." The footnote should also explain that the "Trigger DU's" column refers to when during project buildout the improvements would be completed.*

#### **Impact M4.12-5**

**Project-generated trips would result in significant traffic levels on roadways internal to the site, requiring construction of adequately sized internal roadways and intersections to maintain acceptable LOS at buildout of the project.**

The Draft Master Plan proposes three existing roads, Byron Road, Grant Line Road, and Patterson Pass Road, for primary circulation of both through traffic and traffic to or from the project site (Figure 3.8 in Chapter 3 of this DEIR). The Draft Master Plan proposes to improve these roads to major arterial status within the project boundaries. Byron Road would be widened to four lanes from the Alameda County line to Patterson Pass Road and eventually to six lanes from Patterson Pass Road to Wicklund Road in the Draft Master Plan. Grant Line Road would be widened to four lanes from I-580 to Byron Road throughout three different stages of the project's development. Patterson Pass Road is planned to be widened to as much as eight lanes from Central Boulevard to I-205, six lanes from Main Street to Byron Road, and four lanes from I-205 to I-580.

Additional minor arterial roadways proposed in the Draft Master Plan for internal circulation include:

Central Parkway	Main Street
De Anza Boulevard	North Patterson Pass Road
Marina Boulevard	Bethany Road
Mountain House Boulevard	

All of these minor arterial roadways would be constructed to two lanes in each direction. The Draft Master Plan also proposes Mascot Boulevard and several shorter streets as two-lane collector roads.

Review of projected 2010 traffic volumes indicates that the planned number of lanes for the internal arterial and collector roads would generally accommodate buildout of the project at LOS C or better, as required by the County General Plan 2010. The key exception is Mascot Boulevard. Projected traffic volumes at buildout are slightly greater than 10,000 ADT, and this exceeds the Draft Master Plan's traffic threshold of 7,000 ADT for collector roads. In light of the projected traffic volumes, its distance from other arterials, and its length, Mascot Boulevard should be designated as a four-lane minor arterial along its full length.

### Intersection Levels of Service

The County General Plan 2010 contains an additional policy that requires all intersections to operate at LOS D or better. The Draft Master Plan proposes signalization of 28 intersections, and channelization (additional turn lanes) at 17 intersections (Figure 4.12-9). Table 4.12-11 shows the 2010 intersection Level of Service results for the Master Plan buildout assuming the intersection lanes included in the Draft Master Plan. The AM and PM peak hour volume-to-capacity (V/C) ratio and LOS are shown for each intersection. Planning level methods were used due to the long range nature of the forecasts and the lack of existing intersections at present.

The following four unsignalized intersections would have minor street movements that would operate at deficient conditions (LOS E or worse) at project buildout:

- Patterson Pass Road/A Street (AM, PM)
- C Street/Mountain House Boulevard (AM, PM)
- D Street/Mountain House Boulevard (AM, PM)
- De Anza Boulevard/Von Sosten (PM)

In addition, the signalized intersection of Patterson Pass Road North/Central Parkway would operate at deficient conditions during the PM peak hour. All of the remaining study intersections would operate at acceptable conditions (LOS D or better) in the AM and PM peak hours for the Master Plan scenario (Table 4.12-11).

All of the deficient unsignalized intersections above (except Patterson Pass Road/A Street) would meet the Caltrans' Peak Hour Signal Warrant minimum requirement for either the AM or PM peak hour at buildout of the project.<sup>16</sup>

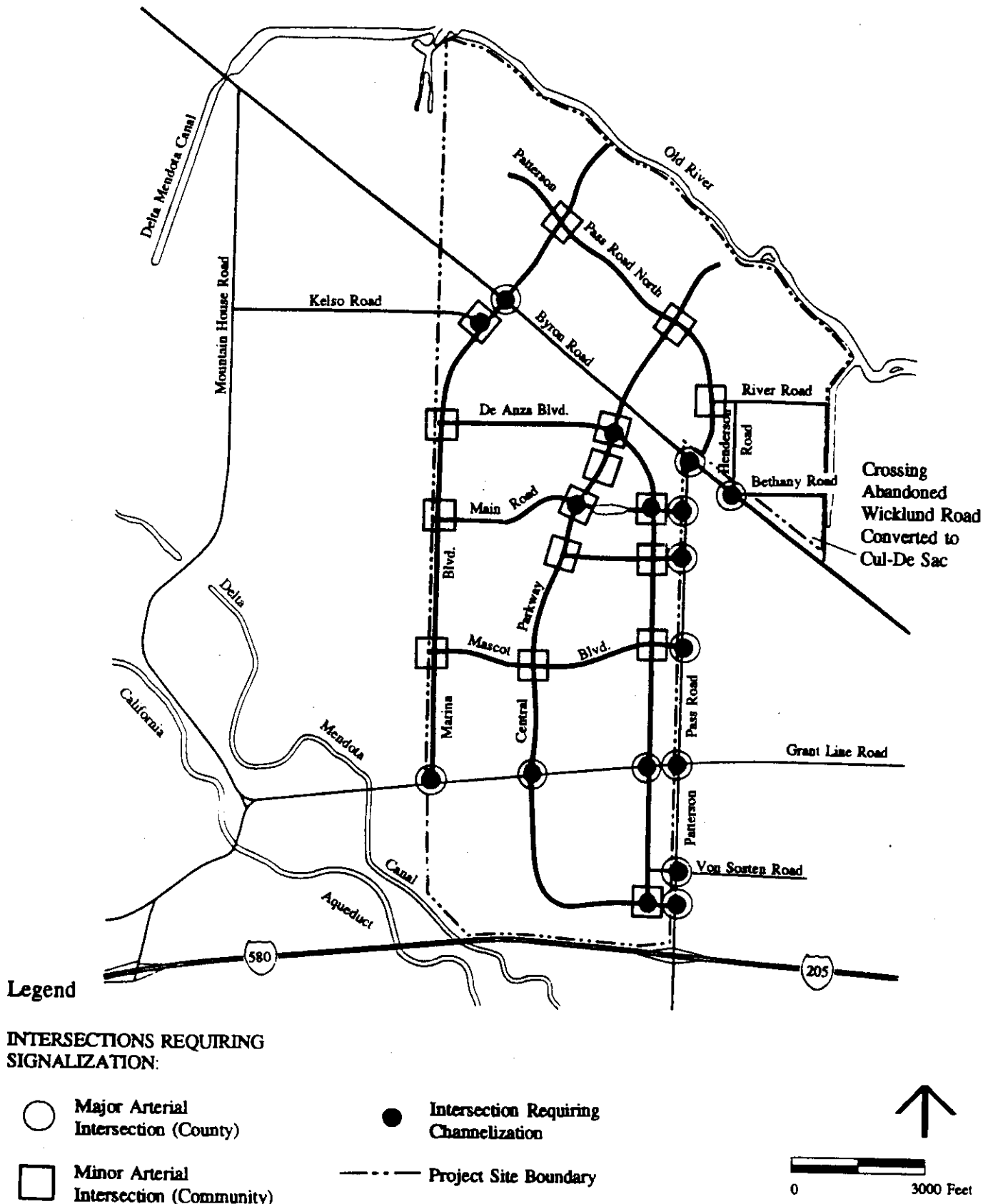
With signalization, the three intersections meeting peak hour signal warrants would operate at acceptable conditions (LOS D or better) in both peak hours. At Patterson Pass Road North/Central Parkway, an additional westbound lane would mitigate the projected Level of Service deficiency.

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<sup>16</sup> This is only one of several warrants that should be evaluated before a traffic signal is actually installed and operated at any intersection.

# PROPOSED INTERSECTION SIGNALIZATION AND CHANNELIZATION

Figure 4.12-9



Source: The SWA Group, 1994a.  
R10114-BO.03 6/6/94



TABLE 4.12-12

**INTERSECTION LEVEL OF SERVICE WITH MITIGATION  
Project Buildout in Year 2010**

Location	2010 LOS without Mitigation	2010 LOS with Mitigation	Mitigation
Patterson Pass Road North/Central Parkway	E (PM)	D	Additional westbound lane
Patterson Pass Road/Marina Boulevard	F (AM/PM)	A	Signalize intersection
Marina Boulevard/Kelso Road	F (AM/PM)	C (PM)	Signalize intersection
De Anza Street/Von Sosten Road	E (PM)	A	Signalize intersection
C Street/Mountain House Boulevard	F (AM/PM)	A	Signalize intersection
D Street/Mountain House Boulevard	F (PM)	A	Signalize intersection

Table 4.12-12 shows the results of mitigation on the study intersections. It should be noted that no additional lanes were assumed for the mitigation analysis. Additional turning lanes may be desired to accommodate left-turning vehicles.

The minor left-turn movement at the intersection of Patterson Pass Road/A Street would operate at LOS E in both peak hours for the Master Plan scenario. However, because this intersection does not meet the Peak Hour Warrant requirement, and the demand for the critical minor street left-turn movement is low (under 40 vehicles per peak hour), no mitigation is recommended.

#### **Consistency with County General Plan 2010**

Several policies and assumptions in the Draft Master Plan do not appear to be consistent with adopted policies and performance standards in the County General Plan 2010. The inconsistencies involve:

- The Draft Master Plan states that all project roadway improvements will maintain LOS C during peak periods, except that "LOS D shall be allowed on segments in order to discourage single occupant vehicle commuting and to encourage and support the use of alternate modes of travel including buses and high occupancy vehicles" (Policy a) under County Arterials). Gateway road segments include Byron Road, Grant Line Road, and Patterson Pass Road. This language conflicts with the General plan policy that requires LOS C on all County road segments in the Tracy planning area.
- The Draft Master Plan includes Road Classifications and Standards (Table 9.6) that do not conform with standards in the General Plan (Table IV-8, Volume I). Draft Master Plan standards allow Local Residential roadway widths of 39, 43, and 47 feet, and allow minimum widths for Major Arterials of 108 feet, which are lower than the minimum right-of-way standards in the General Plan.

## 4.12 TRANSPORTATION

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- The projected daily traffic volumes of 52,000 vehicles on Patterson Pass Road between Grant Line Road and the I-205 freeway exceed the capacity standard in the General Plan of 45,000 ADT for Major Arterials.

### Mitigation Measure M4.12-5

*The following revisions should be made under Objective 1 in Arterial Intersections (Appendix C):*

*(a) Implementation c) and the accompanying Figure 9.3 in the Draft Master Plan should be revised to include possible signalization when warranted at the following three intersections:*

- De Anza Boulevard/Von Sostem
- C Street/Mountain House Boulevard
- D Street/Mountain House Boulevard

*(b) Implementation d) should be revised to provide channelization at 18 intersections. Figure 9.3 of the Draft Master Plan should be revised to include channelization at the intersection of Central Parkway and Patterson Pass Road North, where an exclusive westbound left-turn lane should be added.*

*(c) A Policy should be added under Objective 1 in On-Site Roadway Circulation and Design (Appendix C) as follows:*

*"j p) ~~Specific plans shall be designed~~ **Unnecessary cul-de-sacs shall be avoided** to ensure that access between adjacent neighborhoods is not restricted ~~by eliminating unnecessary cul-de-sacs.~~"*

*~~(d) An Implementation should be added under Objective 2, Bicycle and Pedestrian Circulation (Appendix C) as follows:~~*

*~~"g) Specific Plan design shall encourage siting of neighborhood stores at the intersection of residential streets, where possible, as a means to encourage and facilitate pedestrian travel."~~*

*(e) (d) Figure 9.4 of the Draft Master Plan (Roadway Classification Diagram) should be revised to indicate Mascot Boulevard as a minor arterial (4 lanes) from Marina Boulevard to Patterson Pass Road. Figure 9.19 (Mascot Boulevard-Collector) should likewise be revised to reflect the minor arterial designation.*

*(f) (e) For consistency with the Draft Master Plan, and to promote transit/HOV usage and efficient land use, the County should amend its General Plan policy that requires LOS C on all county road segments in the Tracy planning area, as follows: "Permit LOS D on new community gateways that are used as major commute routes, subject to the approval of the county."*

*(g) (f) Amend Table IV-8 (page IV-102) of the General Plan to indicate that major arterials may be up to 8 lanes wide in some segments if needed for capacity and if operationally feasible. Also amend this table to indicate that the daily capacities are approximate only, and may be superseded by more detailed level of service analysis based on peak hour volumes and controlling intersections and will be higher on roadway segments where LOS D is approved by the county.*

*(h) (g) Mitigation Measures M4.2-1 (e) and (f) in the General Plan and Development Title Consistency section of this DEIR call for the conflicting language and standards in the Master Plan transportation chapter to be revised or, alternatively, a General Plan Text Amendment should be submitted that would allow new communities, or projects that have an adopted Master and/or Specific plan, to deviate from the General Plan standards.*

#### **Impact M4.12-6**

**The project would generate a significant demand for parking.**

The Draft Master Plan includes provisions for on-site parking, including minimum and maximum parking requirements for each land use type. These standards appear to adequately accommodate the project's potential parking demand while providing flexibility to encourage use of alternative modes of transportation where feasible. In particular, the mixed-use areas of the project site (e.g., the Town Center area) present opportunities to reduce the land area devoted to parking by sharing parking areas based on peak demands for adjacent land uses occurring at different times of the day.

#### **Mitigation Measure M4.12-6**

*(a) Policy a) under Objective 1 in Vehicular Parking (Appendix C) should be amended as follows:*

*"Within mixed-use districts, including community commercial areas, the shared parking guidelines published by the Urban Land Institute shall be used wherever feasible to reduce total parking supply."*

*(b) A new policy should be added under Objective 1 in Vehicular Parking as follows:*

*"I) For non-residential uses, use of the minimum parking space requirements shall be encouraged where possible in order to promote use of alternatives to the automobile modes, subject to completion of a Parking Demand Study for the site use(s)."*

#### **Impact M4.12-7**

**The project would increase the demand for bicycle travel within the project site as well as between the site and adjacent developed areas.**

The scale of the project would generate a significant demand for bicycle travel. The Draft Master Plan includes provisions for Class I facilities (paths) on 11 arterial segments, Class II facilities (bike lanes) on another 6 arterials, and Class III facilities (signed bike routes) on all collectors. The Draft

## 4.12 TRANSPORTATION

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Master Plan also includes implementation actions for bike route signage and amenities such as bicycle racks. The project does not provide for fair share contributions to regional bike trails.

### **Mitigation Measure M4.12-7**

*Implementation k) j) under Objective 1 in Bicycle and Pedestrian Circulation (Appendix C) should be revised:*

*"The community shall participate on a fair share basis in the planning and implementation of off-site bicycle facilities on and connecting with regional bike routes **designated on the County Regional Bicycle Plan** within five miles of the project, including those along Grant Line Road, Patterson Pass Road, Byron Road, Schulte Road, and the Edmund G. Brown Aqueduct."*

### **Impact M4.12-8**

**The project would increase the number of vehicles crossing the existing Southern Pacific railroad track that runs through the site.**

Three grade crossings within the project site exist along the Southern Pacific Transportation Company (Mococo line) railroad track that runs through the site parallel to the Byron Highway. These crossings are located on Kelso Road, Henderson Road, and Wicklund Road. The Draft Master Plan proposes to upgrade the existing at-grade crossings at Kelso Road and Henderson Road. The Wicklund Road crossing is proposed to be closed. A new at-grade crossing is proposed at Patterson Pass Road. A new grade-separated crossing would be constructed as an extension of Central Parkway across both Byron Road and the railroad tracks.

### **Mitigation Measure M4.12-8**

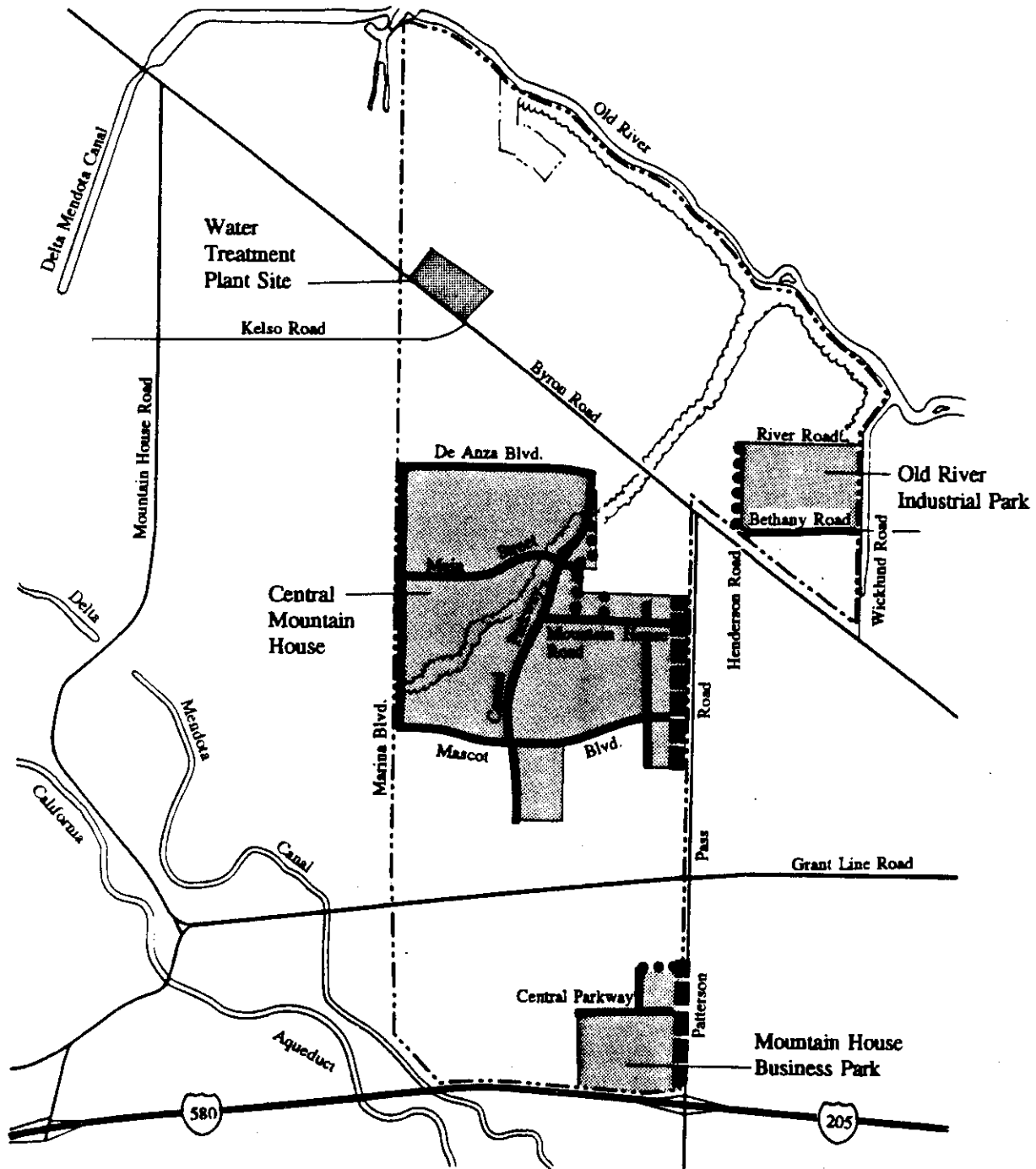
*Implementation a) under Objective 4 3 in ~~Rail Crossings~~ **Transit** (Appendix C) should be revised to include: ". . . Any proposed new vehicular, pedestrian, or bicycle railroad crossing. . ."*

## **SPECIFIC PLAN I**

Internal circulation at the project site would consist of a series of major arterials, minor arterials and collectors (Figure 4.12-10). Patterson Pass Road would be improved to a four-lane major arterial from I-205 to Byron Road, linking the three Specific Plan I development areas to each other. The I-205/Patterson Pass Road freeway interchange would be improved for regional access to and from the project. Portions of minor arterials within the three development areas would be constructed with two to four lanes, but segments of Master Plan arterials outside the Specific Plan I areas would not be constructed. In particular, Central Parkway would not extend north to Byron Road or south to Grant Line Road, and Main Street would stub on the west side of the Town Center. Improvements to existing Grant Line Road and Byron Road are not included in Specific Plan I. Traffic signals are proposed at six intersections. The existing rail crossing at Henderson Road would be improved for access to Old River Industrial Park, but no new crossings would be constructed across the SP tracks.

# SPECIFIC PLAN I INTERNAL CIRCULATION AND ROAD CLASSIFICATION

Figure 4.12-10



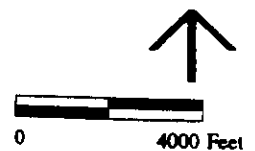
## Legend

■ ■ ■ ■ ■ Major Arterial

— Minor Arterial

● ● ● ● ● Collector

- - - Project Site Boundary



**BASELINE**

#### 4.12 TRANSPORTATION

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The project includes provisions for bus and rail passenger transit services. Local transit service would initially be demand-responsive, and would convert to all day fixed route service operating along a route connecting neighborhood centers and the two industrial parks upon occupancy of 3,200 residential units. Interim regional bus service would initially operate as demand-responsive service to Tracy and as subscription bus service to other locations, consistent with CMP requirements. Specific Plan I makes provisions for conversion of demand responsive service to other cities to fixed route service upon occupancy of 3,200 residential units. No direct connections to BART are specifically proposed. An interim transfer point would be provided within the Specific Plan I area for transfers between local and regional routes. If Altamont Corridor commuter rail service were initiated, a van shuttle service is proposed between Mountain House and the nearest rail station. Mountain House is anticipated to contribute towards capital costs for a station, and peak hour transit service would be provided to the station.

A network of bicycle and pedestrian routes is included in Specific Plan I, consisting of multi-use paths and on-street bike lanes where streets are constructed.

TDM measures to reduce the use of single occupant vehicles within, to, and from the site would be implemented as described for the Master Plan. The TDM program incorporates San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) measures, other strategies and a monitoring program, implemented under the structure of a TMA. The project appears to meet transit/TDM requirements of the County General Plan 2010 and the Congestion Management Program (ConMAG, 1991).

#### **DEIR Analysis Methodology and Assumptions**

The transportation impacts of the Draft Specific Plan I are examined in this DEIR in the context of projected growth to 2000. For this analysis, the project was superimposed onto 2000 projections of housing and employment in the remainder of San Joaquin County and the surrounding region, including the nine-county Bay Area, Sacramento County, and Stanislaus County.

Two scenarios for Specific Plan I were analyzed for transportation impacts. The "Expected Employment" scenario assumes full buildout of the residential components of the Specific Plan, as shown in Table 3.1 of the Draft Specific Plan I, but only the amount of employment that is anticipated to be absorbed by the time that residential buildout is reached (the seventh year of the project or approximately 2000), as shown in Table 3.3 of Draft Specific Plan I. The Expected Employment scenario includes 4,139 dwelling units and 4,370 jobs (see Tables 3.1 and 3.3 of the Draft Specific Plan I).<sup>17</sup> The second alternative, referred to as the "Full Employment" scenario, assumes full buildout of both residential and employment components of the project, the latter of which would not occur until beyond 2000. The Full Employment alternative includes 4,139 dwelling units and 9,696 jobs, as indicated in Table 3.1 of the Draft Specific Plan I. In sum, the Expected

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<sup>17</sup> The travel projections for Specific Plan I assume a total of 4,593 jobs based on an earlier draft Specific Plan absorption rate, and are therefore slightly conservative (high) compared to the revised projection of 4,370 jobs.

Employment scenario includes the same number of dwelling units and slightly less than half the number of jobs as the Full Employment scenario.

Procedures for analyzing transportation impacts of Specific Plan I are consistent with those used for the Draft Master Plan analysis. Travel forecasts are based on the current multi-modal San Joaquin County COG Travel Model (Appendix F). For the Specific Plan I analysis, changes were made to the model network and land use inputs to reflect year 2000 conditions. The land use and network assumptions for year 2000 are described in detail in Appendix F and summarized as follows:

- The land uses for the site were revised to correspond to the Full Employment and Expected Employment scenarios for Specific Plan I.
- For other San Joaquin County areas, it was assumed that other new towns (including New Jerusalem and Gold Rush City) would remain undeveloped by 2000, and that 40 percent of the projected growth from 1990 to 2010 would occur in all remaining areas.
- For the Bay Area, Sacramento, and Stanislaus County, 2000 land uses were interpolated from 1990 and 2010 land uses to reflect most current projections to 2000.
- The 2000 regional highway network was developed by scaling back the 2010 network to reflect anticipated near-term projects based on applicable Capital Improvement Programs and agency staff input. The I-205 freeway was assumed to be widened from 4 lanes to 6 lanes by 2000, ~~as compared to 8 lanes in 2010~~. The 2000 network in the Tracy area reflects more modest growth on the west side of Tracy than assumed in 2010, and no new arterials are assumed north of I-205.
- Key transit improvements by 2000 include the planned Altamont commuter rail line (at a reduced speed and frequency than assumed in 2010), and a BART extension to Dublin. San Joaquin County transit services were based on the 2010 RTP "Balanced Alternative," with reduced service frequencies. Modest transit services to, from, and within the project site were added in accordance with the proposed project provisions.

#### Impact S4.12-1

**The project, under the Full Employment scenario, would generate approximately 71,500 daily vehicle trips to, from, or within the site. With the Expected Employment scenario, the project would generate about 55,300 daily vehicle trips, or 23 percent fewer than the Full Employment scenario in year 2000. The added vehicle trips would cause associated impacts such as traffic growth and LOS deficiencies on the road system, particularly in the vicinity of the site, and increases in vehicle miles of travel. Some of these associated impacts would be significant and unavoidable. The project would also generate the need and demand for transit services to, from, and within the site. Since transit services are proposed in the Draft Specific Plan I to accommodate the projected transit ridership, this trip generation impact is not significant.**

## 4.12 TRANSPORTATION

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The project's potential trip generation was estimated using the 1993 COG Travel Model. The model first estimates person trips by all modes, and then allocates person trips to vehicle and transit passenger modes. Person trip-ends by mode generated by the Specific Plan Expected and Full Employment Scenarios are shown in Tables 4.12-13 and 4.12-14, respectively. Projected vehicle trips are presented in Tables 4.12-15 and 4.12-16. Table 4.12-17 compares peak hour external vehicle trips generated by the two scenarios.

The project would generate 109,700 daily person trip ends with the Expected Employment level, and 140,300 daily person trip ends with the Full Employment level. A high proportion of trips is projected to be in vehicles, either as drivers or passengers. Transit passengers would account for 1.8 to 1.9 percent of work trips and 0.4 to 0.5 percent of all trips (Tables 4.12-13 and 4.12-14).

The transit shares projected for Mountain House are not high enough to significantly reduce traffic impacts of the project over the day. The low percentages are typical of suburban development and may be due to various factors. Only those transit services fully committed in the Draft Specific Plan I or programmed by other agencies were assumed for forecasting purposes. The 2000 regional transit network includes an Altamont commuter rail line to the Bay Area, but the closest currently planned station is in Tracy, and access to Tri-Valley employment sites would require transfers to local buses. Also, BART was assumed to extend only to Dublin/Pleasanton, as currently funded. A local fixed route bus line was assumed to circulate around the project site as proposed in Specific Plan I, but its relatively slow travel speeds, low service frequency, and requirements for transfers would limit its ridership potential.

Tables 4.12-15 and 4.12-16 show daily and peak hour vehicle trips to, from, and within the project. The Full Employment scenario is projected to generate about 71,500 trips, while the Expected Employment scenario would generate about 55,300 vehicle trips over the day. The percentage of internal trips to all trips does not differ significantly for the two scenarios, accounting for about 37 percent of all trips over the day. Internal trips would account for about 31 percent of the AM peak hour and 33 percent of the PM peak hour vehicle trips generated by either of the two scenarios. The projected daily vehicle trip generation of Specific Plan I is about 20 or 26 percent of the generation of the Draft Master Plan (Table 4.12-3), depending on the level of employment assumed in Specific Plan I.

Table 4.12-17 compares external trip generation of the two scenarios. In the AM peak hour, the Full Employment scenario would generate slightly fewer trips outbound to other areas, but significantly more trips inbound from other areas than would the Expected Employment scenario. Likewise, the Full Employment scenario would generate nominally fewer trips inbound to the site, but significantly more outbound trips than the Expected Employment scenario. Overall, the Full Employment scenario is a worst case scenario for traffic generation.



TABLE 4.12-13  
**DAILY TRIP ENDS BY MODE**  
**Specific Plan I - Expected Employment**

	Person Trip Ends		Vehicle Trip Ends	Number of Persons per Vehicle
	Number	Percent		
<u>Home-Based Work:</u>				
Drive alone	12,170	82.4	12,170	
Shared ride	2,320	15.7	1,040	
Transit	<u>270</u>	<u>1.8</u>	<u>--</u>	
<b>Total</b>	<b>14,760</b>	<b>99.9</b>	<b>13,210</b>	<b>1.12</b>
<u>Other:</u>				
Drive alone/shared ride	94,780	99.8	62,750	
Transit	<u>170</u>	<u>0.2</u>	<u>--</u>	
<b>Total</b>	<b>94,950</b>	<b>100.0</b>	<b>62,750</b>	<b>1.51</b>
<u>Total:</u>				
Drive alone/shared ride	109,270	99.6	75,960	
Transit	<u>440</u>	<u>0.4</u>	<u>--</u>	
<b>Total</b>	<b>109,710</b>	<b>100.0</b>	<b>75,960</b>	<b>1.44</b>

Source: DKS Associates.

TABLE 4.12-14  
**DAILY TRIP ENDS BY MODE**  
**Specific Plan I - Full Employment**

	Person Trip Ends		Vehicle Trip Ends	Number of Persons per Vehicle
	Number	Percent		
<u>Home-Based Work:</u>				
Drive alone	17,530	82.5	17,530	
Shared ride	3,310	15.6	1,450	
Transit	<u>400</u>	<u>1.9</u>	<u>--</u>	
<b>Total</b>	<b>21,240</b>	<b>100.0</b>	<b>18,980</b>	<b>1.12</b>
<u>Other:</u>				
Drive alone/shared ride	118,760	99.8	78,930	
Transit	<u>260</u>	<u>0.2</u>	<u>--</u>	
<b>Total</b>	<b>119,020</b>	<b>100.0</b>	<b>78,930</b>	<b>1.51</b>
<u>Total:</u>				
Drive alone/shared ride	139,590	99.5	97,910	
Transit	<u>660</u>	<u>0.5</u>	<u>--</u>	
<b>Total</b>	<b>140,250</b>	<b>100.0</b>	<b>97,910</b>	<b>1.43</b>

Source: DKS Associates.

TABLE 4.12-15  
**PROJECT VEHICLE TRIPS AT BUILDOUT**  
**Specific Plan I Expected Employment**

	Vehicle Trips Generated					
	AM Peak		PM Peak		Daily	
	Number	Percentage	Number	Percentage	Number	Percentage
Inbound	1,000	29.9	1,650	37.2	17,280	31.3
Outbound	1,310	39.1	1,320	29.7	17,280	31.3
Internal <sup>1</sup>	1,040	31.0	1,470	33.1	20,700	37.4
<b>TOTAL</b>	<b>3,350</b>	<b>100.0</b>	<b>4,440</b>	<b>100.0</b>	<b>55,260</b>	<b>100.0</b>

Source: DKS Associates

<sup>1</sup> Trips with both ends within project boundaries.

TABLE 4.12-16  
**PROJECT VEHICLE TRIPS AT BUILDOUT**  
**Specific Plan I Full Employment**

	Vehicle Trips Generated					
	AM Peak		PM Peak		Daily	
	Number	Percentage	Number	Percentage	Number	Percentage
Inbound	1,900	41.9	1,630	28.0	22,570	31.6
Outbound	1,250	27.5	2,280	39.2	22,570	31.5
Internal <sup>1</sup>	1,390	30.6	1,910	32.8	26,380	36.9
<b>TOTAL</b>	<b>4,540</b>	<b>100.0</b>	<b>5,820</b>	<b>100.0</b>	<b>71,520</b>	<b>100.0</b>

Source: DKS Associates

<sup>1</sup> Trips with both ends within project boundaries.

**Mitigation Measure S4.12-1 (C,O,M)**

In addition to mitigation measures proposed for the Master Plan (Mitigation Measure M4.12-1), the following mitigation measures are recommended to reduce vehicle trips generated by the Specific Plan I project:

(a) ~~Regional commute period~~ **Local bus routes should extend from the interim central transfer facility on Patterson Pass Road into Neighborhoods E, F, and G, to provide providing no-transfer service within one-quarter mile walking distance to a majority of the residents, and providing convenient connections to regional commute period bus routes at the Interim transfer facility.** For example, this could be a one-way loop along westbound Mountain House Boulevard, northbound Central Parkway, westbound Main Street, southbound Marina Boulevard, and eastbound Mascot Boulevard.

(b) ~~The Specific Plan I land use map should be revised to show four or more neighborhood commercial areas, as compared to the three areas shown. The areas should be situated to maximize the total number of~~ **so that as many homes as possible are within one-quarter mile walk of the closest neighborhood or community shopping area.**

(c) **A park and ride lot should be established in the Mountain House Business Park.**

**Impact S4.12-2 (C,O,M)**

The project would contribute to cumulative traffic growth and resulting Level of Service deficiencies on I-205, I-580 and I-5 freeways, with projected year 2000 peak hour traffic demand in the peak direction exceeding capacity. Due to the lead time required for freeway widening and, in the case of I-580, ~~legislative restrictions~~ current policy limitations on widening, these impacts are considered significant and unavoidable.

By 2000, total freeway traffic would increase significantly compared to 1993 conditions, under the Expected Employment scenario. The Full Employment scenario would further increase freeway

TABLE 4.12-17

**COMPARISON OF EXTERNAL VEHICLE TRIPS<sup>1</sup>  
Specific Plan I, Full versus Expected Employment**

	Expected Employment	Full Employment	Percentage Difference <sup>2</sup>
<b>AM Peak Hour</b>			
Inbound	1,000	1,900	+90
Outbound	<u>1,310</u>	<u>1,250</u>	-5
Total External	2,310	3,150	+36
<b>PM Peak Hour</b>			
Inbound	1,650	1,630	-1
Outbound	<u>1,320</u>	<u>2,280</u>	+73
Total External	2,970	3,910	+32
<b>Daily</b>			
Inbound	17,280	22,570	+31
Outbound	<u>17,280</u>	<u>22,570</u>	+31
Total External	34,560	45,140	+31

<sup>1</sup> External vehicle trips are trips that either enter or leave the project site.

<sup>2</sup> Increase (+) or decrease (-) of Full Employment Scenario as compared to Expected Employment Scenario.

#### 4.12 TRANSPORTATION

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volumes east of the site while reducing freeway volumes to the west; due to the lag time in employment absorption, the Full Employment traffic levels would not occur until beyond 2000. In either case, the project would be a significant contributor to future traffic growth on regional freeways. Future freeway volumes are identified in Figure 4.12-11 and Table 4.12-18 for an area

that

# 2000 SPECIFIC PLAN TOTAL DAILY TRAFFIC VOLUMES ON AREA FREEWAYS, FULL AND EXPECTED EMPLOYMENT SCENARIOS

Figure 4.12-11

4.12-58

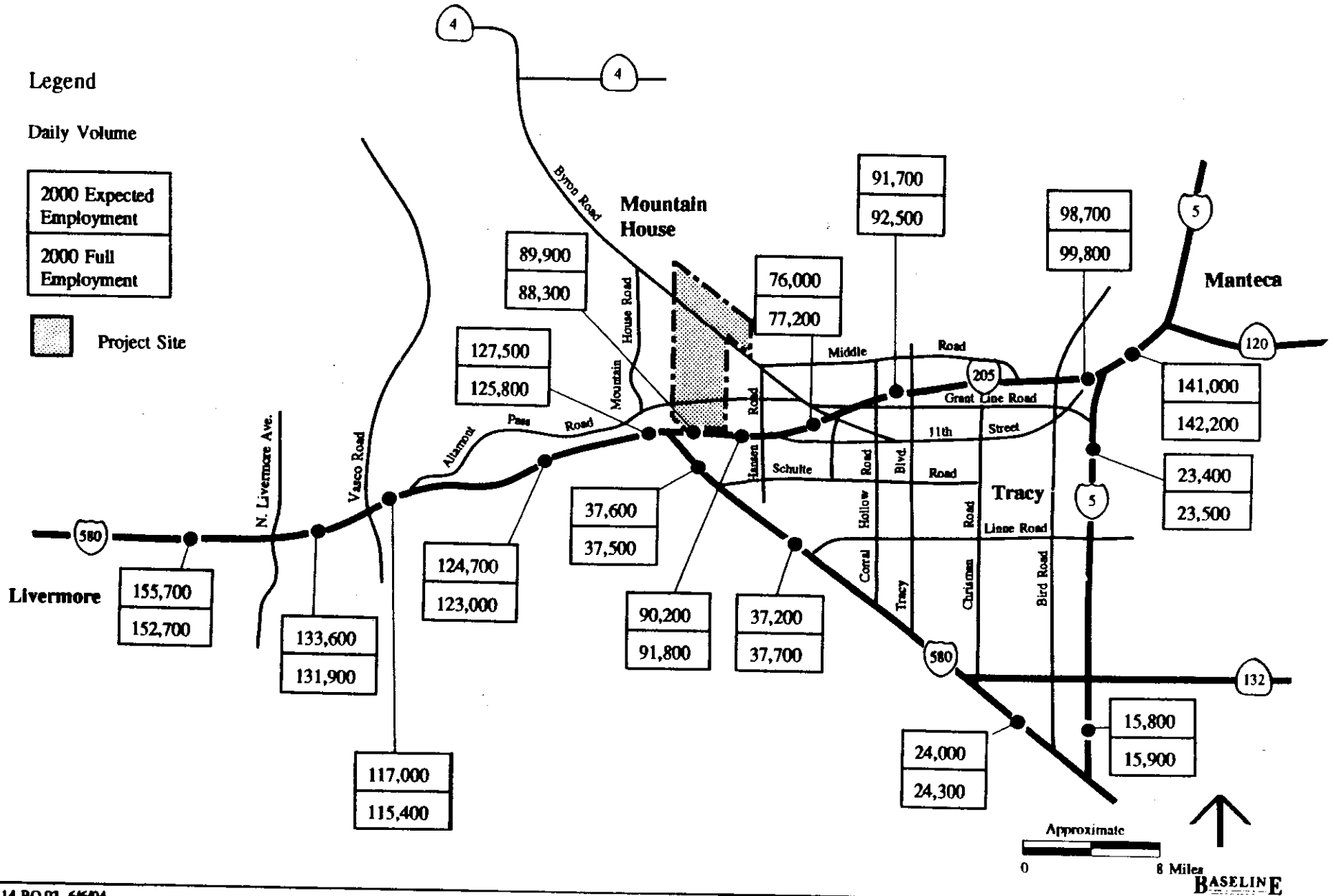


TABLE 4.12-18

**TOTAL DAILY TRAFFIC VOLUME CHANGES ON FREEWAYS IN PROJECT VICINITY  
Year 2000: Specific Plan I**

Freeway	Location	1993 Daily Traffic Volume	2000 Daily Traffic Volume		
			Expected Employment	Full Employment	Difference <sup>1</sup>
I-580	In Livermore between Vasco Road and North Livermore Avenue	103,000	133,600	131,900	(1,700)
	At the Altamont Pass	91,000	124,700	123,000	(1,700)
	West of I-205 Interchange	105,800	127,500	125,800	(1,700)
	North of Patterson Pass Road	28,500	37,600	37,500	(100)
I-205	West of Patterson Pass Road	65,000	89,900	88,300	(1,600)
	East of Patterson Pass Road	77,300	90,200	91,800	1,600
	East of 11th Street	56,000	76,000	77,200	1,200
	East of Grant Line Road	56,000	91,700	92,500	800
I-5	Between I-205 and SR 120	84,000	141,000	142,200	1,200

Source: DKS Associates.

<sup>1</sup> Full Employment volume compared to Expected Employment volume. Volumes in parentheses indicate segments where a decrease in traffic is projected for the Full Employment scenario due to the effect of increased on-site jobs on regional and commuting patterns.

up to 10 miles from the project site.<sup>18</sup> Projected 2000 peak hour volumes and levels of service on I-205, I-580 and I-5 in the project vicinity are summarized in Table 4.12-19. Deficient LOS are projected at a number of locations. These represent potential peak hour demands associated with cumulative regional growth to 2000 and, due to capacity limitations on the freeway facilities, may be higher than actual hourly volumes that would be observed. Additional freeway capacity is not anticipated to be developed beyond assumed 2000 levels. Therefore, reduction of traffic demand through TDM efforts and transit service improvements, and further spreading of the peak period would have to occur to accommodate the projected traffic demands. These measures are not anticipated to fully mitigate the projected level of service deficiency.

<sup>18</sup> General impacts of the project on other freeway volumes farther away were also considered.

TABLE 4.12-19

## YEAR 2010 2000: PEAK HOUR, DIRECTIONAL LEVEL OF SERVICE ON FREEWAYS

Freeway Location	Total Lanes	Expected Employment						Full Employment					
		AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
		Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS	Volume	V/C	LOS
I-580 north of Linne Road	4	2,160	0.54	B	2,780	0.70	C	2,430	0.61	C	2,830	0.71	C
I-580 south of I-205	4	2,520	0.63	C	2,850	0.71	C	2,450	0.61	C	2,830	0.71	C
I-580 at Altamont Pass	8	8,770	1.10	<u>F</u>	8,630	1.08	<u>F</u>	8,440	1.06	<u>F</u>	8,300	1.04	<u>F</u>
I-580 west of Vasco Road	8	8,520	1.07	<u>F</u>	10,270	1.28	<u>F</u>	8,100	1.01	<u>F</u>	10,220	1.28	<u>F</u>
I-580 west of Livermore Ave.	8	11,920	1.49	<u>F</u>	12,990	1.62	<u>F</u>	11,890	1.49	<u>F</u>	12,850	1.61	<u>F</u>
I-205 west of I-5	4+HOV	5,710	0.95	<u>E</u>	6,040	1.01	<u>F</u>	5,820	0.97	<u>E</u>	6,150	1.03	<u>F</u>
I-205 west of Tracy Blvd.	4+HOV	5,230	0.87	D	5,780	0.96	<u>E</u>	5,400	0.90	D	5,850	0.98	<u>E</u>
I-205 south of Grant Line Road	4+HOV	5,010	0.84	D	5,310	0.89	D	5,000	0.83	D	5,370	0.90	D
I-205 west of Hansen Road	4+HOV	6,310	1.05	<u>F</u>	6,490	1.08	<u>F</u>	6,250	1.04	<u>F</u>	6,600	1.10	<u>F</u>
I-205 west of Patterson Pass Rd.	4+HOV	6,230	1.04	<u>F</u>	6,550	1.09	<u>F</u>	6,020	1.00	<u>F</u>	6,310	1.05	<u>F</u>
I-5 south of State Route 132	4	640	0.16	A	720	0.18	A	640	0.16	A	760	0.19	A
I-5 south of Grant Line Road	4	770	0.19	A	850	0.21	A	770	0.19	A	870	0.22	A
I-5 north of I-205	8	8,220	1.03	<u>F</u>	9,100	1.14	<u>F</u>	8,370	1.05	<u>F</u>	9,270	1.16	<u>F</u>

Notes: Freeway capacity assumed as 2,000 vehicles per hour per lane. Under ideal conditions, capacities may be as high as 2,200 vehicles per hour per lane.

V/C = Volume to capacity ratio.

**Bold** and underlined letters indicate locations where County prevailing standards for acceptable LOS are not met.

Volumes represent peak hour demand volumes assuming existing peaking characteristics of travel and reflecting generalized capacity constraints on the network. Where demand volumes exceed capacities, actual throughput volumes would be lower due to peak spreading and other factors, and queues would form upstream of bottleneck locations.

### **I-205 Freeway**

The traffic analysis assumes widening of I-205 to a total of six lanes by 2000, with the added lanes for HOV's, consistent with the COG's Regional Transportation Plan.

East of the project site, the greatest net increase in freeway volumes by 2000 would occur east of Grant Line Road, with an increase of 36,500 daily vehicles over current volumes. A sizable increase of almost 25,000 daily vehicles is also projected west of Patterson Pass Road. Under both the Expected and Full Employment scenarios, LOS F conditions are projected on both the east and west end of I-205 during both AM and PM peak hours.<sup>19</sup>

~~Widening of I-205 to eight lanes (including HOV lanes) would accommodate the projected 2000 traffic volumes at LOS D or better. Given the lead time for freeway project development, it is unlikely that the widening could be completed by then.~~ Since I-205 is anticipated to be widened to six lanes by 2000, the projected LOS deficiency is largely dependent on the amount of cumulative regional growth that occurs by 2000. This impact is therefore considered an unavoidable adverse impact if growth occurs as projected.

### **I-580 Freeway**

No freeway improvements for I-580 are assumed by 2000 in this analysis, although an Altamont Pass commuter rail line and express bus services between the project site and the Tri-Valley are included.

At the Altamont Pass, 124,700 daily vehicles are projected on I-580 by 2000 with the Expected Employment scenario and other cumulative regional growth. This represents an increase of 37 percent over current volumes. For the Full Employment scenario, 123,000 daily vehicles are projected, a reduction of less than two percent from the Expected Employment scenario.

Higher traffic volumes are projected on I-580 west of the Altamont Pass, with up to almost 134,000 daily vehicles just west of Vasco Road. South of the I-205/I-580 junction, projected volumes on I-580 are much lower than to the west, with an increase of 9,000 daily vehicles over current levels projected south of Patterson Pass Road.

Unacceptable levels of service, generally LOS F, are projected along I-580 west of the I-205 junction, with either Expected or Full Employment (Table 4.12-19). Slightly lower traffic demands are projected for the Full Employment scenario. Given the lack of parallel routes over much of the road, the excess traffic demand would cause spreading of the peak period in the peak direction of travel, resulting in a lower percentage of the daily traffic occurring in the peak hour than projected by the Travel Model. In the AM period, excess demand would cause standing queues on the east side of the Altamont Pass, limiting the rate of traffic entering the Tri-Valley. In the PM, queues

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<sup>19</sup> It should be noted that the CMP standard for I-205 from the County line to Tracy Boulevard is LOS F, and the CMP standard for the segment from MacArthur to I-5 is LOS E (ConMAG, 1991).



would occur on the west side of the Altamont Pass and reduce eastbound traffic flows on I-205 farther east.

An intensive multi-regional effort to reduce single-occupant vehicle trips generated by the proposed project and other cumulative development on both sides of Altamont Pass would be needed to address future traffic growth on I-580 through Altamont Pass. The 2000 projections include potential effects of on- and off-site transit service improvements currently planned by 2000. However, the COG Travel Model does not have the capability to project traffic reduction potential associated with countywide TDM efforts such as carpool/vanpool incentive programs, flexible work hours, and the like. The project could be more effective in reducing peak hour traffic than the County as a whole due to locational advantages, the scale of the project and the comprehensive TDM program proposed in the Draft Master Plan. Emphasizing single-occupant trip reduction on both ends of the work trip would be likely to substantially increase the level of traffic reduction for the project as a whole. However, recognizing the uncertainty in achieving any traffic reduction beyond that already reflected in the Travel Model, no further traffic reduction was assumed. Should further trip reduction be achieved, the impacts would be reduced from those indicated in this DEIR.

There are no plans to widen I-580 freeway within the corridor, and projects to increase the capacity of I-580 in Alameda County are inconsistent with Alameda County's Policy 164A. The feasibility of constructing truck-climbing lanes in each direction over the Altamont Pass has been studied by Caltrans District 4 as part of the Inter-regional Route System 10-year plan and a draft Project Study Report has been prepared (Satow, 1994). However, only a Stage 1 project involving truck operational improvements at the I-205/I-580 has been approved for inclusion in MTC's Regional Transportation Plan Track 1 list of projects for funding. Truck climbing lanes may or may not be inconsistent with Alameda County's Policy 164A which opposes capacity improvements to I-580 but which supports improvements to facilitate goods movement. With truck-climbing lanes, level of service on the applicable sections of I-580 is projected to improve to LOS D, but deficient levels of service would remain "upstream" and "downstream" of the lanes. This impact on I-580 west of the I-205 junction is therefore considered an unavoidable adverse impact.

To maintain acceptable freeway mainline speeds, Caltrans may require installation of ramp metering at the intersections of I-205 with Patterson Pass Road and I-580 with Grant Line Road. If ramp metering were installed, HOV bypass lanes should be provided to encourage carpooling.

### **I-5 Freeway**

No improvements were assumed on I-5 in the project vicinity. In the segment between I-205 and SR 120, the daily traffic volume on I-5 is projected to reach up to 142,000 daily vehicles by 2000 under the Full Employment scenario, an increase of 68 percent over existing traffic levels (Table 4.12-18). The Expected Employment scenario would reduce the projected demand by less than one percent.

LOS F conditions are projected during both the AM and PM peak hours, with potential demand well exceeding freeway capacity (Table 4.12-19). As discussed for I-580 above, the peak hour demand

## 4.12 TRANSPORTATION

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could not be fully accommodated, resulting in standing queues, peak period spreading and reduction of traffic flows downstream. This is considered a significant unavoidable impact of cumulative regional growth.

### **Other Regional Facilities Farther from the Site**

West of North Livermore Avenue, net impacts of the project on I-580 traffic levels are projected to be insignificant (one to two percent over No Project volumes). The relatively low impact on I-580 west of Livermore is primarily due to the underlying assumption that the amount of employment growth in the Bay Area would not increase beyond growth projected by the Association of Bay Area Governments due to construction of the project.<sup>20</sup>

Similar results are observed on I-680 freeway north and south of I-580 and on other regional facilities in Alameda and Contra Costa counties, where net traffic increases of the project over 2000 traffic volumes without the project are insignificant.

### **Mitigation Measure S4.12-2 (C,O,M)**

*Refer to Mitigation Measure M4.12-2. This is an unavoidable adverse impact.*

### **Impact S4.12-3 (C,O,M)**

**The project would increase traffic volumes at nearby freeway interchanges, requiring improvements to the Patterson Pass Road/I-205 interchange.**

The project would primarily impact the existing freeway interchange at I-205/Patterson Pass Road. Lesser impacts may occur at the I-580/Grant Line Road and I-580/Patterson Pass Road interchanges. All three are currently low capacity interchanges built to rural standards, and would require substantial upgrading to accommodate projected 2010 traffic volumes with the project. The Draft Specific Plan includes improvements to the I-205/Patterson Pass Road interchange, and the Draft Master Plan includes "fair share" participation in required studies and funding of the improvements.

### **I-205/Patterson Pass Road Interchange**

Draft Specific Plan I proposes the following interchange improvements, staged over time, based on trigger points:

- Interim traffic signals
- Overpass widening to 4 lanes
- Addition of loop ramp (southbound to eastbound on)

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<sup>20</sup> If fewer internal trips were generated at Mountain House than projected in this DEIR, additional Mountain House trips would use I-580. However, the net traffic increase would be relatively small because only 60 percent of the non-internal trips by Mountain House residents are to Bay Area workplaces reached by I-580, and because the added Mountain House trips would "displace" some other trips that would otherwise use I-580.

- Signals at ramp intersections
- Westbound off-ramp widening

The above interchange improvements would meet the County's LOS standards at buildout of Specific Plan I. Under both the Expected and Full Employment scenarios, the controlling signalized ramp intersections would operate at LOS A during both AM and PM peak hours (Table 4.12-22, presented later in this section), and all ramps are projected to operate satisfactorily. During preparation of the Project Study Report (PSR), further analysis should be conducted to determine storage lane requirements. Also, provisions should be made for installing ramp metering with an HOV bypass lane at the southbound to westbound on ramp. The fair share for this project should be as established for the Draft Master Plan (Table 4.12-7).

#### **I-580/Grant Line Road Interchange**

The Draft Specific Plan I does not include any interchange improvements. The existing interchange is projected to meet the County's LOS D standard at buildout of Specific Plan I based on projected 2000 traffic volumes. The controlling unsignalized ramp intersections would operate at LOS C or better during both AM and PM peak hours (Table 4.12-22, presented later in this section), and all ramps would accommodate the projected ramp volumes.

However, should some site traffic be diverted from the I-205/Patterson Pass Road interchange due to congestion on I-205 and/or revision of the Specific Plan to provide an additional north-south arterial (see Mitigation Measure S4.12-4(c)), traffic volumes at the I-580/Grant Line Road interchange may be increased over the projected levels. Such increases may accelerate the need for improvements at the I-580/Grant Line Road interchange.

#### **I-580/Patterson Pass Road Interchange**

The I-580/Patterson Pass Road interchange would not be significantly impacted by the project, and a comparison of projected 2000 traffic volumes on Patterson Pass Road with existing conditions (Table 4.12-20) does not indicate the need for any improvements by 2000.

#### **Mitigation Measure S4.12-3**

*(a) As a part of a Land Use/Traffic Monitoring program (Mitigation Measure M4.12-1(j)), traffic growth trends and levels of service at the Grant Line Road/I-580 interchange shall be monitored and reported to the County. Should the review indicate the need for interchange improvements at I-580/Grant Line at or before buildout of Specific Plan I, the required interchange improvements should be added to Table 9.1 of Draft Specific Plan I accordingly.*  
(C)

*(b) The I-205 Interchange section of Table 9.1 should be amended to specifically provide for future ramp metering with HOV bypass lane. This may involve widening and lengthening of the westbound on-ramp. (C,O,M)*

TABLE 4.12-20

**TRAFFIC VOLUME INCREASES ON ARTERIALS IN PROJECT VICINITY  
Year 2000: Specific Plan I**

Road	Location	1993 Daily Traffic Volume	2000 Daily Traffic Volume		
			Expected Employment	Full Employment	Difference <sup>1</sup>
11th Street	West of Lammers Road	11,000	14,300	14,600	300
Altamont Pass Road	East of Dyer Road	3,100	6,300	6,200	(100)
Grant Line Road	Between Mountain House and Patterson Pass roads	1,800	1,800	1,800	0
Grant Line Road	North of I-580	4,100	4,100	4,100	0
SR-4	West of Tracy Boulevard	5,700	8,300	9,000	700
SR-4	East of Tracy Boulevard	6,000	9,300	9,300	0
Patterson Pass Road	North of Schulte Road	1,900	2,300	2,700	400
Tracy Boulevard	North of Lammers Road	2,800	2,900	3,600	700
Corral Hollow Road	South of Lammers Road	1,200	1,700	1,700	0
Byron Road	North of Grant Line Road	8,300	11,000	13,800	2,800
Byron Highway	North of County line	6,400	14,100	15,000	900

Source: DKS Associates.

<sup>1</sup> Full employment volume compared to expected employment volume. Volumes in parentheses indicate segments where a decrease in traffic is projected due to the project's effects on regional job location and commuting patterns.

**Impact S4.12-4 (C,O,M)**

**The project would contribute to the need for improvements on several County and other roads in the project vicinity, including portions of Grant Line Road, Patterson Pass Road, Byron Road, and Altamont Pass Road.**

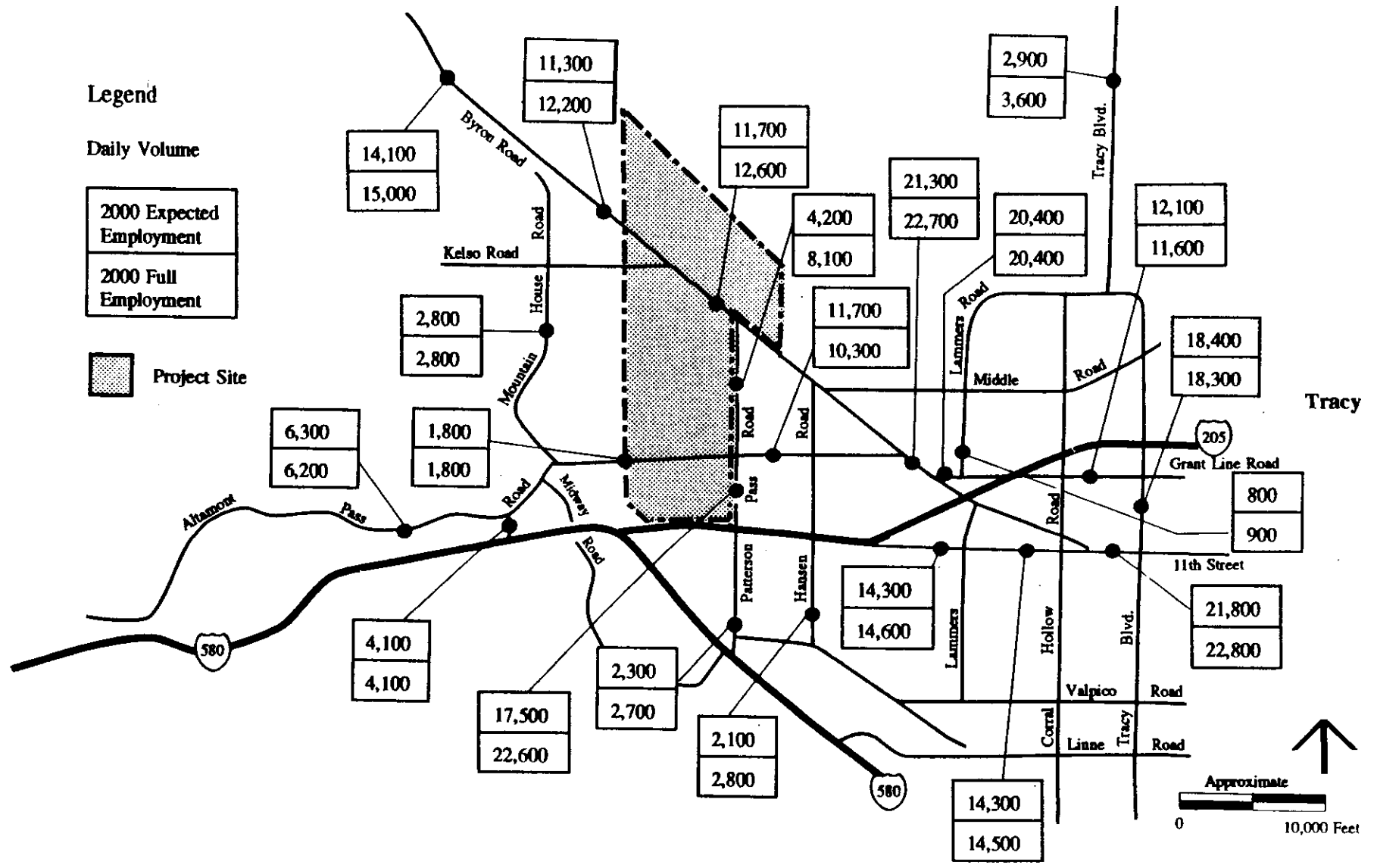
The proposed project would contribute to the projected cumulative traffic growth on these roads, as shown in Table 4.12-20 and Figure 4.12-12. The differences in off-site impacts between the Expected and Full Employment scenarios are typically small, with some projected volumes with the Full Employment scenario slightly higher and some slightly lower. The projected difference is largest on Tracy Boulevard north of Lammers Road where daily traffic volumes would increase by 700 vehicles with Full Employment (from 2,900 ADT with Expected Employment to approximately 3,600 ADT with Full Employment).

Impacts of the project are considered significant when the County's LOS C standard is not met. Locations not meeting the LOS C standard during either the AM or PM peak hour are flagged on

**2000 SPECIFIC PLAN TOTAL DAILY TRAFFIC VOLUMES IN PROJECT SITE VICINITY**  
**FULL AND EXPECTED EMPLOYMENT SCENARIOS**

**Figure 4.12-12**

4.12-66



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Table 4.12-21 (bold, underlined). The roadway capacities are generalized values that may be conservatively low; consequently, V/C ratios and LOS could be better than shown in the table. As indicated on the table, the following roadways may violate the County's current LOS C standard, requiring additional widening or upgrading to increase their capacities:

- Grant Line Road, I-580 to Marina Boulevard
- Grant Line Road east of Patterson Pass Road
- Grant Line Road east of Byron Road
- Patterson Pass Road north of Grant Line Road
- Altamont Pass Road
- Byron Highway west of Mountain House Road
- Byron Road east of Patterson Pass Road

The Draft Master Plan proposes that LOS D be accepted on "community gateways" including portions of Grant Line Road, Patterson Pass Road, and Byron Road. Mitigation Measure M4.12-5(f) proposes an amendment to the County General Plan LOS policy for consistency with the Draft Master Plan. If the revised LOS standard is approved for community gateways, the following roadways would remain in violation of the LOS policy:

- Grant Line Road, I-580 to Marina Boulevard
- Grant Line Road east of Patterson Pass Road
- Patterson Pass Road north of Grant Line Road
- Altamont Pass Road
- Byron Highway west of Mountain House Road

Below is a discussion of the projected traffic increases, LOS impacts and mitigation for off-site roadways in the project vicinity.

On Byron Highway west of Mountain House Road, the existing two-way daily traffic volume of 6,400 would increase to 14,100 ADT with the Expected Employment scenario in year 2000. Traffic volumes on this section of roadway would increase by another 900 vehicles daily with the Full Employment scenario. With Expected Employment, LOS D is projected in 2000, LOS D-E is projected with Full Employment. The projected LOS does not appear to warrant widening Byron Highway to four lanes; however, operational and safety improvements may be needed considering the significantly higher traffic volumes than at present.

East of Patterson Pass Road, Byron Road would have an LOS of D during the PM peak hour for the Full Employment scenario; LOS C is projected for the Expected Employment scenario. To achieve LOS C along this section of roadway, an additional travel lane in each direction would be required. Since LOS D is projected only with Full Employment, and is just marginally beyond LOS C, widening to four lanes does not appear warranted until beyond year 2000.

TABLE 4.12-21

## YEAR 2000 PEAK HOUR LOS ON ARTERIAL ROADS

Road	Location	Directional Lanes	Hourly Directional Capacity <sup>1</sup>	Time of Day	Expected Employment			Full Employment		
					Volume	V/C	LOS	Volume	V/C	LOS
Altamont Pass Road	West of Mountain House Road	1	900	AM	1,000	1.11	<u>F</u>	960	1.07	<u>F</u>
				PM	1,210	1.34	<u>F</u>	1,180	1.31	<u>F</u>
Mountain House Road	South of Kelso Road	1	900	AM	310	0.34	A	290	0.32	A
				PM	240	0.27	A	280	0.31	A
Byron Highway	West of Mountain House Road	1	900	AM	690	0.84	<u>D</u>	760	0.84	<u>D</u>
				PM	760	0.84	<u>D</u>	880	0.98	<u>E</u>
Byron Road	East of Mountain House Road	1	900	AM	380	0.42	B	470	0.52	C
				PM	530	0.59	C	610	0.68	C
Byron Road	East of Patterson Pass Road	1	900	AM	440	0.49	B	620	0.69	C
				PM	670	0.74	C	730	0.81	<u>D</u> <sup>2</sup>
Hansen Road	South of I-205	1	900	AM	60	0.07	A	110	0.12	A
				PM	90	0.10	A	130	0.14	A
Patterson Pass Road	South of I-205	2	1,500	AM	310	0.21	A	300	0.20	A
				PM	370	0.25	A	350	0.23	A
Patterson Pass Road	North of I-205	2	1,500	AM	360	0.24	A	630	0.42	B
				PM	860	0.57	C	1,030	0.69	C
Patterson Pass Road	North of Grant Line Road	2	1,500	AM	1,240	0.83	<u>D</u>	1,100	0.73	C
				PM	1,410	0.94	<u>E</u>	1,410	0.94	<u>E</u>
Grant Line Road	North of I-580	1	900	AM	280	0.31	A	240	0.27	A
				PM	780	0.87	<u>D</u>	840	0.93	<u>E</u>
Grant Line Road	West of Marina	1	900	AM	420	0.47	B	260	0.29	A
				PM	870	0.97	<u>E</u>	760	0.84	<u>D</u> <sup>2</sup>
Grant Line Road	East of Patterson Pass Road	1	900	AM	530	0.71	C	640	0.85	<u>D</u> <sup>2</sup>
				PM	1,090	1.45	<u>F</u>	1,060	1.41	<u>F</u>
Grant Line Road	East of Byron Road	1	900	AM	810	0.90	<u>E</u>	930	1.03	<u>F</u>
				PM	1,240	1.38	<u>F</u>	1,260	1.40	<u>F</u>

Source: DKS Associates.

<sup>1</sup> Hourly capacities are generalized estimates based on COG travel model. Capacities may be higher (and therefore V/C ratios and LOS better) where raised medians, turn pockets, and access controls are used.

<sup>2</sup> Community gateways where LOS D is proposed standard in Draft Master Plan, rather than more restrictive LOS C.

Notes: LOS = Level of service.

V/C = Volume-to-capacity ratio.

**Bold** and **underlined** letters indicate locations where County standards for acceptable LOS are not met.

#### 4.12 TRANSPORTATION

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On Altamont Pass Road between Dyer Road and Grant Line Road, existing ADT volumes are projected to double by 2000 with either the Expected or Full Employment scenarios. This increase appears to be due to diversion of some vehicles off I-580 freeway as traffic congestion on the freeway increases over time due to cumulative traffic growth. The Draft Master Plan and Mitigation Measures 4.12-4(a) and S4.12-4(f) address this potential impact.

Projected LOS E on Patterson Pass Road north of Grant Line Road indicates that widening of the roadway to six lanes would be required by 2000. However, there are no provisions in the Draft Specific Plan I for widening Patterson Pass Road beyond four lanes north of Grant Line Road. As an alternative to widening this section of Patterson Pass Road to six lanes, either Central Parkway or another north-south arterial could be extended south to connect the project with Grant Line Road. This additional north-south connection would alleviate any traffic bottleneck caused by the four-lane Patterson Pass Road.

An additional travel lane in each direction would be required on Grant Line Road from I-580 to east of Byron Road to accommodate future traffic volumes at LOS C or better. Projected traffic increases on the west end of Grant Line Road appear to be primarily related to diversion of project and non-project traffic from I-205 freeway during peak periods.

##### **Mitigation Measure S4.12-4 (C,O,M)**

*Table 9.1 in Section 9.4 of Specific Plan I should be amended to include the following arterial improvements, and to add trigger points for each:*

- a) *Byron Road widening east of Patterson Pass road to four lanes, concurrently with the beginning of construction of the Old River Industrial Park (unless the General Plan is amended to accept LOS D as the gateway standard).*
- b) *North-South arterial or widening of Patterson Pass Road north of Grant Line Road. A traffic analysis shall be carried out prior to beginning construction of housing over the 3,200 unit level to determine the need and feasibility of extending Central Parkway or De Anza Boulevard southerly to at least Grant Line Road, and/or widening of Patterson Pass Road beyond four lanes. Subject to findings of this study and review by the County, Figures 9.3 and 9.4 will be revised accordingly.*
- c) *Grant Line Road widening between I-580 and Mountain House Road to four lanes. Widening shall proceed concurrently with the beginning of construction of the Mountain House Business Park.*
- d) *Grant Line Road safety and operational improvements between Mountain House Road and Byron Road. **These improvements shall proceed begin** concurrently with **approval of the first discretionary permit.** ~~the beginning of construction of the Mountain House Business Park.~~*



- e) *Initiation of discussions with Contra Costa and Alameda county representatives regarding mutually agreeable measures to address traffic increases on Byron Highway in accordance with the Draft Master Plan (Policy g) under Objective 1 in County Arterials (Appendix C). Interim improvements to accommodate traffic growth to year 2000 may consist of safety/operational improvements.*
- f) *Initiation of discussions with Alameda County representatives regarding mutually agreeable measures to address traffic increases on Altamont Pass Road and all Alameda County roads, in accordance with the Draft Master Plan (Policy g) under Objective 1 in County Arterials (Appendix C)), and Alameda County Policy 164(a).*
- g) *Initiation of discussions and improvement plans with City of Tracy regarding improvements to Grant Line Road east of Byron Road (widening to 4 lanes) to accommodate traffic between Mountain House and Tracy Regional Mall). **The Master Developer shall provide fair share funding for the widening of Grant Line Road, based on more detailed studies that identify both Mountain House and City of Tracy fair shares.***

#### **Impact S4.12-5 (C,M)**

**Project-generated trips would result in significant traffic levels on roadways internal to the site, requiring construction of adequately sized internal roadways and intersections in order to maintain acceptable LOS at buildout of the project.**

Specific Plan I uses Patterson Pass Road for primary circulation of both through traffic and traffic to or from the project site (Figure 4.12-10) and proposes to widen it to a four-lane major arterial from I-205 to Byron Road, in three separate phases. No improvements are proposed for either Byron Road or Grant Line Road.

Additional roadways proposed in Draft Specific Plan I for internal circulation include:

#### Central Mountain House

- Central Parkway - De Anza to south of Mascot Blvd. (4-lane minor arterial)
- De Anza Boulevard - two segments (4-lane minor arterial)
- Mascot Boulevard (2-lane collector)
- Mountain House Boulevard (4-lane minor arterial)
- Main Street - Marina Blvd. to west of Town Center (4-lane minor arterial)
- Marina Boulevard - Mascot Blvd. to De Anza Blvd. (4-lane minor arterial)

#### Old River Industrial Park

- Henderson Road (2-lane collector)
- Bethany Road (2-lane minor arterial)

#### Mountain House Business Park

- Central Parkway - one segment (4-lane minor arterial)
- De Anza Boulevard (2- to 4-lane collector)

#### 4.12 TRANSPORTATION

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Neither Marina Boulevard, Central Parkway nor De Anza Boulevard would connect to Grant Line Road from the north, and connections to Byron Road from the project areas to the south would be limited to Patterson Pass Road. The resulting circulation system focuses all but local trips onto Patterson Pass Road. Additionally, Mascot Boulevard would function as a primary connecting route from Central Mountain House to Patterson Pass Road.

Review of projected 2000 traffic volumes indicates that the planned number of lanes for the internal arterial and collector roads would generally accommodate buildout of the Master Plan at LOS C or better, as required by the County's General Plan 2010. One potential exception is Patterson Pass Road. As stated previously (Impact S4.12-4), the segment of Patterson Pass Road north of Grant Line Road would operate at LOS E. The intersection at Grant Line Road has a projected LOS D in the PM peak hour under both the Expected and Full Employment scenarios, and closely approaches LOS E (V/C ratio of 0.90) for the Expected Employment scenario. The relatively high projected through-volumes on Patterson Pass Road (over 1,400 vehicles per hour in one direction) and the lack of any parallel through-routes would adversely impact circulation and access within the site. During later phases of Specific Plan I, it would be desirable to extend Central Parkway or, alternatively, De Anza Boulevard to connect Central Mountain House with the Mountain House Business Park. A possible alternative is to widen Patterson Pass Road to six lanes but this is inconsistent with the ultimate four lanes proposed in the Draft Master Plan. These alternatives are addressed under Mitigation Measure S4.12-4(c).

Another potential on-site circulation deficiency is on Mascot Boulevard. On its east end (between Central Parkway and Patterson Pass Road), daily traffic volumes of 8,000-18,000 vehicles are projected for either the Expected or Full Employment scenario. This exceeds the volume threshold of a two-lane collector (7,000 daily vehicles) proposed in the Draft Master Plan, and would result in a Level of Service deficiency. Ultimate traffic volumes at Master Plan buildout are somewhat lower (due to the presence of additional north-south outlets), but still warrant development of Mascot Boulevard as a four-lane minor arterial.

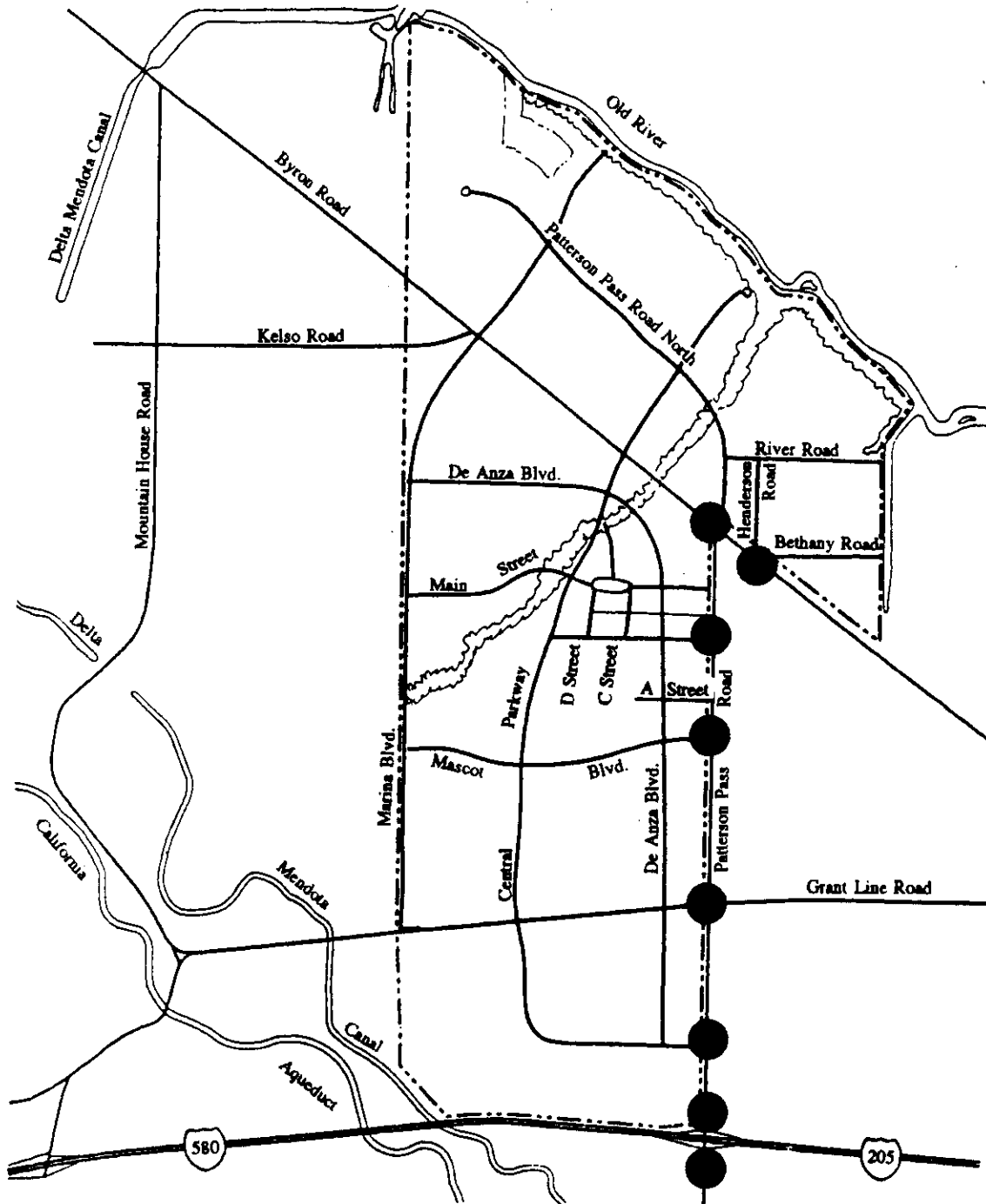
Marina Boulevard is proposed in Draft Specific Plan I to be developed to its ultimate width as a four-lane minor arterial. Due to its location on the west edge of Central Mountain House and the lack of any direct connections to points south or north, projected traffic volumes are below 200 daily vehicles. The low volumes on this relatively remote route could pose problems of high traffic speed and difficult enforcement. Therefore, Marina Boulevard should be constructed as an interim two-lane road, with widening to four lanes beyond year 2000.

The Draft Specific Plan I proposes signalization of six intersections along Patterson Pass Road and Byron Road (Figure 4.12-13). Traffic signals are also proposed at the two ramp intersections at the I-205/Patterson Pass Road intersection. Turn lanes would be provided at these intersections. Other intersections would be unsignalized.

Table 4.12-22 shows the projected 2000 levels of service for key signalized and unsignalized intersections assuming the intersection lanes indicated in the Draft Specific Plan I. The AM and PM

# SPECIFIC PLAN I SIGNALIZED INTERSECTIONS

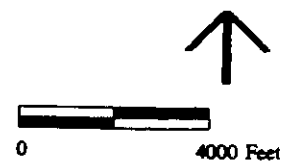
Figure 4.12-13



**Legend**

● Signalized Intersections

--- Project Site Boundary



**BASELINE**

TABLE 4.12-22

YEAR 2000 INTERSECTION LEVEL OF SERVICE SUMMARY  
Specific Plan I Full Census Expected Employment Scenarios

Locations	Expected Employment				Full Employment			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	V/C Ratio <sup>1</sup>	LOS <sup>2</sup>	V/C Ratio <sup>1</sup>	LOS <sup>2</sup>	V/C Ratio <sup>1</sup>	LOS <sup>2</sup>	V/C Ratio <sup>1</sup>	LOS <sup>2</sup>
<b>Signalized</b>								
I-205 Eastbound Ramps/Patterson Pass Rd.	0.21	A	0.49	A	0.28	A	0.50	A
I-205 Westbound Ramps/Patterson Pass Rd.	0.24	A	0.33	A	0.36	A	0.44	A
Patterson Pass Rd./Central Pkwy. (South)	0.18	A	0.31	A	0.32	A	0.48	A
Patterson Pass Rd./Grant Line Rd.	0.62	B	0.90	D	0.71	C	0.86	D
Patterson Pass Rd./Mascot Blvd.	0.62	B	0.70	B	0.56	A	0.69	B
Patterson Pass Rd./Mountain House Blvd.	0.24	A	0.39	A	0.30	A	0.47	A
Patterson Pass Rd./Byron Rd.	0.27	A	0.47	A	0.38	A	0.48	A

Locations	Expected Employment				Full Employment			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS
<b>Unsignalized<sup>3</sup></b>								
Patterson Pass Road/Von Sostem	A	B	A	<u>E</u>	A	D	A <sup>4</sup>	<u>F</u>
Patterson Pass Rd./A St.	A	B	A	A	A	C	A	C
Marina Blvd./Byron Road	A	A	A	A	A	A	A	A
Marina Blvd./De Anza Blvd.	A	A	A	A	A	A	A	A
Marina Blvd./Main Street	A	A	A	A	A	A	A	A

Table 4.12-22 Intersection Level of Service - *continued*

Locations	Expected Employment				Full Employment			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS	Major Street LOS	Minor Street LOS
Marina Blvd./Mascot Blvd.	A	A	A	A	A	A	A	A
Marina Blvd./Grant Line Road	A	A	A	A	A	A	A	A
De Anza Blvd. (S.)/Central Parkway	A	A	A	A	A	D	A	<u>E</u>
Central Parkway/Mascot Blvd.	A	C	A	D	A	C	A	D
Central Parkway/Mountain House Blvd.	A	D	A	D	A	D	A	D
Central Parkway/Main Street	A	B	B	<u>E</u>	A	B	A	<u>E</u>
Central Parkway/A Street	A	A	A	A	A	A	A	A
De Anza Blvd./Von Sostan	A	A	A	A	A	A	A	A
De Anza Blvd./Mascot Blvd.	A	<u>F</u>	A <sup>4</sup>	<u>F</u>	A	<u>F</u>	A <sup>4</sup>	<u>F</u>
De Anza Blvd./A Street	A	B	A	C	A	B	A	C
De Anza Blvd./Mountain House Blvd.	A	D	A	<u>F</u>	A	<u>E</u>	A	<u>F</u>
C Street/Mountain House Blvd.	A	D	A	D	A	D	A	<u>E</u>
D Street/Mountain House Blvd.	A	<u>E</u>	A <sup>4</sup>	<u>F</u>	A	<u>E</u>	A <sup>4</sup>	<u>F</u>
I-580 Eastbound Ramps/Grant Line Road	A	A	A	C	A	A	A	C
I-580 Westbound Ramps/Grant Line Road	A	A	A	A	A	A	A	A

Source: DKS Associates.

Note: **Bold** and underlined letters indicate locations where County standards for acceptable LOS are not met.

<sup>1</sup> V/C = Volume-to-capacity ratio.

<sup>2</sup> LOS = Level of service.

<sup>3</sup> Level of service shown for worst movement from minor and major street approaches.

<sup>4</sup> Meets peak hour signal warrant.

## 4.12 TRANSPORTATION

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peak hour volume-to-capacity (V/C) ratio and LOS are shown for each intersection for both the Expected and Full Employment scenarios. Planning level methods were used due to the long range nature of the forecasts and the lack of existing intersections at present.

During both the AM and PM peak hours, all six signalized intersections are projected to provide acceptable levels of service, with LOS A or B in all cases except at the Patterson Pass Road/Grant Line Road intersection. This intersection would operate at LOS D, approaching LOS E, during the PM peak hour.

Under the Expected Employment scenario, five unsignalized intersections would have minor street movements that are deficient (LOS E or worse) in the AM and/or PM peak hours:

- Patterson Pass Road/Von Sosten Road
- Central Parkway/Main Street
- De Anza Boulevard/Mascot Boulevard
- De Anza Boulevard/Mountain House Boulevard
- D Street/Mountain House Boulevard

In addition to these five intersections, the following two unsignalized intersections would have minor street movements that are deficient under the Full Employment scenario:

- De Anza Boulevard (south)/Central Parkway
- C Street/Mountain House Boulevard

Three of the seven deficient unsignalized intersections (Patterson Pass Road/Von Sosten Road, De Anza Boulevard/Mascot Boulevard, and D St./Mountain House Blvd.) meet the Caltrans Peak Hour Signal Warrant minimum requirement for either the AM or PM peak hour.<sup>21</sup> Minor movements at the other four intersections would operate at LOS E in one or both peak hours. However, because the intersections do not meet Peak Hour Warrant requirements, and the volumes on the critical minor street movements are low, no mitigation is recommended. All of the remaining study intersections would operate acceptably (LOS D or better) in the AM and PM peak hours for both Specific Plan scenarios.

The following measures would mitigate deficient intersection levels of service at Specific Plan I buildout. Table 4.12-23 shows the resulting LOS after mitigation on the study intersections.

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<sup>21</sup> This is only one of several warrants that should be evaluated before a traffic signal is actually installed and operated at any intersection.

TABLE 4.12-23

**INTERSECTION LEVEL OF SERVICE MITIGATION  
Specific Plan Year 2000**

Location	Year 2000 Expected Employment			Year 2000 Full Employment		
	LOS without Mitigation	LOS with Mitigation	Mitigation	LOS without Mitigation	LOS with Mitigation	Mitigation
Patterson Pass Road/Grant Line Road	D/E (PM)	C	Add second eastbound through lane	N/A	N/A	N/A
De Anza Boulevard/Mascot Boulevard	F (AM/PM)	D (PM)	Signalize intersection	F (PM)	C	Signalize intersection
D Street/Mountain House Boulevard	F (PM)	A	Signalize intersection	F (PM)	A	Signalize intersection
Patterson Pass Road/Von Sostem	N/A	N/A	N/A	F (PM)	A	Signalize intersection

Source: DKS Associates.

Note: Second northbound left-turn lane recommended at Patterson Pass Road/Mascot Boulevard.

**Mitigation Measure S4.12-5**

(a) *Figure 9.4 of Specific Plan I should be revised to include the following intersections:*

- *De Anza Boulevard/Mascot Boulevard*
- *D Street/Mountain House Boulevard*

*Both intersections would operate acceptably (LOS D or better) in both peak hours when signalized. Note that no additional lanes were assumed for the mitigation analysis. Additional turning lanes may be needed to accommodate left-turning vehicles. (C)*

(b) *Figure 9.7 of Specific Plan I should be revised to include the following intersection:*

- *Patterson Pass Road/Von Sosten Road*

*This intersection would operate acceptably (LOS D or better) in both peak hours when signalized. Note that no additional lanes were assumed for the mitigation analysis. Additional turning lanes may be needed to accommodate left-turning vehicles. (M)*

(c) *Figure 9.3 of Specific Plan I (Road Classification Diagram) should be revised to designate Mascot Boulevard as a minor arterial from Marina Boulevard to Patterson Pass Road, with four lanes to be provided between Central Parkway and Patterson Pass Road at a minimum. (C)*

(d) *Figure 9.4 of Specific Plan I (Central Mountain House Street System) should be revised to designate an interim width of two lanes on Marina Boulevard while retaining the ultimate four-lane width. (C)*

**Impact S4.12-6 (C)**

**The project would generate a significant demand for parking.**

The Master Plan includes provisions for on-site parking, including minimum and maximum parking requirements for each land use type. Specific Plan I would conform to these standards. This DEIR has not evaluated the adequacy of the standards to accommodate the project's potential parking demand. The standards would provide flexibility to encourage use of alternative modes of transportation. In particular, the community commercial areas may present opportunities to reduce the land area devoted to parking by sharing parking areas based on peak demands for adjacent land uses occurring at different times of the day.

**Mitigation Measure S4.12-6 (C)**

*Policy a) of Section 9.7 of the Draft Master Plan should be amended to state "Within mixed-use districts, including community commercial areas, the shared parking guidelines published by the Urban Land Institute shall be used wherever feasible to reduce total parking supply."*



**Impact S4.12-7 (c)**

**The project would increase the demand for bicycle and pedestrian travel within the project site as well as between the site and adjacent developed areas.**

The project would generate a significant demand for bicycle travel. Specific Plan I would conform to Master Plan requirements for bicycle and pedestrian facilities. The Draft Master Plan also includes implementation actions for bike route signage and amenities such as bicycle racks.

In the Central Mountain House area, Class I (off-street) multi-use paths are proposed along Mountain House Creek, Main Street, De Anza Boulevard, where constructed, and Mountain House Boulevard (Figure 9.6 of Specific Plan I). Combined Class I multi-use paths and Class II bike lanes are proposed along Central Parkway, Patterson Pass Road, Mascot Boulevard, and Marina Boulevard. Similarly, bicycle/pedestrian provisions are proposed within the Mountain House Business Park on Patterson Pass Road and constructed portions of Central Parkway and De Anza Boulevard (Figure 9.8 of Draft Specific Plan I). Class III bike routes (signage only) are indicated in the Old River Industrial Park (Figure 9.10 of the Draft Specific Plan I).

This system, combined with other Class III (signed) routes on collectors, would provide excellent bicycle circulation within Specific Plan I areas. However, due to street discontinuities, regional access and access among the three areas are limited.

**Mitigation Measure S4.12-7 (c)**

*Should Central Parkway or another north-south arterial be extended south to or beyond Grant Line Road as described in Mitigation Measure S4.12-4 (e) b), bicycle provisions should be included as prescribed in the Master Plan.*

**Impact S4.12-8 (o)**

**The project would increase the number of vehicles crossing the existing Southern Pacific railroad track that runs through the site.**

Three grade crossings within the project site exist today along the Southern Pacific Transportation Company (Mococo line) railroad track that runs through the site parallel to the Byron Highway. These crossings are located on Kelso Road, Henderson Road, and Wicklund Road. The Draft Master Plan proposes to upgrade the existing at-grade crossing at Henderson Road. No specific provisions for rail crossings are included in Table 9.1 of Draft Specific Plan I.

**Mitigation Measure S4.12-8 (o)**

*Implementation c) under Rail Crossings in the Draft Master Plan should be revised to add: "Improvements to the rail crossing shall include provisions for bicyclists."*

## 4.13 AIR QUALITY

### SETTING

The project site is located at the northwestern corner of the San Joaquin Valley Air Basin. This air basin has a high potential for air pollution due to the geography and climate. The basin is located generally downwind of and receives pollutants from the adjacent San Francisco Bay Air Basin.

The San Joaquin Valley Air Basin is a nonattainment area (has not attained the State or Federal ambient air quality standards) for PM-10 (particulate matter less than 10 microns in diameter) and ozone. This has resulted in a requirement to prepare regional plans to meet both the Federal and State standards. The San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) has recently adopted Federal nonattainment plans for PM-10 and carbon monoxide; the Federal nonattainment plan for ozone is due in November 1994 (SJVUAPCD, 1991, 1992a). The State-required nonattainment plan for ozone and carbon monoxide, the *1991 Air Quality Attainment Plan* for the air basin, has been approved by the State Air Resources Board (SJVUAPCD, 1992b).

The *1991 Air Quality Attainment Plan* for the San Joaquin Valley Air Basin identifies eleven Transportation Control Measures (TCMs) as "reasonably available" in the San Joaquin Valley Air Basin. The following TCMs are included in the Plan:

Traffic flow improvements	Bicycling program
Public transit	Trip reduction programs
Passenger rail support/facilities	Telecommunications
Rideshare program	Alternative work schedules
Suburban park and ride lots	

The Plan also proposes an indirect source program consisting of three elements:

- Enhanced District CEQA Participation
- Air Quality Element for General Plans
- New and Modified Indirect Source Review

The SJVUAPCD is implementing the first of these indirect source programs, and has produced a model Air Quality Element for General Plans. No schedule has been developed for adoption of a New and Modified Indirect Source Review Rule.

## IMPACTS AND MITIGATION MEASURES

According to CEQA, a project will normally have a significant adverse impact on air quality if it will "violate any ambient air quality standard, contribute substantially to an existing or projected air quality violation, or expose sensitive receptors to substantial pollutant concentrations."

The project's potential for violating the ambient air quality standards for carbon monoxide is used in this DEIR to determine the significance of localized air quality impacts. The potential to create objectionable odors is also a significance threshold for localized air quality impacts.

For regional pollutants, violation of air quality standards cannot be used as a "threshold of significance" since the standards are exceeded in San Joaquin County, the entire San Joaquin Valley Air Basin, and the adjacent San Francisco Bay Air Basin. Impacts are judged on their contribution to the regional emission burden, using the following thresholds of significance suggested by the San Joaquin Unit of the San Joaquin Valley Unified Air Pollution Control District: emissions of ozone precursors (hydrocarbons or oxides of nitrogen) exceeding 150 pounds per day and emissions of PM-10 exceeding 80 pounds per day.

### MASTER PLAN

The Draft Master Plan proposes the implementation of numerous strategies to reduce the air quality impacts of proposed development. Because of the interrelationship among air quality, transportation, land use, and community design, many of the air quality objectives, policies, and implementations appear throughout the Draft Master Plan. The Draft Master Plan strategies for air quality provide a comprehensive framework for reducing the impact of future developments and uses all control strategies generally considered feasible for large-scale land use developments in California.

The Draft Master Plan air quality mitigation measures would be implemented over several time scales. The bulk of the measures related to land use, circulation, and infrastructure would be implemented at specific plan stages. Those measures related to development and design standards would be implemented at the Tentative Map stage. The most crucial air quality mitigation measure is the ~~implementation~~ **development of the Transportation Demand Management Plan**, which is to occur prior to submittal of the first Development Permit. Other strategies are to be implemented at an unspecified future date when future facilities are built or certain development thresholds are exceeded. The overall time frame for implementation of the Draft Master Plan air quality program appears to be logical and appropriate.

### Impact M4.13-1

**The project would increase regional emissions of criteria pollutants through new vehicle travel and area-source emissions associated with residential and industrial uses in excess of threshold levels established by the San Joaquin Valley Unified Air Pollution Control District. These emissions would add to the regional emission burdens within the San Joaquin Valley Air Basin**

and the adjacent San Francisco Bay Air Basin, and delay eventual attainment of air quality standards for ozone and suspended particulate matter (PM-10).

Vehicle trips to, from, and within the project would result in air pollutant emissions over a large area. To estimate the emissions associated with the project, the URBEMIS-3 computer program, developed by the California Air Resources Board, was applied to project land uses. Travel data on numbers of trips and average trip length by trip type were derived from the transportation model used to analyze the traffic impacts of the project as input to the URBEMIS-3 program.

The daily increases in regional emissions from auto travel and residential uses, assuming buildout of Specific Plan I and the Master Plan, are shown in Table 4.13-1 for four regional pollutants.

Residential uses contain a number of dispersed and intermittent sources of pollutants such as space and water heaters, household paints and solvents, fireplaces and wood stoves, lawn mowers, and other equipment. Annual emission rates for residential uses were taken from published sources (BAAQMD, 1985).

The industrial portions of the project could include industrial sources of air pollutants. The type or amount of such emissions is not predictable because it would depend on the individual uses, which are currently unknown, that might locate within the project. Any future industrial sources that would locate within the project would be subject to the rules and regulations of the San Joaquin Valley Unified Air Pollution Control District. Under the provisions of the California Clean Air Act, any

TABLE 4.13-1

**PROJECT EMISSIONS FOR SPECIFIC PLAN I  
AND MASTER PLAN BUILDOUT  
(Pounds per Day)**

	ROG	NO <sub>x</sub>	PM-10	SO <sub>x</sub>
<b>Master Plan Buildout Year 2010</b>				
Automobile Emissions	4,302	8,501	823	965
Residential Emissions	<u>1,836</u>	<u>366</u>	<u>127</u>	<u>22</u>
Total	6,138	8,867	950	987
Percent of Countywide	4.0	7.0	0.03	4.1
<b>Specific Plan I Year 2000 (Full Employment)</b>				
Automobile Emissions	1,256	2,362	235	280
Residential Emissions	<u>175</u>	<u>35</u>	<u>12</u>	<u>2</u>
Total	1,431	2,397	247	282
Percent of Countywide	0.9	1.9	0.01	1.2
<b>Specific Plan I Year 2000 (Expected Employment)</b>				
Automobile Emissions	970	1,817	180	215
Residential Emissions	<u>175</u>	<u>35</u>	<u>12</u>	<u>2</u>
Total	1,145	1,852	192	217
Percent of Countywide	0.7	1.5	0.01	0.9

**Notes:** ROG = Reactive organic gases.

NO<sub>x</sub> = Nitrogen oxides.

PM-10 = Particulate matter, ten microns.

SO<sub>x</sub> = Sulfur oxides.

Refer to the Transportation section for discussion of Full Employment and Expected Employment scenarios for Specific Plan I.

future industrial sources will be subject to the "no net increase" strategy included in the *1991 Air Quality Attainment Plan* (SJVUAPCD, 1992b).

The proposed project would result in substantial new regional emissions (Table 4.13-1). These new emissions would cause a deterioration in regional air quality and delay eventual attainment of the air quality standards for ozone and PM-10 in San Joaquin County and the larger San Joaquin Valley Air Basin.

The majority of emissions shown in Table 4.13-1 would occur within the San Joaquin Valley Air Basin. However, a substantial portion would occur in the neighboring San Francisco Bay Air Basin. A substantial portion of the vehicle trips to and from the project would pass through or have destinations in the neighboring Livermore Valley. Approximately 32 percent of the Vehicle Miles Traveled generated by the project at buildout would occur within the Livermore Valley; a similar fraction of the emissions shown in Table 4.13-1 would be generated within the Livermore Valley.

The FSEIR identified several mitigation measures designed to reduce regional air quality impacts. These included land use strategies to reduce travel, incentives for non-auto travel, strategies to reduce vehicle trip production at employment sites, and measures to reduce area-source emissions from residences. Such measures have been substantially incorporated into the Draft Master Plan Objectives, Policies, and Implementations; additionally, the following measures are recommended. Inclusion of these measures, however, would not reduce the air quality impacts of the project in the Livermore and San Joaquin valleys to a level of insignificance; irrespective of the mitigation measures, the impact would be unavoidable and adverse.

**Mitigation Measure M4.13-1**

*(a) The County should incorporate a Countywide requirement for an air quality mitigation fee as part of the Development Title. Such a fee could be imposed when new projects generating more than 200 trips per day are not able to reduce trip generation by at least 25 percent. This fee could be used for air quality mitigation improvements, such as park and ride facilities, transit, vehicle inspection, or old car buy-back programs.*

*(b) Industrial or commercial operations at the project site with equipment that causes or has a potential for air pollution, or that controls such air pollution, may need to apply for an Authority to Construct and Permit to Operate, according to regulations of the San Joaquin Valley Unified Air Pollution Control District.*

***(c) The Implementation under Objective 1 of Houses and Buildings, Air Quality and Transportation Demand Management (Appendix C) should be revised as follows:***

***"The following items shall be required as conditions of approval of tentative subdivision maps for residential development:***

***"a) Gas Outlets. Natural gas line outlets shall be provided to backyards to encourage usage of natural gas or electric barbecues.***

- "b) Electrical Outlets. 220-volt electrical outlets for recharging electric automobiles shall be provided in each garage. Electrical outlets shall be located on the outside of single family homes to accommodate electric lawn maintenance equipment and electric barbecues.**
- "c) Water Heaters. Low nitrogen oxide (NOx) emitting and/or high efficiency water heaters shall be required for all dwelling units.**
- "d) Fireplaces. Each single family residence shall have no more than one zero clearance fireplace or freestanding wood stove. Only EPA certified fireplaces and wood stoves shall be installed."**

**Impact M4.13-2**

**The project would increase the potential for nuisance complaints due to adjacent agricultural activities.**

The Draft Master Plan proposes residential development adjacent to the western site boundary next to land that would remain in agricultural use. North of where Marina Boulevard diverges from the County line, residences would be located within 100 feet of the site boundary. Where Marina

Boulevard adjoins the western boundary, residences would be located within 100 feet of the eastern right-of-way line of Marina Boulevard, providing a minimum 210-foot setback from the west edge of the site. Security fences and sound walls proposed along the property boundary would be ineffective in reducing agricultural-related air quality effects. The extreme high winds that normally blow from the west amplify the dust generation of agricultural activities such as tilling, mowing, soil preparation and general travel on unpaved roads and surfaces. Dust and particulate matter would be carried onto the project site where its deposition would soil exposed surfaces and potentially irritate residents with pre-existing lung problems. The severity of these impacts would be greatest at the western border of the site and diminish with distance to the east. Given that the population of the site would be urban rather than rural (and thus less tolerant of agricultural dust and odors), an increase in complaints to the San Joaquin Valley Unified Air Pollution Control District could be expected with site development from residences adjacent to the western site boundary.

**Mitigation Measure M4.13-2**

*Policy a) should be replaced under Objective 10 in Development and Design (West Edge Treatment) (Appendix C) as follows:*

*"a) Edge treatments along the west edge shall provide a minimum 500-foot setback for residences to mitigate any potential impacts from aerial spraying and other agricultural activities."*

*The last item under Policy e) under Objective 10, Development and Design (West Edge Treatment) (Appendix C) should be replaced as follows:*

*"• 100-foot setback from the eastern right of way line of Marina Boulevard to the nearest dwelling (minimum 500 feet to the community boundary)."*

*The first item under Policy d) of Objective 10, Development and Design (West Edge Treatment) (Appendix C) should be revised as follows:*

*"• Minimum 500-foot setback from the nearest community boundary to the nearest dwelling."*

*The first item under Policy e) of Objective 10, Development and Design (Appendix C) should be replaced with:*

*"• Minimum 500-foot setback from the nearest community boundary to the nearest dwelling."*

**Impact M4.13-3**

**The project would increase the potential for odor-related land use conflicts.**

The project includes a wastewater treatment plant that would be a potential source of odors under certain operational and meteorological conditions. The location of the wastewater treatment plant is such that no residences within the project are in proximity to the plant.

Along the eastern site boundary, a residence is located about 2,000 feet off-site, east of the proposed wastewater treatment plant. ~~A distance of 2,000 feet appears to be appropriate for minimizing odors reaching that residence. Therefore,~~ This is a less-than-significant impact.

**Mitigation Measure M4.13-3**

*None required.*

**Impact M4.13-4**

**The project would increase carbon monoxide concentrations along streets and intersections providing access to the project site.**

Project traffic would add to concentrations of carbon monoxide along streets and near intersections providing access to the project site. Computer modeling of carbon monoxide levels, using the CALINE-4 program developed by the California Department of Transportation, was conducted for locations near the most heavily-congested intersections in the project vicinity and along the I-205 and I-580 freeways under worst-case traffic and meteorological conditions. These locations were selected as having the highest potential for carbon monoxide based on the volume of traffic and congestion conditions, and concentrations at these locations should represent the highest to be expected near the project site. The resulting predicted concentrations are shown in Table 4.13-2.

The CALINE-4 results indicate that project traffic would increase carbon monoxide concentrations by as much as 2.3 parts per million during the 1-hour averaging time and 1.4 parts per million during the 8-hour averaging time. The existing and estimated future concentrations at worst-case locations remain below the State and Federal ambient air quality standards.

The project does not appear to have an adverse impact on carbon monoxide concentrations near roads, intersections, and freeways. The Objectives, Policies, and Implementations pertaining to congestion management in the Draft Master Plan, if implemented in a timely manner, should ensure that local carbon monoxide concentrations do not become a problem in the future. This is a less-than-significant impact.

**Mitigation Measure ~~4.14-4~~ M4.13-4**

*None required.*

**Impact M4.13-5**

**Construction activities would generate dust and particulate matter that could exceed the PM-10 threshold of significance.**

Construction activities would include clearing, excavation, grading, construction vehicle traffic on unpaved ground, and wind blowing over exposed earth. Construction dust would affect local and regional air quality at various times during the buildout period of the project. The dry, windy



TABLE 4.13-2

**WORST CASE CARBON MONOXIDE CONCENTRATIONS**  
(parts per million)

Location	Averaging Time	Most Stringent Standard	Case 1	Case 2	Case 3	Case 4	Case 5
Byron Highway/ Mt. House Road	1-Hour	20.0	6.3	6.8	6.9	6.9	7.0
	8-Hour	9.0	3.8	4.8	4.1	4.1	4.2
Patterson Pass/ Byron Highway	1-Hour	20.0	6.6	6.8	6.6	6.4	8.7
	8-Hour	9.0	4.0	4.8	4.0	3.8	5.2
Patterson Pass/ Grant Line	1-Hour	20.0	5.8	9.4	9.0	5.9	7.4
	8-Hour	9.0	3.5	5.6	5.4	3.5	4.4
Mountain House/ Grant Line	1-Hour	20.0	6.5	6.7	6.8	6.4	7.6
	8-Hour	9.0	3.9	4.0	4.1	3.8	4.6
Grant Line/ Byron Highway	1-Hour	20.0	7.1	7.6	7.5	6.3	7.6
	8-Hour	9.0	4.3	4.6	4.5	3.8	4.6
I-205 east of I-580	1-Hour	20.0	10.0	11.6	11.8	9.8	10.2
	8-Hour	9.0	6.0	7.0	7.1	5.9	6.1
1-580 west of 1-205	1-Hour	20.0	10.5	11.9	12.0	12.2	12.5
	8-Hour	9.0	6.3	7.1	7.2	7.3	7.5

**Notes:** Case 1 = Existing.  
Case 2 = With Specific Plan 1, Year 2000 (Full Employment).  
Case 3 = With Specific Plan 1, Year 2000 (Expected Employment).  
Case 4 = No Project, Year 2010.  
Case 5 = Master Plan Buildout, Year 2010.

climate of the area during the summer months ~~combined with the fine, silty soils of the region~~ create a high potential for dust generation.

Where construction would occur upwind of previously-completed portions of the project, a potential for dust nuisance would be created. The effects of construction activities would include increased dust fall and locally-elevated levels of particulate matter. Dust fall would soil exposed surfaces, requiring more frequent washing during the construction period. Persons with pre-existing lung problems may find construction dust irritating.

The emission of particulate matter from construction is often considered a temporary source that has local effects but not regional effects. Considering the size and long buildout period for the project,

however, construction is likely to affect regional air quality as well. An approximate estimate of uncontrolled construction dust emissions over a 25-year buildout period is 7,736 tons of PM-10, which averages about 0.8 ton per day.<sup>1</sup> The increase would be partially offset by the elimination of agricultural activities on the site, but existing agricultural PM-10 emissions would represent only a small fraction of construction emissions.

The Draft Master Plan contains a program for mitigating construction air impacts. Objective 6, Air Quality and Transportation Management (Appendix C), and related policies and implementations include the development of communitywide regulations that specify construction practices according to the provisions of the SJVUAPCD. The SJVUAPCD has recently (effective 10 December 1993) adopted Rule 8020, which requires the use of watering, soil stabilization, and removal of mud or dirt carried out onto public roadways. There are, however, additional measures that would reduce fugitive dust and general emissions from construction not currently required by Rule 8020.

#### Mitigation Measure M4.13-5

*The Implementation under Objective 1 in Construction Program for Air Quality (Appendix C) should be amended to include the following:*

- "a) *Transport of Materials. All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.*
- ~~"b) *Vehicular Speeds. Vehicular speeds at construction sites shall be limited to 15 mph.*~~
- "e b) *Equipment Maintenance. All internal combustion engine driven equipment shall be properly maintained and well tuned according to the manufacturer's specifications."*

#### SPECIFIC PLAN I

Many Draft Master Plan strategies for air quality mitigation would be implemented with development of Specific Plan I. The bulk of the measures related to land use, circulation, and infrastructure would be implemented at the Specific Plan stage. Those measures related to development and design standards would be implemented at the Tentative Map stage. Prior to ~~occupancy~~ of the first residential unit Development Permit, the implementation of Transportation Demand Management Program would occur.

#### Impact S4.13-1 (C)

**Specific Plan I does not include a 500-foot buffer along the western site boundary.**

<sup>1</sup> It has been assumed that the PM-10 fraction of total suspended particulates is 50 percent, and that the period of active construction for any site averages three months. The acreage affected by construction activities excludes acreages for resource conservation, marina, landscaped easements, and buffers. The emission factor used was 1.2 tons/month/acre (U.S. EPA, 1985).

The Draft Specific Plan I proposes residential uses along a portion of the western boundary of the site, adjoining agricultural lands. This could result in land use conflicts from agricultural practices. The recommended revisions to the Draft Master Plan include a 500-foot buffer along the western site boundary, either on- or off-site, to mitigate air quality impacts from agricultural activities. The Specific Plan I land use map does not contain this buffer.

**Mitigation Measure S4.13-1 (C)**

*Refer to Mitigation Measure M4.13-2.*

**Impact S4.13-2 (C,O,M)**

**The project would increase regional emissions of criteria pollutants through new vehicle travel and area-source emissions associated with residential and industrial uses in excess of threshold levels established by the San Joaquin Valley Unified Air Pollution Control District. These emissions would add to the regional emission burdens within the San Joaquin Valley Air Basin and the adjacent San Francisco Bay Air Basin, and delay eventual attainment of air quality standards for ozone and suspended particulate matter (PM-10).**

Impacts of Specific Plan I on regional air quality and local carbon monoxide concentrations are shown in Tables 4.13-1 and 4.13-2, respectively, for Full Employment and Expected Employment scenarios for year 2000. The results of the carbon monoxide estimates (Table 4.13-2) indicate that emissions at local and regional intersections would not exceed State and Federal ambient air quality standards.

Buildout of Specific Plan I would result in regional emissions of pollutants exceeding threshold levels (Table 4.13-1) of 150 pounds per day for ozone precursors and 80 pounds per day for PM-10. **These impacts are significant and unavoidable.**

**Mitigation Measure S4.13-2 (C,O,M)**

*Refer to Mitigation Measure M4.13-1.*

**Impact S4.13-3 (C,O,M)**

**Construction activities associated with Specific Plan I would generate dust and particulate matter that could exceed the PM-10 threshold of significance.**

**As noted above, impacts of Specific Plan I include generation of PM-10 above the regulatory threshold of 80 pounds per day.**

**Mitigation Measure S4.13-3 (C,O,M)**

*Refer to Mitigation Measure M4.13-5.*

## 4.14 NOISE

### SETTING

The major noise sources in the vicinity of the project site are vehicular traffic on Interstate 205 (I-205), Byron Road, Patterson Pass Road and Grant Line Road, and potentially trains on the Southern Pacific track adjacent to Byron Road. Sensitive receptors currently on or adjacent to the project site include several residences located along Grant Line Road, Patterson Pass Road, and east of Wicklund Road.

Noise levels have been measured on and in the vicinity of the project site (BASELINE, 1993) (Figure 4.14-1). The highest noise levels occur adjacent to I-205 and Byron Road (Table 4.14-1). (A discussion of the fundamentals of acoustical terms used in this DEIR is included as Appendix E.) Additional noise measurements were conducted by Brown-Buntin Associates along Patterson Pass, Byron, and Grant Line roads (The SWA Group, 1994a). The noise levels presented in that report (The SWA Group, 1994a) are consistent with those presented in the FSEIR (BASELINE, 1993). These measurements, and most particularly, those along the roads serving the project provide background information against which project-generated noise can be compared and then noise impacts, particularly traffic noise impacts, can be estimated.

The Southern Pacific Transportation Company (SP) currently owns a rail line within the project site which runs parallel to Byron Road. During the

TABLE 4.14-1

EXISTING AVERAGE NOISE LEVELS AT KEY LOCATIONS WITHIN AND NEAR THE PROJECT SITE<sup>1</sup>

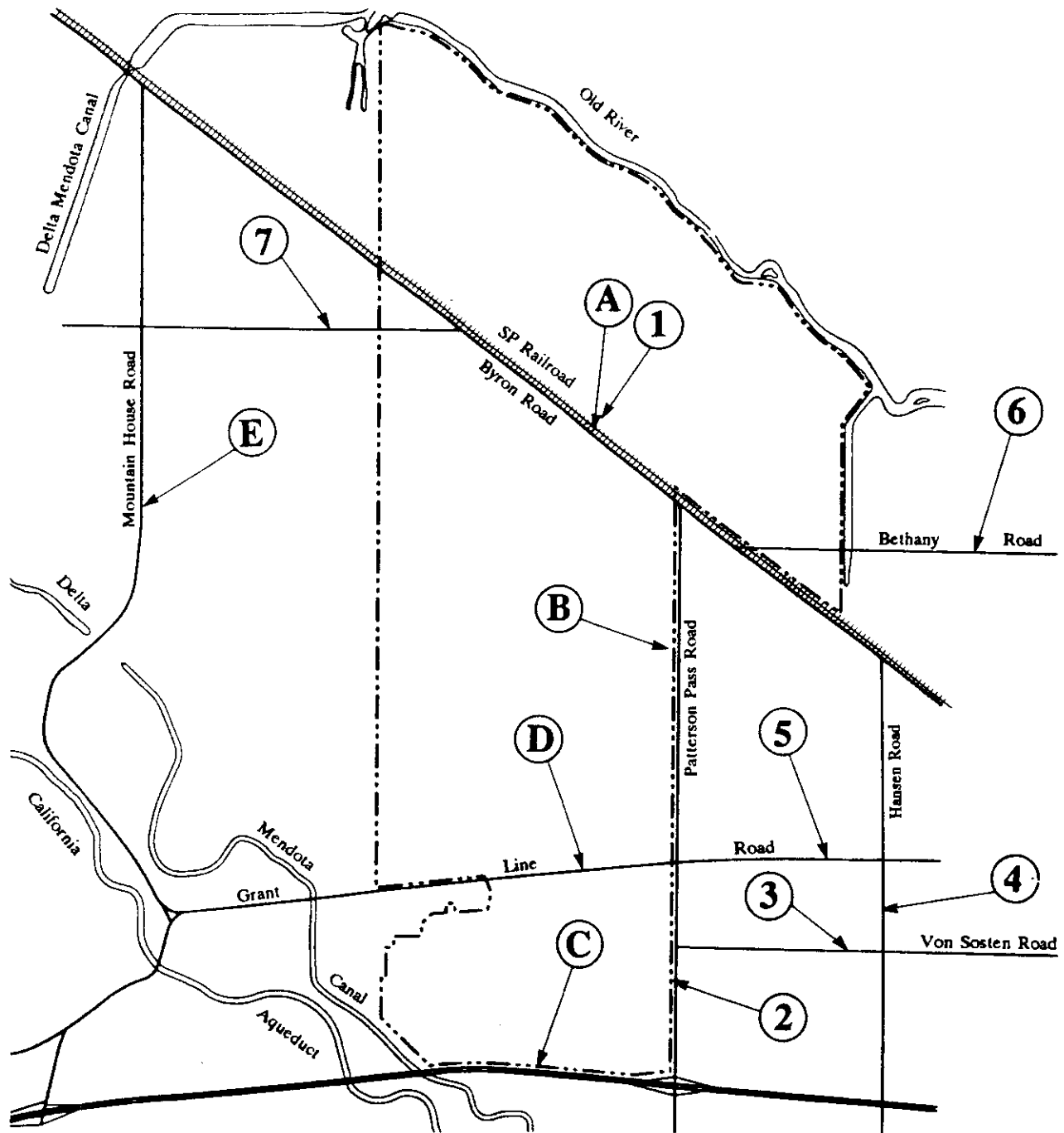
Location <sup>2</sup>	Description	Distance to Centerline (feet)	Average Noise Level (dBA)
A	Byron Road	110	$L_{dn}^3$ of 69
B	Patterson Pass Road	24	$L_{dn}$ of 72
C	Right-of-Way of I-205	115	$L_{dn}$ of 81
D	Grant Line Road	30	$L_{dn}$ of 70
E	Mountain House Road	70	$L_{dn}$ of 66
1	Byron Road	110	$L_{eq}^4$ of 64
2	Patterson Pass Road	50	$L_{eq}$ of 62
3	Von Sosten Road	82	$L_{eq}$ of 51
4	Hansen Road	50	$L_{eq}$ of 44
5	Grant Line Road	100	$L_{eq}$ of 56
6	Bethany Road	100	$L_{eq}$ of 52
7	Kelso Road	100	$L_{eq}$ of 52

Source: BASELINE, 1992a.

- <sup>1</sup> Refer to Figure 4.14-1 for exact locations of measurements.
- <sup>2</sup> Locations with letter refer to long-term noise measurements. Locations with number refer to 15-minute noise measurement.
- <sup>3</sup>  $L_{dn}$  is a descriptor established by the U.S. Environmental Protection Agency (EPA) for the 24-hour average A-weighted noise level. Sound levels during the hours from 10:00 PM to 7:00 AM are penalized 10 dB to account for increased sensitivity during the nighttime hours (see also Appendix E).
- <sup>4</sup>  $L_{eq}$  is the average A-weighted noise level during the measurement period (see also Appendix E).

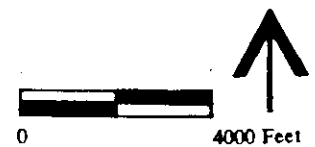
# NOISE MEASUREMENT LOCATIONS

Figure 4.14-1



## Legend

- (A)** Long-Term Measurement Locations<sup>1</sup>
- (1)** Short-Term Measurement Locations<sup>1</sup>
- Project Site Boundary



<sup>1</sup>Refer to Table 4.6-1 for matching noise levels.

measurements for the FSEIR, no trains were observed on the tracks. However, discussions with SP staff at that time indicated that up to five freight trains per day could operate on the tracks. The FSEIR calculated that the distances to the 60 and 65 dB  $L_{dn}$  contours would be approximately 230 feet and 100 feet from the tracks, respectively. During the applicant's noise measurements (The SWA Group, 1994a), there were also no trains observed on the tracks.

Contra Costa County has recently completed a noise study for the expansion of the East Contra Costa County Airport. The study concludes that airport-generated noise levels would be significantly below a CNEL of 55 dB in the proposed Mountain House New Town. Aircraft-generated noise would not cause noise levels to exceed land use compatibility guidelines anywhere in the town. However, the report also concludes that aircraft flying over the town would generate instantaneous noise levels that could conflict with residential land use. Figure 4.14-2 shows the location of the 85 dB single-event level (SEL) noise contour for aircraft passing over Mountain House (Contra Costa County, 1993a). This is equivalent to a maximum instantaneous noise level of about 76 dBA.

## IMPACTS AND MITIGATION MEASURES

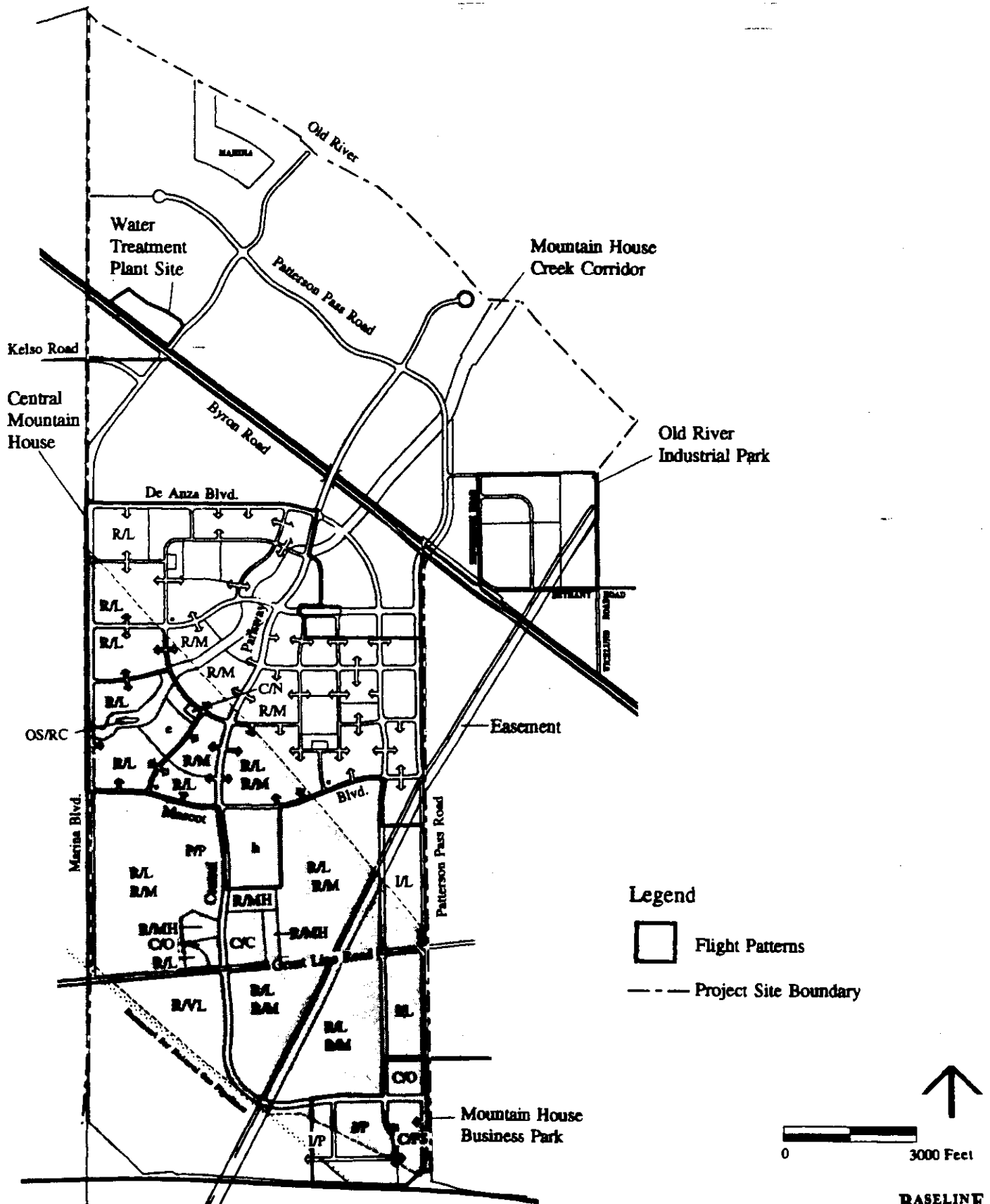
For the purposes of this DEIR, a significant impact is one that would exceed noise and land use compatibility guidelines adopted by San Joaquin County. San Joaquin County considers sites exposed to an  $L_{dn}$  below 65 dB to be compatible with residential development. Noise-sensitive land uses, such as schools, group care facilities, and hospitals, are compatible on sites exposed to noise levels below an  $L_{dn}$  of 60 dB.

The County criterion for residential development is less restrictive than that recommended by the State of California. The State considers residential developments to be a noise-sensitive land use. The State and most local governments have adopted an  $L_{dn}$  of 60 dB as the maximum "clearly acceptable" noise level for outdoor activity areas in residential development. The 60- $L_{dn}$  criterion is based on the desire to protect against speech and sleep interference outdoors and also to protect against speech interference inside dwelling units with the windows open. The criterion is based on studies and research conducted by the United States Environmental Protection Agency (EPA) in the early 1970s. The EPA determined that 60 dB was the limit above which indoor and outdoor speech disturbance becomes significant. The EPA recommended that an  $L_{dn}$  of 55 dB be maintained in residential areas to provide for an adequate margin of safety. Since the new town of Mountain House would be a community with its own identity, it is appropriate for the noise and land use compatibility criteria for the town to be more restrictive than the County criteria and in line with the State guidelines, when possible. The significant impact criterion for noise sensitive land uses is therefore an  $L_{dn}$  not to exceed 60 dB, when feasible.

Existing residents in and around the project site could be potentially impacted by the proposed project. The San Joaquin County General Plan 2010 does not contain quantitative noise criteria for noise level increases that the County would consider significant. Environmental noise level changes in excess of three dB are generally noticeable. An increase in noise level of five dB is considered

**POTENTIAL SINGLE EVENT NOISE IMPACT  
FROM EAST CONTRA COSTA COUNTY AIRPORT  
Byron, California**

**Figure 4.14-2**



**BASELINE**

clearly detectable and can result in adverse community response. In this DEIR, an increase of five dB in the  $L_{dn}$  at a sensitive receptor is considered significant.

## MASTER PLAN

The Draft Master Plan would introduce new development in the project area. The project includes a system of internal roads and a land use plan that would expose new residents in some locations to the noise generated by traffic on existing and proposed roads, to noise generated by new noise sources, and to noise generated by agricultural activities, particularly to the west of the project site. According to projections made by the applicant's consultants, noise levels along I-205, Grant Line Road, Byron Road, De Anza Boulevard, Marina Boulevard, and Central Parkway would all generate noise levels in excess of an  $L_{dn}$  of 60 dB at typical building setbacks.

### Impact M4.14-1

**Residential development, schools, and other noise sensitive land uses on the project site would be exposed to excessive traffic noise levels.**

Table 4.14-2 shows the applicant's projections of future noise levels along the major roads in or adjacent to the proposed project which would create an  $L_{dn}$  of 60 dB or greater at a typical building setback. The distance to the 60  $L_{dn}$  contour ranges from a minimum of 83 feet along portions of Central Parkway to 2,364 feet along I-205. All contour distances are measured from the center of the road. The calculation of noise levels along I-205 does not take into account the reduction in noise levels experienced on the portion of the site adjacent to I-205 due to the fact that the freeway is elevated about 20 feet above the site and that the fill is very wide to accommodate the ~~aqueduct~~ **Delta Mendota Canal** access road. ~~We calculate that this~~ **It is estimated that the canal fill shielding will reduce the distance to the 60  $L_{dn}$  contour to about 500 feet.**

The applicant's landscaping plans for I-205 show that residential development would be located about 320 feet from the center of I-205. The  $L_{dn}$  at this location would be between 60 and 65 dB. The applicant's landscaping plans for I-205 include a berm constructed adjacent to the ~~aqueduct~~ **Delta Mendota Canal** access road. **Typically, an earth berm provides three dB of additional noise attenuation over a soundwall of the same height. A soundwall at the top of an earth berm is more aesthetically pleasing than a soundwall of the same total height, but its performance as a noise barrier is inferior to an earth berm. This** The berm planned along the residential portion of the I-205 freeway would be about six feet higher than I-205 and would provide about an additional one decibel's worth of shielding, reducing the outdoor noise level to nearest residents to about 62 dB at Master Plan buildout.

~~The traffic noise projections performed for this DEIR vary from those made by the applicant and show the traffic volumes in more detail than the applicant's projections. Given the dynamic nature of the planning process, it is likely that there will be changes in traffic projections as the process~~



#### 4.14 NOISE

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~~continues. The noise contour calculations completed by the applicant are indicative of the potential noise problems along the streets in the new town.<sup>1</sup>~~

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<sup>1</sup>~~Final soundwall heights and noise projections should be based on the best available traffic information at the time of specific plan approval. All future noise calculations should be based on the County approved traffic volumes at that time.~~

TABLE 4.14-2

**FUTURE 2010 TRAFFIC NOISE LEVELS  
DUE TO BUILDOUT OF THE MASTER PLAN**

Road	From/To	Distance to $L_{dn}$ Contour (feet)	
		60 dB	65 dB
I-205	Past project site	2,364 <sup>1</sup>	1,097 <sup>1</sup>
Grant Line Road	Hansen Road to Patterson Pass Road	448	208
	Patterson Pass Road to Mountain House Road	386	179
Byron Road	Hansen Road to Patterson Pass Road	519	241
	Patterson Pass Road to Mountain House Road	379	176
De Anza Boulevard	Entire length	114	53
Marina Boulevard	Entire length	142	66
Central Parkway	Byron Road to Main Street	83	38
	Main Street to Mascot Boulevard	102	47

Source: The SWA Group, 1994a.

<sup>1</sup> Calculations do not include shielding due to I-205's elevation above the site. The calculations also assume that the I-205 freeway is eight lanes in the year 2010. If the freeway is only six lanes, the distance to the 60 dB and 65 dB contours would be slightly less.

Residential development is proposed along I-205, Grant Line Road, Byron Road, De Anza Boulevard, Marina Boulevard, and Central Parkway. Two high schools are also proposed along Central Parkway. The Draft Master Plan includes a Community Walls Location Plan; that Plan states that the community walls should be no more than seven feet high. Where more height is necessary to provide the requisite noise reduction the walls would be located on top of berms. Preliminary calculations indicate that the seven-foot community walls would be adequate along Marina Boulevard and De Anza Boulevard to mitigate noise but may not be high enough to achieve an outdoor noise level of an  $L_{dn}$  of 60 dB at the closest residences along Byron Road and Grant Line Road. These uses would all be potentially exposed to an  $L_{dn}$  in excess of 60 dB.

#### Mitigation Measures M4.14-1

(a) The following ~~Policy~~ **Policies** should be added under Objective 1, Mobile Source Noise Control:

"d) Noise levels in primary outdoor use areas of new residential development, schools, and other noise-sensitive land uses shall not exceed an  $L_{dn}$  of 60 dB unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas to an  $L_{dn}$  of 60 dB. ~~Where it is not possible to reduce noise in outdoor activity areas to an  $L_{dn}$  of 60 dB or less~~

~~using a practical application of the best available noise reduction measures, an exterior noise level of up to an  $L_{dn}$  of 65 dB may be allowed. Under no circumstances shall interior noise levels exceed an  $L_{dn}$  of 45 dB. Noise-sensitive land uses include, but are not limited to, schools, group care facilities, hospitals, and park facilities.~~

"e) Interior noise levels for housing proposed to be located in areas exposed to an exterior noise level of an  $L_{dn}$  above 60 dB shall be maintained below an  $L_{dn}$  of 45 dB. Compliance with this recommended mitigation measure shall be verified prior to issuance of building permits."

(b) The following Implementation should be added under Objective 2 in Mobile Source Noise Control (Noise) (Appendix C):

~~"b) Locating noise sensitive land uses as far as possible from major roadways is the preferable solution. If Residential development were shall be set back 500 to 600 feet from the centerline of I-205, to ensure that the  $L_{dn}$  would be below 60 dB and no additional mitigation would be necessary. The exact setback distance shall be determined by additional noise analysis, revising the distances in Table 11.1 in the Draft Master Plan by assuming six lanes on I-205, not eight. Alternatively, earth berms or soundwalls shall be built between the noise source and the noise-impacted area. Typically, an earth berm provides three dB of additional noise attenuation over a soundwall of the same height. A soundwall at the top of an earth berm is more aesthetically pleasing than a soundwall of the same total height, but its performance as a noise barrier is inferior to an earth berm. Alternatively, noise level reductions to an  $L_{dn}$  of 60 dB could shall be achieved through site planning and building orientation, construction of earth berms or soundwalls, or a combination of more than one of these methods. Site-specific noise reduction measures shall be determined on a case-by-case basis prior to Development Permit approval."~~

(c) Implementation ~~b)~~ a) under Objective 2 in Noise (Appendix C) should be replaced with:

"Specific Plan and Development Permit Application Requirements. For each Applications for a specific plan or a Development Permit shall include, acoustical studies shall be required for noise-sensitive land uses proposed to be located in areas exposed to noise levels above an  $L_{dn}$  of 60 dB. These studies shall be submitted to the County with each specific plan. Appropriate mitigation measures shall be recommended in these studies and implemented by the appropriate party to ensure that the  $L_{dn}$  of 60 dB is maintained."

(d) The following Implementation should be added under Objective 1 in Mobile Sources Noise Control (Noise) (Appendix C):

"d) Noise studies for specific residential projects proposed in noise impacted areas (exposed to an  $L_{dn}$  above 60 dB) shall address how noise levels in outdoor use areas, such as backyards, patios, and decks, and other noise-sensitive land uses, could be maintained below an  $L_{dn}$  of 60 dB. ~~For noise sensitive land uses, such as schools, hospitals, and~~

~~parks, similar studies shall also be required. All Noise studies and recommendations shall be submitted prior to with each Tentative Map submittal application.~~

~~The following Policy should be added under Objective 1, Mobile Source Noise Control (Noise) (Appendix C):~~

~~"Interior noise levels for housing proposed to be located in areas exposed to an exterior noise level of an  $L_{dn}$  above 60 dB shall be maintained below an  $L_{dn}$  of 45 dB. Compliance with this recommended mitigation measure shall be verified prior to issuance of building permits."~~

**(e) Table 11.1 In the Draft Master Plan should be revised to reflect the most recent average daily traffic projections for I-205 (assuming six lanes in the future, not eight lanes), and for all other roadways.**

#### 4.14 NOISE

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~~(b) The following should be added as a Policy under Objective 1 in Site and Building Design (Noise) (Appendix C):~~

~~"Future residences shall be located outside the 65  $L_{dn}$  noise contour, as estimated before mitigation is included."~~

#### **Impact M4.14-2**

**Existing residences located adjacent to existing roads in and around the project site would be significantly impacted by project-generated traffic.**

Noise levels along those streets leading to the site would increase by 5 to 20 decibels, depending on location, at project buildout (The SWA Group, 1994a) due to increases in automobile traffic.

#### **Mitigation Measure M4.14-2**

*A new Objective, Policy, and Implementation under Mobile Source Noise Control (Noise) (Appendix C) should be added:*

*"Objective:*

*"To minimize impacts on existing residences located along the roads to the Mountain House community.*

*"Policy:*

*"Outdoor use areas of existing residences that are projected to be impacted (i.e., would experience an increase of five dB in the  $L_{dn}$ ) by project-generated traffic noise at buildout shall be protected from excessive noise. Individual residences could take the form of constructing soundwalls along the roadways, soundproofing homes, or building barriers around specific portions of yards to provide shielded outdoor spaces. Because of the nature of the development in the area, solutions will have to be tailored to each specific situation, based on individual noise studies.*

*"Implementation:*

~~*"The applicant shall develop a plan for mitigating impacts at individual residences. A plan for mitigating noise levels at existing residences shall be submitted with each specific plan application. The plan shall identify the mitigation necessary to reduce exterior noise levels to an  $L_{dn}$  of 60 dB and interior noise levels to an  $L_{dn}$  of 45 dB or less. A plan for mitigating noise levels at existing residences shall be submitted prior to approval of each specific plan."*~~

#### **Impact M4.14-3**

**Proposed noise-sensitive land uses adjacent to agricultural lands could be significantly impacted by agricultural machinery and equipment noise.**

The Draft Master Plan proposes residential development next to the western edge of the property, adjacent to land that would remain in agricultural use. North of Marina Boulevard and south of

Grant Line Road, residences would be located within 100 feet of the site boundary where there would be a continuous security fence or wall planted with vines. Where Marina Boulevard adjoins the western boundary there would be a soundwall located along the east side of Marina Boulevard between the homes and the property (the height of the soundwall is not specified). The residences would be set back 100 feet from the eastern right-of-way line of Marina Boulevard (a minimum of 210 feet to the site boundary).

Although the noise generated by agricultural machinery would be non-transportation related and may therefore be mitigated by imposing noise performance standards, the performance standard would be difficult to apply and may not fully avoid noise conflicts between the new residents and adjacent agricultural activity. Preliminary calculations indicate that maximum noise levels generated by helicopters applying pesticides and by agricultural equipment could generate noise levels of 80 to 100 dBA at the nearest proposed residential areas. The proposed soundwalls would not shield residences from the noise generated by helicopters, although the walls would be effective in mitigating ground generated noise levels in the agricultural area. The maximum noise levels generated by helicopters would be expected to awaken people during early morning activity and interfere with indoor activities even with the windows closed. **This is a significant impact which cannot be mitigated to a level of non-significance**

#### Mitigation Measure M4.14-3

*The following should be added to Implementation a) under Objective 6 under Mobile Source Noise Control (Noise) (Appendix C).*

*"A 500-foot wide on-site or off-site buffer would reduce noise levels generated by agricultural machinery and helicopters by approximately 20 dB and would significantly reduce the potential for noise impacts." Alternatively, "Helicopter use shall not be permitted within 500 feet of the nearest residential dwelling along the western site boundary."*

#### Impact M.14-4

**Noise levels generated by the noisiest of individual aircraft flyovers would reach 76 dBA on portions of the site. The  $L_{dn}$  due to aircraft flyovers would be less than 60 dB.**

The authors of the East Contra Costa County Airport study calculate that the noisiest jets using the airport would generate an **single-event level (SEL)** of up to 85 dB as they fly over the southern portion of the new town (Figure 4.14-2). The SEL is a measure of the acoustical energy generated during an aircraft flyover normalized to a one-second flyover time. It allows for a comparison of events with different flyover times and acoustic output. Thus, a very short duration high noise level event could be equivalent to a much longer event generating a lower noise level. For the durations typical of jets approaching an airport, an SEL of 85 dB is typically associated with a maximum instantaneous noise level of 76 dB as the aircraft passes directly overhead. This same maximum noise level would be generated by a truck passby at a distance of 50 feet on a local street.

A typical home with the windows closed will reduce an exterior noise level of 76 dBA to about 55 dBA indoors. The FAA has concluded that a maximum interior noise level of 55 dBA will not

create significant sleep disturbance. Since only the occasional noisy jet would generate even a level of 55 dBA indoors with the windows closed, this is not considered a significant impact. A mitigation measure is recommended below to assure that prospective homeowners are notified that aircraft do fly over the site.

**Mitigation Measure M4.14-4**

*The following Implementation should be added under Objective 5, Mobile Source Noise Control (Noise) (Appendix C):*

*"b) In the airport overflight zone, the applicant shall provide a disclosure to potential home buyers that property offered for sale is located in an area subject to aircraft flyover noise.*

**SPECIFIC PLAN I**

Specific Plan I proposes to use the 65- $L_{dn}$  criterion of the San Joaquin County General Plan for outdoor noise levels. ~~As above in the Draft Master Plan impact assessment, an  $L_{dn}$  of 60 is recommended to protect residents from outdoor activity interference, when possible. Specific Plan I indicates that there may be certain locations where short fences or walls would reduce the  $L_{dn}$  to 60. It does not propose that this would be the goal of the design.~~

Specific Plan I indicates that it is too early to identify the appropriate mitigation measures to achieve acceptable outdoor noise levels at proposed residential developments. Residential development should be located far enough from the roads to keep the  $L_{dn}$  below 65 dB due to distance alone. Reducing the noise level further to an  $L_{dn}$  of 60 dB in outdoor areas could then be accomplished through the use of property fences. Specific Plan I does not include an assessment of the feasibility of altering the land use plan to achieve this goal. While it may be too early to determine exact heights of berms or soundwalls where they must be used, it is an appropriate time to evaluate the feasibility of limiting the need for these walls by changing the land use plan to include interposing buildings between noise sensitive uses in the streets or using distance as a buffer.

Specific Plan I does not include provisions for a 500-foot buffer along the western site edge to mitigate agricultural noise levels to noise-sensitive land uses..

**Impact S4.14-1 (C,O,M)**

**The Specific Plan does not define how an  $L_{dn}$  of 60 dB will be achieved at noise sensitive areas.**

**Mitigation Measure S4.14-1 (C,O,M)**

*(a) Refer to Mitigation Measures M4.14-1(a) and M4.14-2.*

~~*(b) Draft Specific Plan I should be revised to provide data on how an exterior noise level of 60 dB  $L_{dn}$  and an interior noise level of 45 dB will be achieved.*~~

**Impact S4.14-2 (M)**

***Specific Plan I does not include a 500-foot buffer along the western site boundary or a restriction on helicopter use.***

*The recommended revision to the Draft Master Plan includes a 500-foot buffer along the western site boundary to mitigate noise impacts from agricultural activities. The buffer could be either on- or off-site. The Specific Plan I land use map does not contain this buffer.*

**Mitigation Measure S4.14-2 (M)**

*Refer to Mitigation Measure M4.14-3.*

**Impact S4.14-3 (C,O,M)**

**Implementation of the Specific Plan I would increase noise levels at existing residences to a noticeable level.**

The Draft Specific Plan I does not mitigate noise impacts at existing residences along Grant Line Road, Patterson Pass Road, Von Sosten Road, Hansen Road, and Byron Road; these residences could be adversely affected by increases in the noise environment.

**Mitigation Measure S4.14-3 (C,O,M)**

*Refer to Mitigation Measure M4.14-2.*



# CHAPTER 4

## ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

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### INTRODUCTION

This chapter of the DEIR addresses specific topics to be evaluated in accordance with the requirements of the California Environmental Quality Act and Guidelines. An evaluation of whether the proposed project has complied with the Mitigation Monitoring Program (MMP) contained in the Final Supplemental Environmental Impact Report (Final SEIR) for the Mountain House New Town General Plan Amendment, published in January 1993 and approved by the San Joaquin County Board of Supervisors in March 1993 is contained in Appendix D.

Each topic in this Chapter includes a description of the existing conditions (Setting) at the project site and in the vicinity, when appropriate. The existing conditions at the site have previously been described in the Final SEIR and/or the FEIR. The Setting sections from the Final SEIR or FEIR have been summarized in this Chapter and updated where needed.

Unless otherwise noted, all impacts are considered significant impacts. The associated mitigation measures would be sufficient to reduce the significant impact to a level of insignificance, unless otherwise noted. When more than one mitigation measure is recommended for a specific impact, all mitigation measures would be required to reduce the impact to a level of insignificance, unless the word "or" appears in the list of mitigation measures.

The impacts and mitigation measures have been coded to refer to the Draft Master Plan, Draft Specific Plan I, and Specific Plan subareas, respectively. All impact statements and mitigation measures pertaining to the Draft Master Plan are preceded by the letter "M" (e.g., Impact M4.1-1 and Mitigation Measure M4.1-1). All impact statements and mitigation measures pertaining to the Draft Specific Plan I are preceded by the letter "S" (e.g., Impact S4.2-1 and Mitigation Measure S4.2-1); in addition, the Draft Specific Plan I impacts and mitigation measures specify whether the impacts and mitigation measures pertain to the subareas Central Mountain House (C), Old River Industrial Park (O), or Mountain House Business Park (M).

Examples:

- **Impact S4.1-1 (C,O,M)**

Refers to Draft Specific Plan I and pertains to Central Mountain House (C), Old River Industrial Park (O), and Mountain House Business Park (M).

#### 4.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

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- **Impact S4.1-2 (M)**

Refers to Draft Specific Plan I and pertains only to the Mountain House Business Park.

The mitigation measures presented in this Chapter for the Draft Master Plan consist primarily of proposed changes to the Objectives, Policies, and/or Implementations of the Draft Master Plan; these are all contained in Appendix C of this document. Some proposed mitigation measures also recommend changes to the Land Use Map; the proposed Land Use Map is presented in Figure 3.4. Mitigation measures for Draft Specific Plan I include recommendations for changes to achieve compliance with the Master Plan and/or mitigate environmental impacts.

CEQA defines a significant effect as a substantial, or potentially substantial adverse change in the environment (Public Resource Code 21068). The Guidelines implementing CEQA direct that this determination be based on scientific and factual data. The specific criterion for determining significance of a particular impact in this DEIR is described at the beginning of each topic section and are consistent with the significance criteria set forth in the CEQA Guidelines implementing CEQA.

# CHAPTER 5

## ALTERNATIVES

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### BACKGROUND

The State CEQA Guidelines require that a range of reasonable alternatives to a project, which could feasibly attain the objectives of a project, be described and evaluated in a comparative fashion. The CEQA Guidelines also require that the environmentally-superior alternative (including consideration of the proposed project) be identified. If the alternative with the least environmental impact were the No Project Alternative, then one of the other remaining alternatives must be designated as the environmentally-superior alternative. The FEIR on the Mountain House General Plan Amendment to the General Plan 1995 (BASELINE 1992b) and the FSEIR (BASELINE, 1993) contained discussions and evaluations of five alternatives to the proposed project. These alternatives included the No Project Alternative, the Tracy Alternative Site, the North Livermore Alternative site, the Reduced Scale Alternative, and the Redesigned Alternative. These alternatives were evaluated for environmental impacts. The impacts of the alternatives were compared to impacts associated with the impacts associated with the General Plan Amendments to the County's General Plan 1995 and 2010 (BASELINE, 1992b and 1993). The comparative impacts identified the Reduced Scale Alternative as the environmentally superior alternative. In approving the General Plan Amendment for the project in 1993, the County Board of Supervisors found that the alternatives were infeasible. These previously-evaluated alternatives are discussed below for informational purposes. However, additional comment is not being sought on them in this DEIR, with the exception of the No-Project alternative.

This DEIR evaluates one additional alternative, the Mitigated Alternative. The Mitigated Alternative is described in detail, below, and the environmental impacts are identified in Table 5.1 to a level of detail that allows comparison with the proposed project and all of the impacts from the other alternatives. Table 5.2 identifies whether the goals of the proposed project are achieved for the No Project and Mitigated Alternatives. The comparison between the Mitigated Alternative and the proposed project identifies the Mitigated Alternative as the environmentally superior alternative.

### DESCRIPTION OF ALTERNATIVES

Five of the alternatives described below were defined and described in previous EIRs for the project site (BASELINE, 1992a and 1993). The characteristics of those five alternatives, previously determined to be infeasible, are summarized below, and the new Mitigated Alternative is described in more detail.

### **NO PROJECT ALTERNATIVE**

Construction of the proposed project would not occur. The site is currently designated for urban use as a New Community in the County's General Plan 2010. The implementation measures in the General Plan for New Communities require that following a General Plan Amendment, a Master Plan, Public Financing Plan, and a Specific Plan must be prepared. Thus, should the No-Project Alternative be implemented, no development on the site (including subdividing of rural residential parcels currently on-site) could occur without the preparation of the required plans. Williamson Act Contracts on about 418 acres of land have been tentatively canceled. However, if certain conditions (including payment of penalty fees to the State) were not met, the cancellations would not occur, and the land would remain as Contract land.

### **TRACY ALTERNATIVE SITE**

This alternative was evaluated at the request of the City of Tracy. This alternative would be similar to the proposed project except that the entire project would be relocated to the western edge of the City of Tracy. Major access would be available from I-205 and I-580. Changes to the land use plan from the proposed project would include removal of the 60-acre marina (includes 20 acres of related land uses) and replacement of the proposed project's 43-acre town center with 20 acres of neighborhood commercial uses and 23 acres of freeway commercial uses. This alternative would have similar impacts to the proposed project, but would not meet the goal of creating a distinct new community, nor would it comply with the County's General Plan 2010 policy of being a distinct community, separate from existing communities.

### **NORTH LIVERMORE ALTERNATIVE SITE**

The North Livermore site was evaluated because of its location and lack of site constraints. This site appeared to be more advantageously located to supply proximate housing to the Tri-Valley job market than the Mountain House site and would, thus, mitigate some of the identified traffic impacts. The North Livermore site also had relatively few known site constraints, and its agricultural value as grazing land was less than that of Mountain House site.

This alternative would be located within a portion of the North Livermore Planning Area, located north of the City of Livermore in Alameda County. The project acreage and land use categories would be similar to the proposed project except for the removal of the 60-acre marina, which would be replaced with 60 acres of regional parkland. Major access would be available from I-580.

### **REDESIGNED-PROJECT ALTERNATIVE**

This alternative included a major redesign of the project for an ultimate population of about 34,000, as compared to the proposed project's population of more than 43,000 persons. A major difference between the proposed project and this alternative was the village-centered concept, whereby development would be concentrated around four villages. This development form would promote the use of public transit as well as pedestrian and bicycle use. This alternative would maintain 232

acres in agricultural use and include 976 acres of regional parkland. The total acreage for residential, commercial, and industrial use would be slightly less than that for the proposed project.

### **REDUCED-SCALE PROJECT ALTERNATIVE**

This alternative included a significant reduction in the overall scale of the proposed project, and would occur within that portion of the project site bounded by Byron Road in the north and Grant Line Road on the south. Thus, the total area for development would be 2,357 acres, leaving the remaining site in agricultural use. Total residential and commercial development would be about one-half that of the proposed project. Industrial acreage of this alternative would be about 30 percent of that planned for the proposed project.

### **DESCRIPTION OF NEW MITIGATED ALTERNATIVE**

The definition of the mitigated alternative evaluated in this DEIR has been developed in response to mitigation measures identified to mitigate impacts associated with the proposed project. The mitigated alternative includes primarily significant changes to the proposed land use map to mitigate impacts to wildlife, reduce internal vehicle trips, reduce noise impacts to future residents along I-205, reduce water demand, and provide regional recreational opportunities for on-site residents. The Mitigated Alternative would have less environmental impact as compared to the proposed project. Many of the features of the Mitigated Alternative are proposed as mitigation measures; if those were adopted, the proposed project would more closely resemble the Mitigated Alternative. However, the Mitigated Alternative would remain environmentally superior, primarily due to the reduced scale of the development. The following elements would constitute the mitigated alternative:

- The area north of Byron Road would be excluded from development and maintained as an agricultural preserve with habitat enhancement for Swainson's hawk. In addition, a 500-foot buffer along the western site boundary,<sup>1</sup> a 230-foot buffer along the rail corridor, and a 600-foot buffer along the southern boundary should be implemented. This measure would result in a reduction of ~~almost 30~~ **more than 40** percent in the size of the project and would require major redesignation of land uses within the remaining portions of the site to accommodate water and wastewater treatment plants and industrial land uses proposed within the Old River Industrial Park.

A total of about 6,000 residential units and about 1,800 acres would be lost with this alternative, compared to the proposed project. About 3,000 of the lost units could be recaptured on the remaining portion of the site, south of Byron Road, by redesignating 50 percent of the proposed Low Density residential areas south of Byron Road to Medium-High density (with an average of 12 units per acre), for a total of 4,314 Medium-High density units. The distribution of the Medium-High residential areas under this alternative should be near the Town Center area rather than along the western site boundary.

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<sup>1</sup> This buffer could be achieved either completely on-site or partially on- and off-site; if portions of the buffer were off-site, it would consist of a conservation easement.

## 5.0 ALTERNATIVES

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As a result of the elimination of development north of Byron Road, the two proposed golf courses would no longer be part of the proposed project, nor would the marina. The proposed second levee system adjacent to Old River may not be required. However, public access to Old River could be designed to accommodate a boat launch after ensuring protection of special taxa species along the river front and appropriate access to the launch area.

- The reduction in acreage of project site development would also reduce the acreage for off-site mitigation for Swainson's hawk and kit fox. The elimination of development north of Byron Road and use of the area as an agricultural preserve with habitat enhancement could possibly suffice as mitigation for loss of habitat to Swainson's hawk; mitigation for the loss of habitat would still need to be negotiated with the California Department of Fish and Game (CDFG). Off-site mitigation for the loss of moderate to high quality atypical kit fox habitat would require concurrence from the US Fish and Wildlife and CDFG; the lands west of the project site, in Alameda County, could possibly be used as mitigation areas.
- Wastewater from the development would receive tertiary treatment rather than secondary treatment. Under this alternative, all treated wastewater would be used on-site for irrigation (either for landscaping or for crops north of Byron Road). In the winter time, treated wastewater would be discharged to Old River, after approval from the Regional Water Quality Control Board (since the wastewater would receive tertiary treatment, it is expected that approval could be obtained). Storage of water during the winter months have not been proposed under this alternative since storage ponds, several hundred feet in area, would reduce developable land.
- This alternative would not provide any regional park lands. Under this alternative, the project would contribute in-lieu fees to the County for regional park development in other places in the County.
- The reduction in the size of the project would reduce the adverse impacts on the regional and local road network from a reduction in vehicle trips. Additional reduction in trips and trip lengths could be accomplished under this alternative by increasing neighborhood commercial land uses. Neighborhood shopping areas would be provided for each 3,000 increment in population; the commercial areas would be located near and adjacent to street intersections in residential areas.
- Mountain House Business Park, proposed in Specific Plan I, would be included in the CSD at the time of its formation to ensure that the job generating land uses in the business park would be constructed as early in the development as possible.
- Intensive archaeological surveys would be performed **incrementally as on the entire site develops prior to any development**. The purpose of the surveys would be to ensure that mitigation measures were implemented to preserve or record any resources identified.

TABLE 5.1

**SUMMARY TABLE OF IMPACTS OF ALTERNATIVES  
AS RELATED TO THE PROJECT**

ALTERNATIVE	PLANNING, LAND USE, AND AGRICULTURAL ISSUES		
	Inconsistency with Goals or Policies of Relevant Plans	Removal of Agricultural Land	Mitigation of Land Use Conflicts
Proposed Project	Would not meet some policies regarding new communities in the County's General Plan 2010.	Approximately 3,600 acres of Prime Farmland would be removed from production.	Inadequate buffers along the western and southern edges of the project, and inadequate planning for existing on-site uses (rural residences, dairies) would result in potential land use conflicts.
No Project	No impact.	No impact.	No impact.
Mitigated Alternative	Would require some General Plan and Development Title Text Amendments.	Less than for proposed project due to elimination of area north of Byron Road and buffers along the southern and northern site boundaries.	Land use conflicts would be minimized.

ALTERNATIVE	PUBLIC SERVICES			
	Potential To Delay Response Time by Emergency Personnel or To Create an Inherently Hazardous Situation	Difficulty in Provision of Adequate School Services	Difficulty in Provision of Adequate Recreation Services	Difficulty in Provision of Adequate Solid and Hazardous Waste Services
Proposed Project	No significant impacts.	No significant impacts.	Insufficient regional park acreage proposed on-site.	Solid waste generated by the project would reduce landfill capacity.
No Project	No impact.	No impact.	No impact.	No impact.
Mitigated Alternative	Similar to proposed project.	Similar to proposed project.	Would provide in-lieu fees for off-site regional park land.	Similar to proposed project.

Table 5.1 - c

ALTERNATIVE	PUBLIC UTILITIES/WATER & WASTEWATER		
	Wastewater Flows that Exceed Wastewater Collection and Treatment Capacity	Water Demand that Exceeds Available Supply/Potential	Potential to Create a Public Health Hazard
Proposed Project	If discharge to waters is approved, discharge to Old River could result in degradation of surface waters. (Inadequate wastewater treatment system could result in discharge of partially treated effluent into the reclamation system.)	Development is proposed outside of BBID present boundaries. Possible lack of a year-round water source.	Potential of providing untreated water, inadequate wastewater treatment, inadequate water treatment and wastewater sludge disposal. Potential for uncontrolled release of hazardous materials.
No Project	No impact.	No impact.	Hazardous materials and toxic substances used in the form of pesticides and herbicides for agricultural uses.
Mitigated Alternative	This alternative would provide on-site reuse of treated wastewater, thereby reducing overall water demand and eliminate discharges to Old River.	Water demand would be reduced by on-site reuse of treated wastewater.	Similar to proposed project.

ALTERNATIVE	PUBLIC UTILITIES/STORM WATER, ENERGY, AND UTILITIES			
	Potential for Flooding	Degradation of Water Quality from Urban Runoff	Potential Infringement of Utility Easements	Consumption of Energy Resources
Proposed Project	Major storm water facilities would be required to convey rain water off the project site to prevent flooding.	Pollutants in urban runoff may degrade water quality in Old River.	Major gas and electricity transmission lines cross the project site, which would restrict development.	The project would create a large new energy demand that would contribute to the depletion of renewable and nonrenewable resources.
No Project	Existing drainage facilities are sufficient except for occasional flooding of the areas adjacent to Old River and lower sections of Mountain House Creek.	Existing runoff into Old River flows across agricultural lands and contains significantly less of the pollutants that are normally found in urban runoff.	Utility easements would not be infringed upon.	No impact.
Mitigated Alternative	Similar to proposed project.	Similar to proposed project.	Similar to proposed project.	Similar to proposed project.



Table 5... - continued

ALTERNATIVE	CULTURAL RESOURCES	GEOLOGY, SEISMICITY & SOILS	
	Disruption of Prehistoric and Historic Resources	Exposure of People or Structures to Potential Major Geologic Hazards	Construction of Structures in Areas with Adverse Soil Conditions
Proposed Project	Could impact prehistoric and historic resources.	The proposed project would result in a significant increased exposure of people and structures to strong seismic shaking and potential levee failure.	The proposed project would include construction within areas with adverse soil conditions, including high shrink-swell potential, high organic content, and high groundwater levels.
No Project	No impact.	No impact.	No impact.
Mitigated Alternative	Intensive archaeological surveys would be completed prior to development. Potential impacts would be reduced.	Similar to proposed project.	Similar to proposed project.

ALTERNATIVE	HYDROLOGY AND WATER QUALITY	
	Substantial Flooding Impacts on Development within the Floodplain	Degradation of Water Quality (including Siltation from Erosion and Urban Runoff)
Proposed Project	Northern portion of site potentially flooded during 100-year flood by levee overtopping or failure.	Sediment discharge and accumulation in Old River may occur at the outlet of the marina and the mouth of Mountain House Creek.
No Project	No impact.	No impact.
Mitigated Alternative	No impacts, since development is not proposed in 100-year flood plain area.	Similar to proposed project except with respect to the Marina impacts.

Table 5.1 - continued

ALTERNATIVE	VISUAL QUALITY		
	Inconsistency with Character and Form of Surrounding Development	Increase in Light or Glare	Removal of Major Vegetation
Proposed Project	Would convert more than 4,000 acres of agricultural land to urban uses. Views from freeways and major arteries would be altered.	Impacts of light and glare could occur due to urban uses.	Could result in removal of trees due to required road widening.
No Project	No impact.	No impact.	No impact.
Mitigate Alternative	Similar to proposed project, but the area north of Byron Road would not be affected.	Similar to proposed project.	Similar to proposed project.

ALTERNATIVE	POPULATION, HOUSING, AND EMPLOYMENT	
	Inadequate Provision of Employment in Relationship to Proposed Employment, Resulting in Required Commuting	Inadequate Mix of Housing To Meet Needs of Residents with Varying Incomes
Proposed Project	The proposed project may attain a delayed balance between jobs and housing, if non-residential land uses do not build out at the expected rate.	The proposed project may not have a sufficient supply of housing that is affordable to workers employed in the community, or to low-income residents of San Joaquin County.
No Project	No impact.	No impact.
Mitigated Alternative	Requiring that more industrial land be made available earlier in the project will maximize the potential for meeting Jobs/Housing goals.	Requiring the designation of additional acreage for Medium-High density housing will maximize the potential for meeting Affordable Housing goals.

Table 5.1 - continued

ALTERNATIVE	PUBLIC HEALTH AND SAFETY	
	Creation of Potential Health Hazard	Use, Production, or Disposal of Materials that Pose a Hazard
Proposed Project	Potential exposure to subsurface contamination. Exposure to agricultural chemical residue. Potential adverse health effects associated with wastewater treatment.	Potential exposure to continued use of agricultural chemicals, hazardous materials used during and after development, and electromagnetic fields from transmission lines.
No Project	No impact.	Continued application of agricultural chemicals with reduced exposure; reduced exposure to electromagnetic fields.
Mitigated Alternative	Similar to proposed project.	Similar to proposed project.

ALTERNATIVE	BIOLOGICAL RESOURCES		
	Substantial Effect on Rare, Threatened, or Endangered Species	Substantial Interference with Movement of Any Resident or Migratory Fish or Wildlife Species	Substantial Decrease in Habitat for Fish, Wildlife, or Plants
Proposed Project	Substantial impacts, especially upon Swainson's hawk. Use of the site for foraging by San Joaquin kit fox is also a factor.	Proposed development would obstruct terrestrial wildlife movement from Altamont Hills to agricultural land east of the site, creating a barrier from Old River to I-580/I-205.	All raptor foraging habitat would be eliminated and the impacts of marina construction would greatly reduce the worth of Old River inshore zone.
No Project	No impact.	No impact.	No impact.
Mitigated Alternative	Reduced impacts to Swainson's hawk habitat.	Similar to proposed project.	North of Byron Road would remain in agriculture and raptor foraging habitat.

Table 5.1 - continued

ALTERNATIVE	TRANSPORTATION			
	Reduction in Levels of Service for Major Highways	Reduction in Levels of Service for Major Arterials in Vicinity of Project or Alternative Site	Inadequate Provision for Public Transit or Opportunities for Public Transit due to Land Use Pattern	Inadequate Provision for Pedestrian and Bicycle Circulation
Proposed Project	I-580, I-205 at LOS F with cumulative development including project.	Widening of major arterials in site vicinity would be required.	The density of project is generally higher than typical developments in the County; therefore, opportunities for transit are available.	Project designed to encourage pedestrian and bicycle circulation.
No Project	2010 traffic on I580/I205 would be up to 21,000 daily vehicles fewer, but LOS F is still projected due to cumulative growth.	No impact.	No impact.	No impact.
Mitigated Alternative	Similar to proposed project.	Similar to proposed project.	Similar to proposed	Similar to proposed project.

ALTERNATIVE	AIR QUALITY			
	Violation of Air Quality Standards	Exposure of Sensitive Receptors to Substantial Pollutant Concentrations	Creation of Significant Construction Emissions	Creation of New Carbon-Monoxide Hot Spots
Proposed Project	Significant increase in regional of ozone precursors and	Create potential for agricultural-residential conflicts and industrial-residential conflicts.	Creates significant local and regional dust emissions.	Does not create carbon monoxide hot spot problems.
No Project	No impact.	No impact.	No impact.	No impact.
Mitigated Alternative	Similar to proposed project.	Similar to proposed project.	Similar to proposed project.	Similar to proposed project.

Table 5.1 - continued

ALTERNATIVE	NOISE		
	Substantial Increase in Ambient Noise Level in Areas Adjacent to the Project Site	Exceedances of Land Use Compatibility Standards for Community Noise	Exposure of Project Residents or Employees to Excessive Noise (e.g., Airports, Railroad Tracks, Freeways)
Proposed Project	Significant noise level increases (up to 20 dB) are anticipated along major roads in and around the site.	Noise sensitive land uses would not be compatible with the noise environment adjacent to I-205, Byron Highway, Patterson Pass Road, and Grant Line Road.	Many residents near I-205, Byron Highway, and Grant line Road, would be exposed to excessive noise.
No Project	Substantial noise level increases along Altamont Pass (19 dB), Mountain House Road (7 dB), Byron Highway (9 dB), Grant Line Road (8 dB), I-580 (5 dB), I-205 (4 dB), 11th Street (4 dB), Lammers Road (15 dB), Corral Hollow Road (10 dB), and Schulte Road (12 dB) due to cumulative traffic.	Noise sensitive land uses are not compatible with the noise environment adjacent to major access roads.	No impact.
Mitigated Alternative	Similar to proposed project.	Setback of 600 feet from I-205 would reduce impacts.	Setback from I-205 and railroad tracks would reduce impacts.

TABLE 5.2

## PROJECT ALTERNATIVES' CONSISTENCY WITH PROJECT GOALS

Project Goals <sup>1</sup>	ALTERNATIVES	
	No Project	Mitigated Alternative
Create a high quality environment where people of all economic levels can live and work.	No	Yes
Develop a distinct and unique new community that is separate from existing communities.	No	Yes
Develop Mountain House as a full service community that will accommodate a portion of the growth projected in the County's General Plan 2010 in an orderly, well-organized development pattern.	No	Yes
Provide for a life style that is less reliant on the automobile, more involved with activities within the local community and neighborhoods, and more oriented to use of transit, bicycle, and pedestrian transport.	No	Yes
Establish a balance of housing, employment, and a full range of services and infrastructure within the community.	No	Yes
Minimize impacts on the County's agricultural resources.	Yes	Yes
Create attractive and diverse environments for living, working, and playing.	No	Yes
Provide for a pedestrian-oriented character within residential neighborhoods, village commercial centers, and the Town Center.	No	Yes
Provide an adequate supply of housing for all income groups in the community.	No	Yes
Create a financially and fiscally viable community resulting in positive economic impact on the County.	Unknown	Unknown
Establish a safe and efficient circulation system to accommodate the movement of people and goods, reduce environmental impacts and advance the quality of life in the community.	No	Yes
Provide adequate public services and facilities to serve the new community.	No	Yes
Minimize impact on sensitive environmental resources.	Yes	Yes

<sup>1</sup> These are goals as stated by the applicant (see Chapter 3 of this DEIR).

# CHAPTER 6

## ADDITIONAL CEQA CONSIDERATIONS

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### CUMULATIVE IMPACTS

#### INTRODUCTION

This chapter of the DEIR focuses on the cumulative environmental impacts of the Mountain House New Town. The CEQA Guidelines require a discussion of the potential cumulative impacts that could result from a proposed project in conjunction with other projects in the vicinity that are pending, have been recently approved, or are proposed. Cumulative impacts occur when two or more individual projects together create a considerable environmental impact, or if they compound or increase other environmental impacts.

Cumulative environmental impacts for each environmental issue may cover different geographic regions or different cumulative projects, depending on the particular issue. For example, cumulative air quality impacts cover the entire San Joaquin Valley air basin, while the assessment of cumulative land use and public utility impacts addresses growth projected within southwestern San Joaquin County. The geographic area for each issue is explained at the beginning of each subsection discussed below.

San Joaquin County adopted a new General Plan in July 1992 that included approval of two new communities: Riverbrook and New Jerusalem. The Mountain House new town was added to the General Plan Map in February 1993. The City of Tracy adopted a new General Plan (the Tracy Urban Management Plan) in June 1993. The updated Tracy plan projects that the City may quadruple in population (an increase from approximately 40,000 to about 160,000 persons) over a thirty- to forty-year planning period. The cumulative analysis in this DEIR addresses 2010 growth for San Joaquin County; the analysis is based on population projections and other information from the 1992 FEIR (~~San Joaquin County~~ **BASELINE**, 1992be) for the County's General Plan 2010. Although the City of Tracy's new General Plan includes higher growth projections than the County General Plan at full buildout, much of the City's growth is not expected until after the year 2010.

As a basis of reference, this DEIR also addresses other out-of-County and specific San Joaquin County projects within an approximately 30-mile radius of the Mountain House site that are proposed or under construction (Table 6.1 and Figure 6.1). Information regarding recently approved projects or plans, or proposed projects, has been received from individual jurisdictions in San Joaquin, Contra Costa, Stanislaus, and Alameda counties, and planning documents.

TABLE 6.1

## CUMULATIVE PROJECTS IN SAN JOAQUIN, STANISLAUS, CONTRA COSTA, AND EASTERN ALAMEDA COUNTIES

Project Name	Status	Approximate Acreage	Approximate Distance from Mountain House (miles)	Total New Residential Units	Commercial Uses (acres)	Industrial Uses (acres)	Other
<b>SAN JOAQUIN COUNTY</b>							
1. New Jerusalem Expanded Community	Approved in updated County General Plan 2010, work on Master Plan has not begun. <sup>1</sup>	3,225	≈ 10	7,562	221	330	831 acres for open space and recreation, 268 acres for roads and utilities, 80 acres for schools
2. Tri-State/Cheng (expansion of Patterson Pass Business Park west of Patterson Pass Road)	Approved in updated County Plan, Special Purpose Plan being prepared for first 80 acres. <sup>2</sup>	326	1-2		10 freeway service	70 light industrial	
3. Patterson Pass Business Park (south of Schulte Rd.)	Special Purpose Plan being prepared for 48 acres. <sup>2</sup>	285	≈ 2.5		10 freeway service	275 (204 acres are developed, including Safeway)	
4. I-205/Grant Line Tracy shopping mall (part of Tracy Urban Management Plan)	Wal-mart store opened in 1993. Remaining acreage is undeveloped. <sup>1</sup>	405	≈ 2		90 regional shopping 161 commercial	76 light industrial	Remainder is Urban Reserve and interchange
5. I-205/MacArthur Tracy shopping mall (part of Tracy Urban Management Plan)	First phase of factory outlet mall under construction. <sup>3</sup>	50	≈ 5		50 (first phase is 180,000 sq. ft., with 40 stores. Buildout will be 330,000 sq. ft. mall)		



Table 6.1 - continued

Project Name	Status	Approximate Acreage	Approximate Distance from Mountain House (miles)	Total New Residential Units	Commercial Uses (acres)	Industrial Uses (acres)	Other
6. City of Tracy Urban Management Plan	Adopted in June 1993. <sup>3</sup>	115 sq. mi., 65,303 acres	≈ 3.3	≈ 45,000 (≈ 120,000 new population)	1,500	6,500	
7. Tracy Hills "new town" (part of Tracy Urban Management Plan)	Project withdrawn by developer (Grupe); still in General Plan. <sup>1,3</sup>	5,886	≈ 4	7,600 (21,000 new population)	510 commercial and industrial		Two golf courses
8. City of Lathrop General Plan	Approved December 1991. <sup>4</sup>	15,436	≈ 15	8,700 (23,000 new population)	(22,000 jobs)		
9. Crossroads Commerce Center (part of Lathrop General Plan)	Three major projects completed or under construction: Factory outlet center (136,000 sq. ft.), Allied Signal plastics plant (1.5 million sq. ft.), and Nestle USA distribution center (750,000 sq. ft.). <sup>4</sup>	630	≈ 15		630 commercial and industrial		
10. Gold Rush City (part of Lathrop General Plan)	Specific Plan being prepared. <sup>4</sup>	5,000	≈ 15	4,000 lodging rooms	5.4 million sq. ft		Major resort theme park
11. City of Manteca Public Facilities Implementation Plan GPA (includes update of GP area south of SR 120)	Approved in December 1993. <sup>5</sup>	8,500	≈ 17	22,600 (67,200 new population at full buildout)	2,800 commercial and industrial (≈ 54,000 jobs)		
12. City of Stockton 1990 General Plan Revision	Updated plan approved in 1991. <sup>6</sup>	9,500	≈ 20	≈ 55,000 (≈ 145,000 new population)	(≈ 60,000 jobs)		

Table 6.1 - continued

Project Name	Status	Approximate Acreage	Approximate Distance from Mountain House (miles)	Total New Residential Units	Commercial Uses (acres)	Industrial Uses (acres)	Other
13. Riverbrook Expanded Community	Approved in updated County General Plan. No action on Master Plan yet. <sup>1</sup>	909	≈ 20	2,500	5.3	6.4	Golf course
<b>STANISLAUS COUNTY</b>							
14. Diablo Grande GPA and Specific Plan	Project is in litigation. Grading for first golf course is in progress. <sup>7</sup>	29,500	≈ 30	5,000 (12,000 population)			Five golf courses, conference center, winery
<b>EASTERN CONTRA COSTA COUNTY</b>							
15. Discovery Bay West GPA	Pending. <sup>2</sup>	1,000	≈ 7.5	1,700			Golf course, school
16. Albers GPA	Approved May 1993. <sup>2</sup>	74	≈ 6	296	15 (includes offices)		Lake
17. Byron 78 GPA	Approved September 1993. <sup>2</sup>	78	≈ 6		10		Remaining acreage is undeveloped wetlands.
18. East Contra Costa Airport	Approved; under construction. <sup>2</sup>	1,270	≈ 3	Aircraft-related industrial uses allowed. (Parking for 400 aircraft; 6,000 feet of runway.)			
19. City of Brentwood Updated General Plan	Approved in June 1993. <sup>9</sup>	16,700	≈ 14	23,500 (65,000 new population)	(23,300 jobs)		
20. Cowell Ranch "new town"	EIR being prepared. <sup>2</sup>	4,277	≈ 13	7,586 (11,500 to 12,800 new population)	600,000 sq. ft.	2,000,000 sq. ft. business park	

Table 6.1 - continued

Project Name	Status	Approximate Acreage	Approximate Distance from Mountain House (miles)	Total New Residential Units	Commercial Uses (acres)	Industrial Uses (acres)	Other
21. Future Urbanization Areas #1 and #2, City of Antioch	EIR being prepared. <sup>10</sup>	3,500	≈ 18	5,500 (15,000 population)		170	
<b>EASTERN ALAMEDA COUNTY</b>							
22. Expansion of Altamont Landfill	EIR being prepared <sup>11</sup>	880	≈ 5				880 acres of added disposal area
23. Alameda County Waste Management Authority Composting Facility	DEIR has been prepared. In public hearings. <sup>12</sup>	2,000-3,000	≈ 5				Compost facility being proposed as an initial facility on-site.
24. City of Livermore, North Livermore GPA	Approved in 1993. <sup>13</sup>	3,600 (urban acreage)	≈ 9.5	12,100 (30,000 new population)	590 acres	(480 acre business park included in Commercial uses)	11,800 acres open space/rural uses
25. East County Area Plan (update of Alameda County General Plan for the Livermore-Amador Valley area)	Approved in May 1994. <sup>14</sup>	GP covers 418 sq.mi. area, with two major urban area (E. Dublin and No. Livermore, approx. 7,100 acres)	≈ 10	Approximately 40,000 new units in Dublin, Livermore, Pleasanton area (Assumes up to 12,100 units and 30,000 population in North Livermore)			
26. Alameda County, South Livermore Area Plan	Adopted. Location of new units to be determined. <sup>14</sup>	800	≈ 11	1,600			

Table 6.1 - continued

Project Name	Status	Approximate Acreage	Approximate Distance from Mountain House (miles)	Total New Residential Units	Commercial Uses (acres)	Industrial Uses (acres)	Other
27. East Dublin Specific Plan and GPA, City of Dublin (overlaps with part of North Livermore GPA)	Approved in May, 1993. <sup>15</sup>	3,300 (Specific Plan area)	≈ 16	12,400-13,900 (27,600-32,500 new population)	702 (commercial and industrial total)		
28. Ruby Hills GPA	Approved; under construction. <sup>14</sup>	1,303	≈ 16	850			Golf course club, 300 acres of viticulture
29. Hacienda Business Park, City of Pleasanton	4.7 million sq. ft. of office built. Another 600,000 sq. ft. has been approved, and an additional 5.2 million sq. ft. is planned, but not yet approved. <sup>16</sup>	833	≈ 17		833		
30. Various business parks, City of Pleasanton	Among nine separate parks, approx. 3.1 million sq. ft. of office, retail, and light industrial space is approved or planned. <sup>16</sup>	520	≈ 17		520		
31. Kaiser Sand and Gravel Reclamation	No application yet for reuse of reclaimed area. <sup>14</sup>	757	≈ 17	530		8	
<b>CENTRAL CONTRA COSTA COUNTY</b>							
32. Dougherty Valley GPA and Specific Plan	Approved. Lawsuits filed. In litigation. <sup>8</sup>	5,000	≈ 25	11,000			

Table 6.1 - continued

Project Name	Status	Approximate Acreage	Approximate Distance from Mountain House (miles)	Total New Residential Units	Commercial Uses (acres)	Industrial Uses (acres)	Other
33. Country Club at Gale Ranch (part of Dougherty Valley GPA)	EIR being prepared. <sup>8</sup>	618	≈ 25	1,216			218-acre golf course
34. Tassajara Valley GPA	EIR being prepared. <sup>9</sup>	2,000	≈ 20	3,000			

Sources compiled by BASELINE: based on interviews with city and county planners, review of General Plans and EIRs, and planning documents. Specific references and telephone conversations include:

- <sup>1</sup> San Joaquin County, Comprehensive Planning Program FEIR;
- <sup>2</sup> BASELINE, 1994, Special Purpose Plan for a Portion of the Patterson Pass Business Park, February;
- <sup>3</sup> City of Tracy Urban Management Plan DEIR (March 1993), and David Storer, Senior Planner;
- <sup>4</sup> City of Lathrop General Plan and FEIR (December 1992);
- <sup>5</sup> City of Manteca Public Facilities Implementation Plan and South Manteca GPA (December 1993), Ben Cantur, Senior Planner, and Frederick Clark, Engineer;
- <sup>6</sup> City of Stockton General Plan Revision DEIR (August 1989);
- <sup>7</sup> Stanislaus County Diablo Grande DEIR, Bob Kachel, Senior Planner, Ron Freitas, Planning Director;





- <sup>8</sup> Contra Costa County, Jim Cutler, Assistant Director;
- <sup>9</sup> City of Brentwood General Plan 1993-2010;
- <sup>10</sup> City of Antioch, Victor Carniglia, Deputy Director;
- <sup>11</sup> Altamont Landfill, Arlyn Purcell, ESA;
- <sup>12</sup> Alameda County Waste Management Authority, Dick Edminister, Planning Manager;
- <sup>13</sup> City of Livermore, North Livermore GPA FEIR, Bob Brown, Planning Director;
- <sup>14</sup> Alameda County East County Area Plan, FEIR; Deborah Stein, Assistant Director, and Stuart Cook, Planner;
- <sup>15</sup> City of Dublin, Carol Cirelli, Senior Planner;
- <sup>16</sup> City of Pleasanton, cumulative projects list and Kerry Watt, Planner.

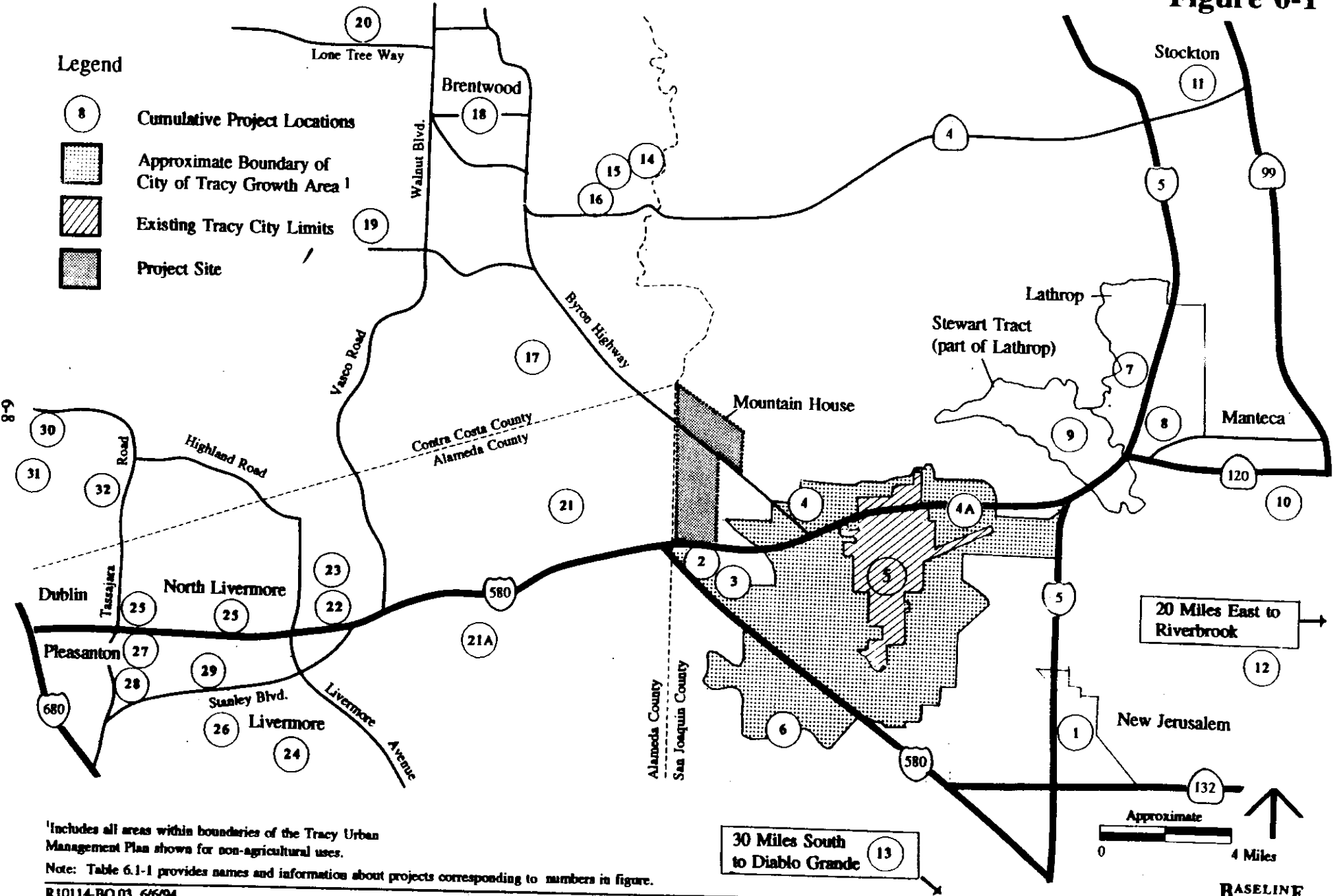
**Notes:** Locations of all projects are shown in Figure 6-1. Also see Tables 6.2 and 6.3.  
 Some of the projected growth may occur after 2010.  
 Some growth estimates have been rounded.  
 GPA = General Plan Amendment.

# CUMULATIVE PROJECT LOCATIONS

Figure 6-1

Legend

-  Cumulative Project Locations
-  Approximate Boundary of City of Tracy Growth Area<sup>1</sup>
-  Existing Tracy City Limits
-  Project Site



<sup>1</sup>Includes all areas within boundaries of the Tracy Urban Management Plan shown for non-agricultural uses.

Note: Table 6.1-1 provides names and information about projects corresponding to numbers in figure.

The FSEIR contained a detailed analysis of cumulative impacts. That analysis identified the following potentially significant cumulative impacts, which are in addition to project-related impacts already discussed:

- The cumulative loss of agricultural land in the Central Valley due to urbanization;
- Increased demand on park facilities in southwestern San Joaquin County and in adjacent Alameda County;
- A need for more school facilities than are currently planned by the Tracy Joint Union High School District and the Lammerville Elementary School District;
- Increased demand for police and fire protection provided by the San Joaquin County Sheriff's Department and Tracy Rural Fire Protection District;
- Increased overdrafting of the regional groundwater basin, if planned development projects turn to groundwater supplies when surface water supplies are not adequate;
- Increased runoff into the Old River of treated wastewater effluent that is used to irrigate agricultural lands in the area;
- Increased demand for the disposal of sludge in public and private landfills in the County;
- Increased stormwater discharges from urban development into the Old River;
- Increased use of non-renewable fuels such as gas and electricity;
- Increased flow velocity and flood discharges in the Old River, and an increase in boating activity within the South Delta;
- A worsening of the "jobs/housing balance" (the ratio of jobs to employed residents) in the southwestern San Joaquin County area, if housing growth outpaces job creation;
- A net reduction in existing habitat for wildlife, including habitat for a number of special-status taxa, notably the Swainson's hawk and the San Joaquin kit fox;
- Unmitigable impacts on some regional freeway segments and arterials, due to cumulative development in the region;
- Failure to attain air quality standards in the San Joaquin Valley air basin for ozone, carbon monoxide, and PM-10 (small particulate matter), due to cumulative growth in population and employment; and

## 6.0 ADDITIONAL CEQA CONSIDERATIONS

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- Significant increases in noise levels along main access roads in the Tracy area, which now carry very low traffic volumes.

The following discussion addresses those previously identified impacts that have changed and are now updated.

### LAND USE AND AGRICULTURAL ISSUES

The cumulative loss of agricultural land in the Central Valley, based on urbanization rates in the 1970s and 1980s, has been estimated by the American Farmland Trust as approximately 12,000 acres per year over ten counties (American Farmland Trust, 1989). Based on the most recently adopted General Plans for San Joaquin County and the seven cities, it is estimated that approximately 35,000 acres of agricultural land, most of which is classified as "prime," is designated for urban development. The Mountain House project would contribute about 13 percent to this anticipated conversion. Prime agricultural land is considered a natural resource under CEQA, and the loss of agricultural land is a significant cumulative impact which cannot be mitigated.

The Central Valley produces more than one-half of the nation's table grapes and almonds, and one-third or more of its peaches, cantaloupes, and walnuts. The Valley's agriculture accounts for approximately three-fifths of the State's \$17.8 billion farm industry. San Joaquin County's leading agricultural products include milk, grapes, cherries, walnuts, and tomatoes. The value of agricultural production in the County for 1992 was \$902,500,000 (San Joaquin County Agricultural Commissioner, 1992).

As urban development encroaches into agricultural lands, land use conflicts increase. Transplanted urbanites moving into the Central Valley to find cheaper housing object to noise, odors, dust, and chemical drift from farming operations. Conversely, farms experience theft, trespassing, illegal dumping of refuse, and free roaming dogs chasing livestock. Complaints from new residents historically result in more restrictions placed on the farmer.

#### Mitigation Measures

San Joaquin County should impose an agricultural conversion impact fee, which can be used to purchase development rights or support land trusts, to mitigate for the loss of agricultural land, as recommended in Mitigation Measure M4.1-1. A policy recommending establishment of such a fee is included in the County's General Plan 2010.

Jurisdictions in San Joaquin County and elsewhere in the Central Valley should be encouraged to increase the densities of planned future urban development on agricultural lands. By increasing residential densities only slightly, for example from an overall average subdivision density of four or five units per acre to six or seven units per acre, the same amount of population growth could be accommodated on less agricultural acreage. Increasing overall average densities would help to preserve more agricultural and open space lands on the fringe of the urban areas and would prevent low density suburban "sprawl."



Jurisdictions throughout San Joaquin County and the Central Valley should also modify their General Plans to designate agricultural lands for urban growth that will be accommodated during a planning period not to exceed twenty or twenty-five years. Many Central Valley cities and counties have adopted General Plans that designate far too much land for the amount of residential and commercial/industrial growth that can reasonably be anticipated over a twenty-year planning period. Designation of excess agricultural lands for urban development can lead to land speculation, an increase in assessed values, and property taxes, and the premature curtailment of agricultural operations.

The legal findings that must be adopted by each of the Central Valley County Local Agency Formation Commissions (LAFCOs) when approving annexations of agricultural lands, or other LAFCO actions, should be modified to incorporate additional findings related to the preservation of agricultural lands. Such additional findings could require discussion of: the likelihood for the conversion of additional agricultural lands, if the application is approved; whether the application is consistent with the adopted population and growth projections included in the applicable city and County General Plans and in Council of Government forecasts; and the consistency of the application with other agencies' land use plans and zoning.

## **PUBLIC SERVICES**

### **Parks and Recreation**

The geographic area analyzed for cumulative recreational impacts includes the Livermore Valley in Alameda County, the Brentwood area of eastern Contra Costa County, and all of San Joaquin County. The 2010 growth projections identified in the San Joaquin County General Plan 2010 (San Joaquin County, 1992b) were considered in determining recreational impacts. Potential development in the Livermore Valley could result in an increase of about 44,000 new residential units and growth in Eastern Contra Costa County could add over 33,000 units (Table 6.3).

Development in southwestern San Joaquin County and in the City of Tracy would place tremendous demands on the existing County park system unless new development provides sufficient parkland and recreational facilities to meet this demand. On a county-wide basis, an additional 3,600 to 4,400 acres of regional parks would be needed by 2010 (~~San Joaquin County~~ **BASELINE**, 1992be) to support the projected population assuming 10 acres of regional park per 1,000 residents. Developers can set aside parkland or pay in-lieu fees to help defray the cost of land acquisition, equipment, and staffing.

The demand for day use activities at nearby regional and State parks in Alameda and Contra Costa counties would significantly increase as development occurs in southwestern San Joaquin County, the Livermore Valley, and eastern Contra Costa County. Existing regional park facilities that could be significantly impacted include Bethany Reservoir and Lake Del Valle in Alameda County and Carnegie State Vehicular Recreation Area in San Joaquin County. As wind surfing gains popularity, the Bethany Reservoir State Recreation Area in Alameda County could become an especially attractive location because of the high winds, warm temperatures in the summertime, and shallow waters. As the demand for park facilities increases, city, county, regional, and State park

## 6.0 ADDITIONAL CEQA CONSIDERATIONS

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departments/districts would be required to hire additional personnel to monitor activities and park visitors. Some of the demand could be accommodated by new park facilities that are planned in the region, such as facilities at Los Vaqueros Reservoir and Round Valley in eastern Contra Costa County.

### *Mitigation Measures*

A regional recreational task force should be formed to develop funding mechanisms to expand and maintain regional recreational facilities in the three-county area. In particular, San Joaquin County should participate in, and coordinate with, park planning efforts by the East Bay Regional Park District. San Joaquin County, in conjunction with the cities in San Joaquin County, should develop a fee structure to finance regional parks. As stated in the San Joaquin County General Plan 2010, dedication of parkland or in-lieu fees for local parks will continue to be required. This should be expanded to address regional parks.

## **PUBLIC UTILITIES**

### **Water Demand**

The geographic area used to define the area that could be affected by cumulative growth seeking a water supply is the Tracy Planning Area of San Joaquin County. In this Area, approved, pending, and proposed development projects allowed under County or City plans will address water demand through a combination of surface water and groundwater supplies, reclamation and conservation, and other sources. Existing irrigation districts will be faced with increasing requests to reallocate water used for agricultural irrigation to new municipal and industrial uses. If surface water resources were inadequate, development projects could turn to groundwater to meet the demand. Lack of adequate water supply is not an environmental impact in itself. However, impacts to groundwater could result if projects were to use groundwater pumping to supplement other supplies.

The geographic area considered for cumulative impacts resulting in groundwater overdrafting is the groundwater basin serving San Joaquin County, and specifically, the Tracy area. If demand exceeds available surface water supplies, even with maximum wastewater reclamation under current regulations, proposed development could cause overdrafting of existing groundwater resources. Significant overdrafting can cause subsidence, decreased storage capacity in the groundwater basin, and reduced opportunities to use the groundwater to serve future water needs.

Analysis in this DEIR indicates that the surface water supply provided to the project through existing water rights would be adequate to serve the planned level of development, assuming water conservation efforts were implemented. However, other cumulative growth in the Tracy Planning Area does not have an identified source of adequate surface water supply. Growth allowed under the City of Tracy Urban Management Plan, as well as growth allowed by the County for the New Jerusalem new community project southeast of Tracy, could cause a serious overdrafting of local groundwater, if new surface water sources were not obtained. Existing agricultural irrigation districts will experience strong pressures to convert their historic water sources to municipal and industrial uses, as a direct result of cumulative growth plans in the Tracy Planning Area. Potential impacts

of cumulative growth on groundwater resources are mitigated in the unincorporated area by the adopted County Water Policy, which requires that all new development (all General Plan Amendments) prove that the planned water consumption can be served by the amount of water historically associated with the agricultural use of the land or by a new water supply brought in to the County.

#### *Mitigation Measures*

The policy implications of existing irrigation districts, which have historically served only agricultural water users, changing into multi-purpose water supply agencies should be addressed by the County in its General Plan and by the City of Tracy in its Urban Management Plan. Analysis of the fiscal impact should be undertaken, especially regarding the potential pressure to equalize water rates which could affect preservation of farmland in San Joaquin County. The City of Tracy should adopt a similar policy to the County's Water Policy in their Urban Management Plan to ensure that urban growth within the City does not cause an increase in overdrafting of the groundwater basin.

#### **Wastewater Treatment and Disposal**

The geographic area under consideration for wastewater treatment (not disposal) is the Tracy Planning Area. Since the Mountain House project incorporates a wastewater treatment system that would serve only the proposed development, there would not be a cumulative impact of overburdening an existing wastewater system.

The geographic area relevant to disposal of treated effluent is the Tracy Planning Area and adjacent Delta lands, including the entire length of Old River, and all discharges into the River. The Central Valley Regional Water Quality Control Board (RWQCB) regulates the quantity and quality of discharges into Old River to ensure that State and Federal water quality standards are met. The RWQCB limits additional discharges into Old River due to a concern about cumulative impacts on water quality in the River and the downstream Bay-Delta facilities, such as the Delta-Mendota Canal.

The project proposes to store treated wastewater in ponds on Fabian Tract during the winter and irrigate adjacent lands with the treated effluent during non-winter months. Existing agricultural drains on Fabian Tract would remain; thus, there is the potential for heavy metals or other constituent parts of the treated effluent to be discharged into the Old River, if appropriate mitigation programs are not implemented. Section 4.4.2 of this DEIR recommends mitigation for this impact. A potentially significant cumulative impact could occur if the City of Tracy also began storing effluent and irrigating agricultural fields within the Old River watershed with treated effluent, without appropriate mitigation. This cumulative impact could occur if wastewater generated by development allowed under the City's Urban Management Plan were served by land disposal or by increased discharges to Old River under the City's existing permit granted by the RWQCB.

Cumulative impacts related to wastewater sludge disposal are considered on a county-wide basis, since the County is obligated to provide sites within the County for solid waste disposal, including those sites accommodating sludge. The County's existing Solid Waste Management Plan (SWMP) identifies disposal sites which are designed to accommodate demand serving long-term growth in the

## 6.0 ADDITIONAL CEQA CONSIDERATIONS

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County. The integrated waste management planning process, currently under way, will update and replace the SWMP, and may change policies relating to sludge disposal, including potential out-of-County disposal options. Sewage sludge is currently not accepted at any public landfills operated by San Joaquin County, although one private landfill near Stockton has been permitted to accept sewage sludge.

### *Mitigation Measures*

San Joaquin County should coordinate Mountain House plans for off-site wastewater land disposal with the involved State agencies (the California Department of Health Services and Central Valley RWQCB) as well as with the City of Tracy's long-term plans for wastewater disposal. The implementation of reclamation projects, including agricultural and landscape irrigation, and groundwater recharge with reclaimed water, should be coordinated so that any potential cumulative environmental impacts to Old River are identified and mitigated. Any new communities or significant urban projects in the unincorporated areas in the County should be required to identify adequate acreage for sludge treatment and/or disposal prior to the approval of Master and Specific plans.

## POPULATION, HOUSING, AND EMPLOYMENT

The area of analysis for cumulative impacts related to population, housing, and jobs is San Joaquin County plus the eastern portions of Alameda and Contra Costa counties. Cumulative development proposed for southwestern San Joaquin County (the Tracy-Lathrop-Manteca area) has the potential to exacerbate the County's existing imbalance between non-agricultural jobs and housing in the short term, which could result in a larger percentage of out-commuters. The amount of new housing planned in the Mountain House and New Jerusalem new towns and by the cities of Tracy, Lathrop, and Manteca is approximately 93,000 housing units, which could result in population growth in the Tracy-Lathrop-Manteca area of about 258,000 additional residents (Table 6.2). In the Tracy area alone, buildout of the Tracy Urban Management Plan would quadruple the size of the city to 160,000 residents, equal to construction of about 45,000 housing units. With full buildout of the City of Tracy and the two new towns in the unincorporated area, the population of the Tracy Planning Area would reach approximately 226,000 residents. Much of this growth may not occur until after the year 2010. This amount of cumulative growth is also dependent on the provision of adequate infrastructure (e.g., water supply, wastewater treatment and disposal, new roads).

Significant job growth is projected in the General Plans for Tracy, Lathrop, and Manteca, and the two new communities in the unincorporated area. The Tracy Urban Management Plan projects the creation of approximately 140,000 new jobs during the long-term (forty-year) buildout of the plan, with almost 100,000 new industrial jobs. Added to the planned employment in the Mountain House and New Jerusalem new towns, the Tracy Planning Area would grow to an eventual employment base of approximately 191,000 jobs (Table 6.2). Based on these estimates, at full buildout in the Tracy Planning Area, the jobs to employed residents ratio would be about 1.4 jobs for every worker.

TABLE 6.2  
 CUMULATIVE GROWTH IN SOUTHWESTERN  
 SAN JOAQUIN COUNTY

Jurisdiction/Project	Existing Population	"Buildout" Population <sup>5</sup>	"Buildout" Housing (dwelling units) <sup>5</sup>	"Buildout" Jobs <sup>5</sup>
Tracy Urban Management Plan <sup>1</sup>	40,500	150,000	80,800	153,300
Mountain House New Town	--	44,000	16,100	22,000
New Jerusalem New Town	--	22,000	7,600	16,000
<b>Subtotal: Tracy Planning Area</b>	<b>49,500<sup>2</sup></b>	<b>226,000</b>	<b>104,500</b>	<b>191,300</b>
Manteca Public Facilities Infrastructure Plan <sup>3</sup>	53,000	111,000	33,000	54,000
Lathrop General Plan <sup>4</sup>	8,000	32,200	11,200	22,000
<b>TOTALS</b>	<b>110,000</b>	<b>368,200</b>	<b>148,700</b>	<b>267,300</b>

Sources: San Joaquin County (1992c); BASELINE; City and County planning documents.

- <sup>1</sup> The City of Tracy currently has a population of about 40,500 residents. Much of the projected job growth would occur after the year 2010, and some of the projected industrial job growth may never occur at all, due to lack of a labor supply.
- <sup>2</sup> Includes approximately 9,000 residents who live in unincorporated areas around Tracy.
- <sup>3</sup> The Manteca Public Facilities Infrastructure Plan (1993) includes infrastructure plans for the buildout of the City's General Plan. The "existing" population estimate includes approximately 9,000 residents in unincorporated areas. Some of the housing growth and approximately two-thirds of the job growth would occur after the year 2020.
- <sup>4</sup> Includes the Gold Rush City resort/theme park.
- <sup>5</sup> "Buildout" includes existing plus new population, housing and jobs. Buildout of the City and County General Plans may never reach these levels, depending on whether adequate infrastructure (water supply, etc.) can be provided, and whether there is a market for all the new housing and employment opportunities.

It is doubtful, however, that the amount of job growth that is projected by the City of Tracy will ever be realized, because of the lack of a labor supply to fill the positions due to competition from other regional employment centers (e.g., the Tri-Valley area of eastern Alameda County). The cities in the Livermore-Amador Valley area are planning for an equally large amount of housing and employment growth as in southwestern San Joaquin County. The population of eastern Alameda County is projected to increase from about 152,000 residents to 240,300. Full "buildout" of the General Plans and associated projects for the cities of Livermore, Dublin, and Pleasanton may result in the eventual construction of approximately 44,000 additional housing units and the creation of over 75,000 jobs (Table 6.3). Buildout of the Brentwood General Plan and the proposed Cowell Ranch New Town in southeastern Contra Costa County could add over 30,000 housing units and 36,000 new jobs.

6.0 ADDITIONAL CEQA CONSIDERATIONS

TABLE 6.3  
 CUMULATIVE GROWTH IN EASTERN ALAMEDA AND  
 CONTRA COSTA COUNTIES

Jurisdiction/Project	Existing Population <sup>1</sup>	"Buildout" Population <sup>7</sup>	"Buildout" Housing (dwelling units) <sup>7</sup>	"Buildout" Jobs <sup>7</sup>
North Livermore <sup>2,3</sup>	--	30,000	12,500	5,200-13,000
City of Livermore <sup>3,4</sup>	60,000	72,500	27,200	50,800-101,500
South Livermore <sup>3</sup>	--	7,500	2,800	2,000
East Dublin <sup>3</sup>	--	32,500	13,900	22,600
City of Dublin <sup>3</sup>	17,500	17,800	6,700	12,800
City of Pleasanton <sup>3</sup>	62,000	80,000	30,000	58,100
<b>Total: Eastern Alameda County</b>	<b>152,000</b>	<b>240,300</b>	<b>93,100</b>	<b>151,100-210,000</b>
City of Brentwood <sup>5</sup>	9,000	80,000	28,400	28,000
Cowell Ranch New Town <sup>6</sup>	--	12,000	7,600	8,000
<b>Total: Eastern Contra Costa County</b>	<b>9,000</b>	<b>92,000</b>	<b>36,000</b>	<b>36,000</b>

- <sup>1</sup> Current (1993) population estimates by BASELINE, based on published reports.
- <sup>2</sup> Range of "buildout" job estimates is from the City of Livermore (high estimate) and from Alameda County (low estimate).
- <sup>3</sup> "Buildout" estimates prepared by EPS, based on the General Plans of cities and associated studies, from Table B-4, *Draft East County Area Plan/Background Reports* (Alameda County, February 1993), as updated. North Livermore high buildout estimates from *Alameda County, East County Plan*, Table 5, adopted in May 1994. Estimates have been rounded.
- <sup>4</sup> The "buildout" jobs number for the City of Livermore General Plan may never be realized, because of the lack of a labor force to fill the jobs, according to EPS (Economic and Planning Systems, *Alameda County General Plans: Land Use and Jobs/Housing Analysis*, July 1992). EPS estimates the job "buildout" for the City to more realistically be 50,800.
- <sup>5</sup> From *Brentwood General Plan 1993-2010*.
- <sup>6</sup> From Contra Costa County, initial project description.
- <sup>7</sup> "Buildout" includes existing plus new population, housing and jobs. Buildout of the City and County General Plans may never reach these levels, depending on whether adequate infrastructure (water supply, etc.) can be provided, and whether there is a market for all the new housing and employment opportunities.

*Mitigation Measures*

As indicated in the Land Use section of this DEIR, jurisdictions in San Joaquin County and eastern Contra Costa and Alameda counties should be encouraged to adopt General Plans that designate only as much land as will be needed for development over a reasonable twenty-year planning period. Jurisdictions should take into account jobs and housing growth projections for adjacent cities when preparing their growth plans, so as not to overestimate the ability of a single city to capture job and housing growth. San Joaquin, Alameda, and Contra Costa counties should attempt to resolve inconsistencies in local and regional growth projections, based upon the combined cumulative total of all jurisdictions' General Plans.

## BIOLOGICAL RESOURCES

The geographical area addressed for cumulative impacts to biological resources includes San Joaquin County and portions of eastern Alameda and Contra Costa counties (Figure 6.2). Cumulative development would result in a net reduction of existing habitat for wildlife, including habitat for a number of special-status taxa. The loss of suitable habitat for Swainson's hawk and San Joaquin kit fox, as well as other highly mobile avian and mammalian predators, would likely result in further decline of existing populations unless a comprehensive plan or plans were implemented providing for permanent habitat conservation, management, and enhancement.

Representatives of the U.S. Fish and Wildlife Service and California Department of Fish and Game have expressed concern that suitable habitat for mitigation of project-specific impacts on Swainson's hawk and kit fox may not be available, given the extent of cumulative development throughout the County. Projected growth outlined in the General Plans for the cities and the County impinges onto areas tentatively identified as conservation areas for Swainson's hawk in the south Delta area and for the San Joaquin kit fox in the Altamont Hills west of Tracy (Figure 6.2).

The San Joaquin Council of Governments has initiated a program to prepare a multiple-species Habitat Management Plan. If this habitat planning effort is successful, mitigation for habitat loss may be accomplished through the imposition of development fees and the acquisition of conservation easements on habitat lands. However, habitat planning efforts by the City of Stockton and San Joaquin County have, to date, not resulted in any adopted plans or programs. In lieu of a County-wide Habitat Management Plan, Mountain House and other developers may be required by Federal and State wildlife agencies to mitigate for habitat loss on a fragmented and case-by-case basis. Unless a coordinated approach to habitat conservation is provided on a County-wide basis, suitable replacement habitat may not be available for compensation of habitat lost to cumulative development in San Joaquin County.

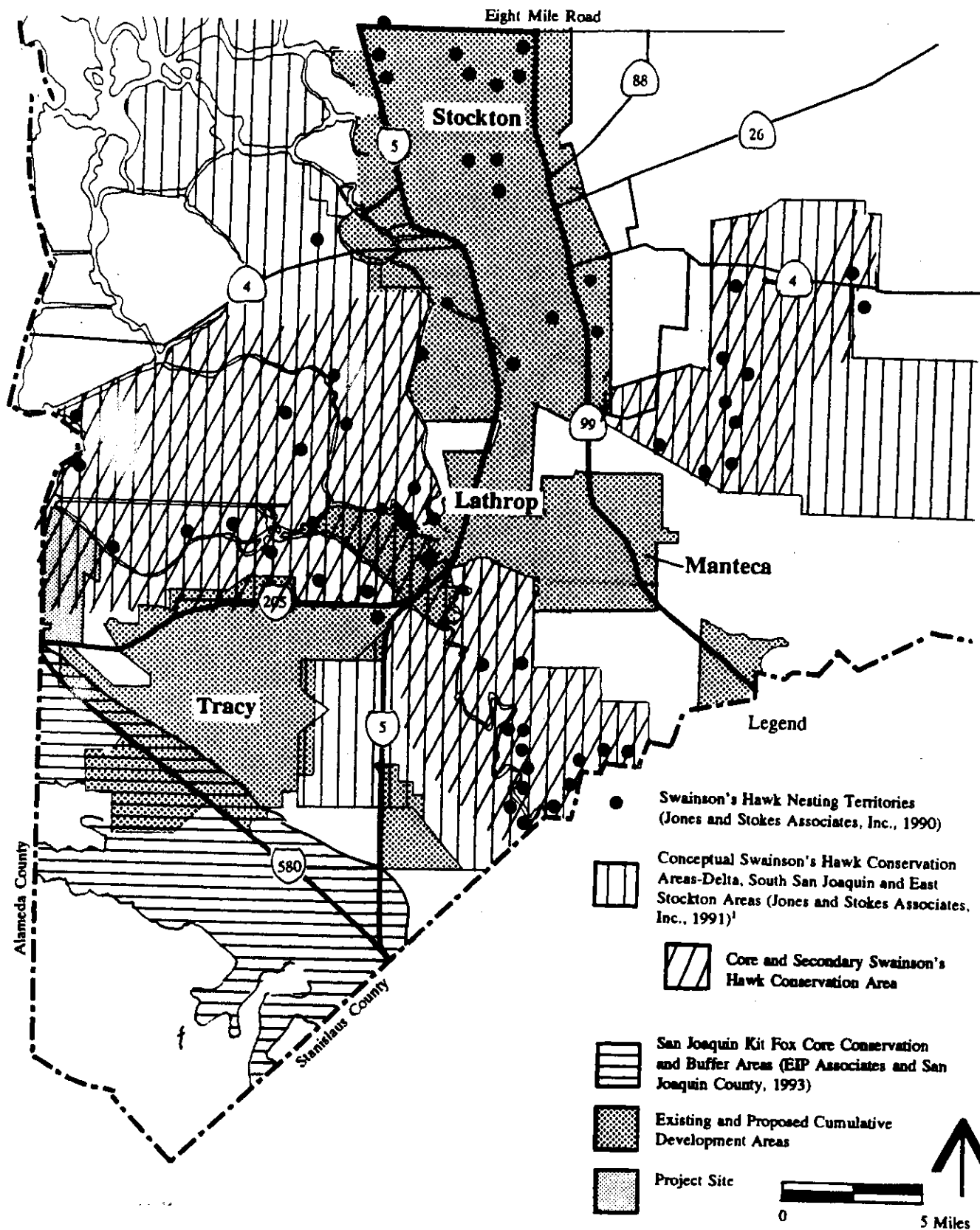
The loss and modification of wetlands on the site would contribute to an incremental reduction of seasonal foraging habitat for many water bird species that annually migrate through the southern portion of the County. Development along the southwest shore of Old River would contribute to a reduction in the quality of the productive fishery habitat.

### *Mitigation Measures*

The County should participate in the preparation and implementation of a County-wide Habitat Management Plan for Swainson's hawk, San Joaquin kit fox, and other species of concern. Federal and/or State incidental "take" permits for endangered or threatened taxa should be obtained for the Mountain House project and other development projects, as required by the wildlife agencies. Copies of the "take" permits should be submitted to the County prior to issuance of any construction or site improvements to ensure that off-site replacement habitat is provided before destruction of existing habitat. Stringent zoning controls should be imposed in areas that have been identified by Federal and State wildlife agencies as habitats of biological significance.

# CUMULATIVE DEVELOPMENT AND POSSIBLE HABITAT CONSERVATION AREAS

Figure 6-2



<sup>1</sup>Includes Core, Secondary, and Tertiary Conservation Areas.



## TRANSPORTATION

The transportation impacts of the project have been extensively analyzed in a multi-county, year 2010 cumulative growth scenario using the San Joaquin County Council of Government's (SJCCOG) travel demand model (which was revised and enlarged by DKS Associates in 1991 for use in the County General Plan Program). The SJCCOG traffic model has been used to evaluate the project's trip generation, the portion of the trip generation that would remain internal to the project site, and the distribution of external trips on the roadway network, over a multi-county area.

The SJCCOG travel demand model includes demographic data (housing units, job estimates for 1990 and 2010) for the following areas: Stanislaus County, the nine-county San Francisco Bay Area, the Sacramento region, and the Foothills region east of San Joaquin County including Amador County, Calaveras County, and Tuolumne County. The expanded multi-county model was successfully validated by applying it to 1990 land use/socio-economic data and comparing resulting model volume estimates to actual traffic counts throughout San Joaquin County and at County gateways. The expanded model was then used for forecasting the travel demand of the project and project alternatives by incorporating the appropriate San Joaquin General Plan land use and highway network assumptions for 2010, along with most recent available 2010 land use and network assumptions from Stanislaus County, the Metropolitan Transportation Commission (for the Bay Area), and the Sacramento Area Council of Governments. The analysis contained in Section 4.12 includes projected future traffic volumes for the project, as well as cumulative growth, for a wide area.

### *Mitigation Measures*

Mitigation measures identified for the proposed project in Section 4.12 address cumulative traffic increases on the regional transportation network. No additional measures are recommended.

## AIR QUALITY

The project is part of a pattern of urbanization within the San Joaquin Valley air basin that has important implications for regional air quality. The *1991 Air Quality Attainment Plan* (SJVUAPCD, 1991b) and *San Joaquin Valley Unified Air Pollution Control District PM-10 Nonattainment Area Plan* (SJVUAPCD, 1991a) are recent attempts to forecast future air quality trends and develop control strategies to bring air quality into compliance with the Federal and State ambient air quality standards. Even using all feasible and available control measures, attainment of the ozone, carbon monoxide, and PM-10 standards in the San Joaquin Valley air basin is not forecast in this decade. A major impediment to attaining these standards is projected growth in population and employment within the air basin.

Emissions for major developments and plans within San Joaquin County have been estimated in recent environmental documents (Table 6.4). While there are some differences in methodology and forecast period between the emissions estimates, it can be seen that the project would contribute to a forecasted substantial increase in county-wide regional pollutant emissions.

6.0 ADDITIONAL CEQA CONSIDERATIONS

TABLE 6.4

EMISSIONS FROM CUMULATIVE PROJECTS AND PLANS IN SAN JOAQUIN COUNTY (pounds per day)

	ROG	NOx	PM-10	SOx
Mountain House	—	—	—	—
Tracy Urban Management Plan/General Plan (City of Tracy, 1993)	36,751	45,397	7,599	NA
Lathrop Comprehensive General Plan (City of Lathrop, 1991)	1,600	3,200	NA	NA
Stockton 1990 General Plan Revisions (City of Stockton, 1989)	11,200	11,000	NA	NA
San Joaquin County General Plan (San Joaquin County, 1992)	5,060	10,600	NA	NA

Notes: NA = Not Available  
 ROG = Reactive Organic Gases  
 NOx = Nitrogen Oxides  
 PM-10 = Particulate Matter, 10 microns  
 SOx = Sulfur Oxides

TABLE 6.5

SAN JOAQUIN VALLEY AIR BASIN PROJECT REGIONAL EMISSIONS (tons/day)

	ROG	NOx	PM-10
1987	750	586	1,085
1994	662	531	1,109
1997	672	523	1,019
2000	679	530	984

Source: SJVUAPCD 1991a, 1991b.

Notes: ROG = Reactive organic gases.  
 NOx = Nitrogen oxides.  
 PM-10 = Particulate matter, ten microns.  
 SOx = Sulfur oxides.

Table 6.5 shows projected emissions of ROG, NO<sub>x</sub> and PM-10 for the San Joaquin Valley air basin from 1987 through 2000, assuming implementation of all feasible control measures developed in the nonattainment plans for the region. While year 2000 emissions are lower than year 1987 emissions (28 percent for ROG, 29 percent for NO<sub>x</sub> and 10 percent for PM-10), attainment of the standards requires much larger reductions in emissions. For ROG and NO<sub>x</sub>, a 65 percent reduction is mandated in the California Clean Air (based on 1987 emissions). The projections show, that in the absence of new State and Federal air quality programs, regional ozone and PM-10 air quality in the San Joaquin Valley air basin would gradually improve, but not sufficiently to meet the State and Federal standards by the next century.

The San Joaquin Valley air basin is also nonattainment for carbon monoxide (CO), but violations of the ambient air quality standards are limited to four urban areas: Stockton, Modesto, Fresno, and Bakersfield. These areas are not predicted to attain the State and Federal ambient air quality

standards for carbon monoxide by the year 2000 (SJVUAPCD, 1991b). The project's contribution to traffic volumes at these four locations would be so small that the project would not be considered to contribute to cumulative impacts on carbon monoxide levels at these locations.

#### *Mitigation Measures*

Similar mitigation measures prepared for the project (i.e., land use mixes to promote non-vehicular travel) should be implemented for all cumulative growth. The County should develop a fee system for all new development, with funds to be used to mitigate air quality impacts (e.g., park-and-ride lots, inspection programs for automobiles, installation of air pollution control equipment, inspections of farm equipment, and new staff for SJVUAPCD).

## **NOISE**

The geographic area used in the assessment of cumulative noise impacts is the area for which future traffic projections are available. The proposed project analysis takes into account future cumulative growth. Therefore, mitigation measures recommended for the project would also be appropriate for some cumulative impacts. The FSEIR for the Mountain House General Plan Amendment previously analyzed noise impacts in the Tracy planning area. The results of this analysis is illustrated in Figure 6.3. Because the level of cumulative growth forecast in the Tracy area has not changed significantly for the year 2010 since publication of the FSEIR for the General Plan Amendment, the cumulative noise analysis remains valid.

In the future, noise level increases along main access roads to the project site would be primarily due to the proposed project. Noise levels would increase along streets leading to the City of Tracy, due to additional traffic generated by Mountain House and other development approved by the City of Tracy (Figure 6.3). Noise level increases, relative to existing noise levels, due to cumulative growth in the area would range between 1 and 18 dB. The most significant noise level increases would be along Altamont Pass Road (18 dB), Hansen Road (16 dB), portions of Patterson Pass Road (6 to 11 dB), Lammers Road (3 to 13 dB), and Schulte Road (4 to 9 dB). Other streets in and around the City of Tracy would also experience significant noise level increases (Figure 6.3). Increases in noise levels above 5 dB are considered to be significant. Existing residences along streets experiencing noise level increases above 5 dB would be potentially impacted. Roads with noise level increases above 10 dB currently carry very low traffic volumes.

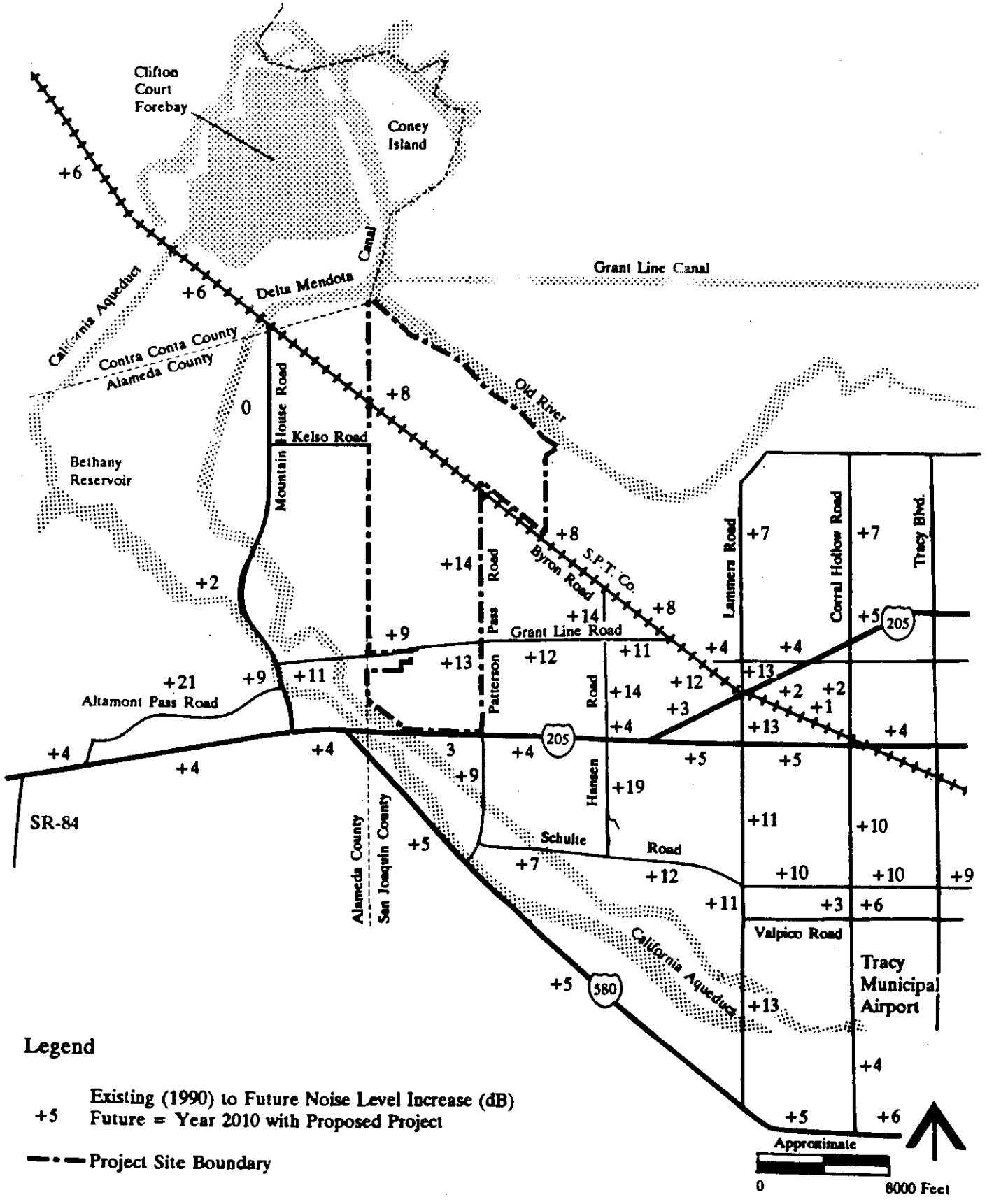
#### *Mitigation Measures*

The County should use noise policies contained in the Noise Element of the General Plan to evaluate potential noise impacts associated with proposed projects. Projects to be located in areas showing large noise increases (Figure 6.3) should require noise studies to quantify the project contribution to the future noise environment. If the noise impacts associated with a specific project are found to be significant, mitigation measures should be proposed to reduce the impact.

Substantial growth in the study area is anticipated over the next 20 years. As a result of proposed developments, the character of the greater area would change significantly and some of the noise

# CUMULATIVE ANALYSIS AREA FOR NOISE IMPACTS

Figure 6.3



Source: Illingworth and Rodkin, Inc.

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impacts would be unavoidable. However, the County should use its noise policies to allow for proper planning and minimize noise impacts associated with future development.

New, more restrictive noise and land use compatibility criteria for all proposed land uses should be adopted by the County to match criteria of the State of California, at a minimum.

## **GROWTH-INDUCING IMPACTS**

The proposed project has been planned with a mix of land uses to be a "self-contained community" and, thus, to minimize growth-inducing impacts. However, over time, development in this agricultural area could expand beyond the boundaries of the site due to both economic and environmental factors.

Agricultural lands at the edges of Mountain House may increase in value due to the proximity of urban infrastructure and development. Potential land use conflicts between urban and agricultural areas (i.e., odors, noise, trespassing) could discourage farmers from continuing their agricultural operations and they could possibly file for nonrenewal of their Williamson Act contracts. While existing zoning and General Plan designations show agricultural use for the surrounding lands, private landowners could, over time, request amendments and rezoning to urban uses. Such requests could also occur if water rights of the Byron-Bethany Irrigation District were reduced and water supply for surrounding agricultural operations were restricted.

Growth-inducing impacts could also result if the on-site water and wastewater plants were sized with a greater capacity than that needed to serve the project. If these plants were built at the outer edges of the site, as proposed, adjoining landowners may be able to connect new water and wastewater lines to the project's facilities.

One way to minimize growth-inducing impacts would be to have agricultural or open space buffer zones on all sides of the project that contain deed restrictions limiting development for perpetuity (e.g., through an agricultural land trust). Such buffer zones should be maintained on the west and east sides of the project. On-site deed restriction zones could also be established to prevent water and sewer line extensions across the zones. Sizing the on-site water and wastewater plants to serve no more than the projected on-site population would eliminate this potential growth-inducing impact.

Interstate 205 and Old River would provide an adequate buffer to minimize growth-inducing impacts to the south and north of the project site, respectively. The costs of extending infrastructure across these two barriers would deter new development. Agricultural lands south of I-205 will be subject to growth inducement because of the proximity of Mountain House and the Patterson Pass Business Park, and because the City of Tracy Urban Management Plan designates long-term growth in the area. However, growth south of I-205 will be prohibited from receiving services from Mountain House.

## **RELATIONSHIP OF SHORT-TERM USES OF THE ENVIRONMENT VERSUS LONG-TERM PRODUCTIVITY**

The development of the project would remove more than 4,000 acres from agricultural use. About 77 percent of this acreage has been identified as Prime Farmland. Thus, the long-term productivity of this farmland would be eliminated by the proposed project. The farmland's value as wildlife habitat for the Swainson's hawk and other species would also be eliminated by the project. However, the General Plan Amendment to the General Plan 2010, approved by the Board of Supervisors in February 1993, allowed the urban development of the project site, and the Board made overriding findings for removing the land from agricultural uses. According to the applicant, development of the project would be justified at the present time due to the demand for housing and employment in this part of San Joaquin County, and the economic benefits (i.e., employment opportunities and tax revenue) that would accrue over the projected buildout period.

## **SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS**

The unavoidable adverse impacts that would result from buildout of the proposed Mountain House project include the following:

- Unacceptable Levels of Service for regional roadways, including certain locations at I-205 and I-580;
- Increased emissions of ozone precursors and total suspended particulate matter;
- Exposure of the public and structures to seismic ground shaking;
- Loss of more than 4,000 acres of wildlife habitat.

## **SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES**

Approval of the Mountain House project and ultimate development of the site would result in the following irreversible changes to the environment:

- Contribution to degradation of air quality associated primarily with increased automobile travel generated by the project, in conjunction with cumulative traffic increases; and
- Commitment of non-renewable energy resources for vehicular travel, construction activity, and indoor climate controls.

## CHAPTER 7

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# CHAPTER 8

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## PREFACE

This is the Final EIR (FEIR) for the Mountain House Master Plan and Specific Plan I. Comments received on the Draft EIR (DEIR) and responses to the comments are included in this document in addition to a full copy of the DEIR, with changes in the text which have been made as a result of comments received during the public review period. Any changes to the DEIR text are shown by **bolding** for new text and a delete mark (-) for any text removed. The Summary in Section 2 of this FEIR has been revised to reflect the corrected DEIR text (without bolding or strike-outs). The Draft Mitigation Monitoring Program (Program) that was part of the Summary in the DEIR has been removed. The Draft Program was included in the DEIR for informational purposes. A final Program will be developed by the County.

The public review period started on 8 June 1994 and ended on 22 July 1994. An administrative hearing on the DEIR was held on 30 June 1994 at the County offices. A summary of verbal comments made at this hearing is provided in Chapter 9.

Comments, both written and verbal, are numbered; responses have corresponding numbers to the comments and are contained in Chapter 10. Only those comments addressing the adequacy of environmental analysis, rather than the project itself, have received a response. Comments have been received from State and local agencies, private citizens, private companies, and citizen groups.

### Note on Project Description

Subsequent to the publication of the DEIR, the applicant has eliminated one component of the project. Wastewater reuse was proposed on one of two alternative sites: one location in Alameda County to the west of the site, and one area north of the site on Fabian Tract. Fabian Tract is no longer considered by the applicant as a reuse site for treated wastewater. The DEIR analysis on wastewater disposal on Fabian Tract remains unchanged.