

Draft Environmental Impact Report
for the
Union Ranch Specific Plan



SCH# 2004092016

VOLUME I – Text and Appendices A and B

Prepared for
City of Manteca

Prepared by



January 13, 2005

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for the
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Prepared for
City of Manteca
Community Development/Planning Department
1001 W. Center Street
Manteca, CA 95337

Contact
Kyle Kollar
Community Development Director
209/239-8422

Prepared by

EDAW
2022 J Street
Sacramento, CA 95814

Contact
Amanda Olekszulín
Project Manager
916/414-5800
January 13, 2005

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1 INTRODUCTION

1.1 PURPOSE OF THE EIR

The City of Manteca has prepared this Draft Environmental Impact Report (Draft EIR) to disclose the potential environmental effects of the proposed Union Ranch Specific Plan (project). This Draft EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended through Public Resources Code §21000 et seq.) and the State CEQA Guidelines (California Code of Regulations §15000 et seq.). An EIR is a full disclosure, public information document in which the significant environmental impacts of a project are evaluated, feasible measures to mitigate significant impacts are identified, and alternatives to the project that can reduce or avoid significant environmental effects are considered.

An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies. The lead agency is the public agency with primary responsibility over the project. In accordance with State CEQA Guidelines §15051(b)(1), “the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose.” IN the case of the proposed project, the lead agency is the City of Manteca, who will be responsible for overall approval.

The purpose of an EIR is not to recommend either approval or denial of a project. CEQA requires decision-makers to balance the benefits of a project against its unavoidable environmental effects in deciding whether to carry out a project. The lead agency will consider the Draft EIR, comments received on the Draft EIR, and responses to those comments before making a decision. If environmental impacts are identified as significant and unavoidable, the lead agency may still approve the project if it determines that the social, economic, or other benefits outweigh the unavoidable impacts. The lead agency would then be required to prepare “Findings” and a “Statement of Overriding Considerations” that discuss the specific reasons for approving the project, based on information in the EIR and other information in the record.

1.2 SCOPE OF THE EIR

Pursuant to §15143 of the State CEQA Guidelines, a lead agency may limit the EIR’s discussion of environmental effects to specific issues where significant effects on the environment may occur. The City of Manteca used a variety of information to determine which issue areas would result in potentially significant or significant effects on the environment. This information included field surveys of the project site, review of project characteristics, comments from public and agency consultation, and comments received on the Notice of Preparation (NOP). An NOP was circulated to public agencies and the public on September 6, 2004, for a 30-day review period. A public scoping meeting was held on September 21, 2004 at 6:30 pm in the Manteca City Council Chambers. Comments received on the NOP and from the public scoping meeting are included in Appendix A.

Based on the NOP, comments received at the public scoping meeting, public comments on the NOP, and preliminary analysis, the project would have less-than-significant impacts on recreation as discussed below. Recreation will not be evaluated further in this Draft EIR.

1.3 EFFECTS FOUND NOT TO BE SIGNIFICANT

This section contains a discussion of the environmental effects found not to be significant pursuant to the State CEQA Guidelines §15128, which provides that “[a]n EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.” The following effect on recreation was found not significant and is not included in the detailed analysis of potential project impacts.

In summary, the project includes creation of approximately 70 acres of open space and public park land on the project site to serve future residents and existing surrounding neighborhood residents of the development. Further, an open space area would be provided for the residents of the senior housing facility. These recreation facilities would adequately serve the proposed development and would exceed typical recreation amenities required by the City of Manteca. The project would not result in the need for new or expanded recreational facilities above what is already proposed. As a result, recreational impacts of the project are not evaluated further in this Draft EIR.

1.4 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

The City of Manteca is the lead agency with primary authority for approval of the project. Additional agencies (listed below) with potential permit or approval authority over the project, or elements thereof, will have the opportunity to review this document during the public review period, and will use this information in consideration and issuance of any permits required for the project.

Public agencies with known or potential permits, other approvals, or jurisdiction by law over resources on the site include but may not be limited to:

Lead Agency

- ▶ City of Manteca (project approval)

State Responsible Agencies

- ▶ California Department of Toxic Substances Control (DTSC) (Underground Storage Tank Abandonment Permit)
- ▶ State of California Regional Water Quality Control Board (RWQCB) (National Pollutant Discharge Elimination System Permit)

- ▶ Office of Historic Preservation/State Historic Preservation Officer (SHPO) (consultation for onsite resources)

State Trustee Agencies

- ▶ California Department of Fish and Game (DFG) (Streambed Alteration Agreement, California Endangered Species Act Permit)

Local Responsible Agencies

- ▶ San Joaquin County Local Agency Formation Commission (LAFCO) (Annexation approval)
- ▶ San Joaquin Valley Air Pollution Control District (Authority to construct and permit to operate)
- ▶ San Joaquin Council of Governments (SJCOG) (Implementation of San Joaquin County Multi-species Habitat Conservation and Open Space Plan [SJMSCP])

Federal Agencies

- ▶ U.S. Army Corps of Engineers (USACE) (Section 404 of Clean Water Act Permit, Section 10 of the Rivers and Harbors Act permit)
- ▶ U.S. Fish and Wildlife Service (USFWS) (Federal Endangered Species Act permit)

1.5 PUBLIC REVIEW PROCESS

Consistent with the requirements of CEQA, a good faith effort has been made during the preparation of this Draft EIR to contact affected agencies, organizations, and individuals who may have an interest in the project. As described above, this effort included the circulation of the NOP on September 6, 2004 and a public scoping meeting in the City of Manteca on September 26, 2004. In addition, early consultation with relevant agencies, organizations, and individuals assisted in the preparation of this Draft EIR. The City of Manteca has filed a Notice of Completion (NOC) with the Governor's Office of Planning and Research, State Clearinghouse, indicating that this Draft EIR has been completed and is available for review and comment by the public. This Draft EIR is being circulated for a 45-day public review period, during which time written comments will be received by the City of Manteca at the following address:

Kyle Kollar, Community Development Director
City of Manteca
1001 W. Center Street
Manteca, CA 95337
Facsimile: (209) 825-2349
Email: kkollar@ci.manteca.ca.us

Copies of the Draft EIR can be found at the following addresses:

Manteca City Clerk
1001 W. Center Street
Manteca, CA 95337

City of Manteca Community Development Department
1001 W. Center Street
Manteca, CA 95337

Manteca Branch Library
Stockton-San Joaquin County Public Library
320 West Center Street
Manteca, CA 95336

PUBLIC HEARING

A public hearing on this Draft EIR will also be held at the Manteca City Council Chambers on February 15, 2005, during the review period, to receive oral comments on the document. A public Notice of Availability of the Draft EIR, which also includes the date, time, and specific location for the public hearing, has been published in the Manteca Bulletin.

1.6 TERMINOLOGY USED IN THE EIR

This Draft EIR includes the following terminology to denote the significance of environmental impacts of the project:

Less-than-significant Impact: A less-than-significant impact is one that would not result in a substantial and adverse change in the environment. This impact level does not require mitigation.

Significant Impact: CEQA §21068 defines a significant impact as one that causes “a substantial, or potentially substantial, adverse change in any of the physical conditions in the area affected by the project.” Feasible mitigation measures or alternatives to the project must be considered to reduce the magnitude of significant impacts to less-than-significant levels.

Potentially Significant Impact: A potentially significant impact is one that, if it were to occur, would be considered a significant impact as described above; however, the occurrence of the impact cannot be definitely determined. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact and would require mitigation.

Significant and Unavoidable Impact: A significant and unavoidable impact is one that would result in a substantial adverse effect on the environment that cannot be feasibly mitigated to a less-than-significant level. A project with significant unavoidable impacts can still be approved, but the city would be required to prepare a Statement of Overriding Considerations, pursuant

to State CEQA Guidelines §15093, explaining the social, economic, or other benefits of the project that outweigh the significant environmental impacts.

Thresholds of Significance: A criterion to define at what level an impact would be considered significant. A criterion is defined based on examples found in CEQA or the State CEQA Guidelines, scientific and factual data relative to the lead agency jurisdiction, views of the public in affected areas, the policy/regulatory environment of affected jurisdictions, and other factors.

1.7 EIR ORGANIZATION

This Draft EIR is organized into chapters, as identified and briefly described below. Chapters are further divided into sections (e.g., Section 3.1, Land Use and Agricultural Resources).

Chapter 1, Introduction. Chapter 1 describes the purpose and organization of the Draft EIR, context, and terminology used in the Draft EIR.

Chapter 2, Executive Summary. This section summarizes the project description, alternatives to the project, significant environmental impacts that would result from the project, and mitigation measures proposed to reduce or eliminate those impacts.

Chapter 3, Project Description. Chapter 3 describes project location, background, proposed actions by the applicants, lead agency, Trustee and Responsible Agency actions, project characteristics, and project objectives. This chapter also describes project construction and regulatory requirements.

Chapter 4, Existing Conditions, Thresholds of Significance, Environmental Impacts, and Mitigation Measures. For each environmental issue area, this chapter describes the existing environmental setting, discusses the environmental impacts associated with the proposed project, and identifies mitigation for the impacts.

Chapter 5, Cumulative Impacts. This chapter contains a discussion of cumulative impacts that would result from the proposed project in combination with reasonably foreseeable projects in the project area.

Chapter 6, Other CEQA-Mandated Sections. The potential for the project to foster economic or population growth, or remove obstacles to growth are evaluated in Chapter 6. Project and cumulative impacts that cannot be mitigated to a less-than-significant level are also documented in this chapter.

Chapter 7, Alternatives to the Project. This chapter describes alternatives to the project, at a level consistent with CEQA requirements; State CEQA Guidelines §15126.6(d). This chapter presents brief descriptions of alternatives that could mitigate the project's environmental impacts while meeting most of the project's objectives. This chapter also describes alternatives previously considered and rejected.

Chapter 8, References. This chapter sets forth a comprehensive listing of all sources of information used in the preparation of the Draft EIR, including agencies or individuals consulted during preparation of the Draft EIR.

Chapter 9, Report Preparation. This chapter identifies the Draft EIR authors and consultants who provided analysis in support of the Draft EIR's conclusions.

Appendices. Appendices contain various technical reports, letters, official publications, summarized or otherwise used for preparation of the Draft EIR.

1.8 TECHNICAL STUDIES USED IN THE EIR

Several studies or reports have been prepared in support of the analysis presented in this Draft EIR and are included in the appendices, where appropriate. In addition, the following studies and reports were prepared in connection with the project, and are available at the City of Manteca, Community Development Department, 1001 West Center Street, Manteca, CA 95337.

- ▶ *Draft Environmental Impact Report, Volumes 1 and 2, Manteca General Plan 2023* (Wade Associates 2003)
- ▶ *City of Manteca General Plan 2023 Policy Document* (Wade Associates 2003)
- ▶ *Union Ranch Specific Plan* (The HLA Group 2004)
- ▶ *Phase I Environmental Site Assessment Approximately 500-Acres Union Ranch Specific Plan Lathrop Road and Union Road Manteca, California* (Kleinfelder 2002)
- ▶ *Phase I Environmental Site Assessment Approximate 356-Acre Property at Union Ranch Manteca, California* (Kleinfelder 2003)
- ▶ *Geotechnical Services Report Union Ranch Subdivision Manteca, California* (Kleinfelder August 2003)
- ▶ *Geotechnical Services Report Union Ranch Subdivision Manteca, California* (Kleinfelder December 2003)
- ▶ *Biological Resources Constraints Analysis for the Union Ranch Project Manteca, California* (Monk & Associates 2003)
- ▶ *Circulation Study Relating to Union Ranch Partners Project Manteca, CA* (kdAnderson 2003)
- ▶ *Circulation Study Relating to Union Ranch Partners Project Manteca, CA* (kdAnderson 2004)
- ▶ *Sun City Lincoln Hills EDU Study. Final Report* (Fehr & Peers 2001)
- ▶ *Union Ranch Annexation Boundary Map* (Thompson-Hysell Engineers 2004)

- ▶ *Tentative Subdivision Maps for Union Ranch* (Thompson-Hysell Engineers 2004)
- ▶ *Union Ranch Preliminary Land Use Plan* (The HLA Group 2003)
- ▶ *Community Design Plan* (The HLA Group 2003)

1.9 LIST OF ACRONYMS AND ABBREVIATIONS

The following acronyms and abbreviations are used in the Draft EIR.

CARB	California Air Resources Board
Caltrans	California Department of Transportation
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
City	City of Manteca
CO	carbon monoxide
DFG	California Department of Fish and Game
Draft EIR	Draft Environmental Impact Report
EIR	Environmental Impact Report
ESA	Federal Endangered Species Act
FEIR	Final Environmental Impact Report
FHWA	Federal Highway Administration
GPS	Global Positioning System
kV	Kilovolt
LAFCO	Local Agency Formation Commission
MG	million gallons
NAHC	Native American Heritage Commission
NOI	Notice of Intent
NOP	Notice of Preparation
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
SCSWSP	South County Surface Water Supply Project
SHPO	State Historic Preservation Officer

SJMSCP	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan
SJCOG	San Joaquin Council of Governments
SR	state route
URSP	Union Ranch Specific Plan
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

2 EXECUTIVE SUMMARY

2.1 INTRODUCTION

The Union Ranch Specific Plan (URSP) is a proposal by Union Ranch Partners, LLC to develop a 553-acre site, located at the northeast and northwest corners of Union Road and Lathrop Road, with single-family residential, senior housing, and park uses. Two areas proposed for commercial mixed-uses are also included in the URSP. The project site is owned by a number of private landowners. The property would be sold to the project developers once the EIR is certified and if the project is approved. The environmental analysis in this Draft EIR is based on an evaluation of how environmental conditions would be expected to change as a result of implementing the project. Public comments on the Draft EIR will provide important input for the city's decision on the proposed project. This section summarizes the information contained in the Draft EIR, including a summary of the project description, environmental impacts, mitigation measures, and alternatives.

2.2 THE EIR PROCESS

The City of Manteca, as lead agency or public agency that has the primary authority to approve the project, must certify the EIR as being adequate according to the California Environmental Quality Act (CEQA), and consider its environmental information when taking action on the project. Other public agencies with approvals of the project are considered responsible agencies; these agencies would consider the environmental effects of the project based on this Draft EIR. The purpose of an EIR is to identify and assess the environmental impacts that would directly or indirectly occur as a result of the project.

The Draft EIR has been released for public review to receive comments from interested parties on its completeness and adequacy in disclosing the environmental effects of the project. Written responses to significant environmental points raised in comments will be prepared and published. Together, the Draft EIR, comments received on the Draft EIR, and the responses to comments will constitute the Final EIR.

2.3 SUMMARY OF THE PROJECT DESCRIPTION

2.3.1 PROJECT LOCATION

The project site is located at the northeast and northwest corners of Union Road and Lathrop Road, partially within the City of Manteca's sphere of influence. The City of Manteca incorporated city limit is located along the southern property line of the project site along Lathrop Road. The project site is bordered by single-family residences to the south, and by agricultural uses to the west, north, and east. Union Road bisects the project site. Refer to Chapter 3, Project Description, for project vicinity and location exhibits.

2.3.2 OBJECTIVES OF THE PROJECT

The City of Manteca, as the lead agency, has developed the following primary objectives to satisfy the requirements of the State CEQA Guidelines §15124 (b):

- ▶ Provide to the City of Manteca (and the surrounding region) long-term community benefits, including generation of permanent employment opportunities and fiscal benefits from tax-generating land uses.
- ▶ Provide a residential community that is consistent with the land use patterns envisioned in the City of Manteca General Plan and that provides supporting commercial, open space, and public facilities.
- ▶ Develop an integrated mixed-use master-planned community that includes employment-generating uses, recreation opportunities, and a range of housing types including a master planned active adult community.
- ▶ Integrate the project site with the surrounding development and circulation pattern by creating street and pedestrian connections.
- ▶ Provide a pedestrian-friendly, human scale community environment that provides a safe and pleasant place for people to live, work and recreate.

2.3.3 ELEMENTS OF THE PROJECT

The project site currently consists of agricultural uses such as orchards, cattle grazing and goat dairy, fallow farmland, and rural residences and associated outbuildings. An existing hay supply business is on the northwest corner of Union Road and Lathrop Road intersection in the proposed project area. Scattered residences are located along Union Road, Lathrop Road, along Airport Way.

The project includes the sale of the property to a residential developer. When appropriate entitlements are obtained and the property is sold, the project developer would remove all existing site structures and develop 341 high density residential dwelling units, 1,425 active adult single-family dwelling units, 535 traditional single-family dwelling units, and approximately 69 acres of open space and parkland. Other project features include construction of 4 onsite stormwater detention basins. Construction of the URSP is expected to proceed in 7 phases. Construction of Phase 1 is estimated to begin in 2005 and complete project buildout is estimated for 2011.

2.3.4 SUMMARY OF ALTERNATIVES TO THE PROJECT

This EIR evaluates the following alternatives to the project:

- ▶ No Project Alternative – Continuation of Existing Conditions
- ▶ Mitigated Design Alternative
- ▶ Offsite Alternative

The No Project Alternative and the Mitigated Design alternative are environmentally superior to the project. The Offsite Alternative is environmentally similar to the project and would result in comparable impacts, but at an offsite location.

The No Project Alternative would not attain any of the project's objectives. The Mitigated Design Alternative would partially attain some of the project's objectives

NO PROJECT ALTERNATIVE – CONTINUATION OF EXISTING CONDITIONS

The No Project Alternative–Continuation of Existing Conditions assumes that existing conditions at the project site remain. This means that the project site would continue existing agricultural operations including grazing, orchards, and row crop farming. No new facilities would be constructed. The project site would remain under the jurisdiction of San Joaquin County, and partially within the Sphere of Influence of the City and County. Although both the City and County General Plans foresee development in this area, this analysis uses existing conditions as the “no project” scenario to allow consideration of a full range of alternatives. Although this alternative is evaluated herein, it is an unlikely long-term alternative for the URSP area because of the presumed development assumed in the City and County's General Plans. In short, given the City and County General plan designations for urban development, future development interest in the site is extremely likely. However, it is too speculative at this time to determine and evaluate the types of facilities and operations that could be located on the project site under a different development scenario.

Consistent with CEQA requirements, the No Project Alternative is evaluated in this EIR. The No Project Alternative would not meet any of the objectives of the project and would not be consistent with the intent of the City's General Plan, which calls for development of residential and commercial land uses.

MITIGATED DESIGN ALTERNATIVE

The Mitigated Design Alternative is designed to avoid or reduce several of the environmental impacts identified for the project including minimizing impacts to farmland, noise compatibility, air quality, traffic, sensitive habitats and species, and cultural resources. With this alternative, a reduced density development would be implemented in a reduced portion of the project site.

In general, this alternative would avoid development of the areas of the project site that are west of Union Road (Exhibit 7-1, in section 7 of this document). Based on review of SJVAPCD thresholds, a potential mitigated development option would be to eliminate commercial mixed-use (CMU) areas from the site, and restrict the number of housing units to 460. At this level of development, it is anticipated that the project's long-term criteria air pollutants would be below applicable thresholds and would eliminate the project's significant and unavoidable impacts. It should be noted that a variety of development patterns (i.e., residential/CMU) could be developed under this alternative; however, the development intensity could only be at a level that would generate emissions comparable to a 460-unit residential development. For purposes of this analysis, a 460-unit residential development is assumed. All development

would be concentrated east of Union Road to avoid significant impacts to freshwater marsh. This alternative would result in the development of 460 active adult single-family housing units onsite, 20% of the total proposed for the project. In general, the pattern of land uses under this alternative would be substantially similar to the pattern of land uses proposed for the project east of Union Road.

Proposed infrastructure and facilities that would serve the development (i.e., roadways, drainage, parks, etc.) would be similarly reduced. All existing site structures in the area where construction would occur would be demolished and removed from the site. Access to the proposed development would be provided from Union Road. Park access would be provided from the interior of the project site. Site landscaping and setbacks would be in accordance with applicable City guidelines.

The Mitigated Design Alternative would partially meet project objectives by providing a development that is consistent with land use patterns envisioned by the City's General Plan at a reduced scale, and that is integrated into surrounding communities. However, the Mitigated Design Alternative would not be consistent with the project objective to provide a ranges of housing types, and because of its substantially reduced size, it may be economically infeasible to develop a project of this size.

OFFSITE ALTERNATIVE

An offsite alternative would require the location of another potentially feasible site for development of uses consistent with those of the project. As directed in the State CEQA Guidelines §15126.6(f) (2) (A), "the key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location." Because certain significant effects of the project are site-specific (such as the conversion of prime and important farmland, intersection impacts), it would be conceivable that an alternative location could avoid the significant effect. Therefore, it is valid to determine if feasible alternative locations may exist in the area.

The State CEQA Guidelines §15126.6(f) (2) (B) indicates that "if the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion." If feasible alternative locations do not exist, the EIR analysis need not continue to consider the issue of an offsite alternative.

The area in which it is reasonable to search for alternative sites would be the jurisdiction of the lead agency, the City of Manteca. Because the project would require the annexation of the URSP to the City, areas that fall within the County's jurisdiction adjacent to the City's urban limits would also be reasonable for this analysis. A site that could feasibly attain the basic objectives of the project would need to be of comparable size, with adequate access to roadways and utilities to support residential development, in a location where residential uses would be consistent with the General Plan designation and compatible with adjacent uses.

An examination of developable parcels in the City and a review of the City of Manteca General Plan Land Use Element led to the conclusion that a feasible alternative location for the project

exists in the southern portion of the City. Currently, there is a large area of undeveloped land south of Woodward Avenue, west of Manteca Road (Main Street), and east of Airport Way, that is within the City's Primary Urban Services Boundary and is of sufficient size to accommodate a 553-acre development. In general, this area is designated for low density land uses, with a small area designated for CMU, and medium and high density residential land uses. These land use designations are comparable to existing land use designations for the URSP site and would be feasible for development of the Offsite Alternative. The Offsite Alternative would result in similar land uses and land use patterns as the project including the same number of housing units and areas of CMU.

The Offsite Alternative would meet all the project objectives including the provision of a residential community that is consistent with land use patterns envisioned in the City's General Plan, development of an integrated mixed master plan community, and integration with surrounding development. However, the proposed location for the Offsite Alternative is not owned by the project applicants. Further, it is unknown whether land owners would be willing to sell their property. This alternative would require substantial time and investment to research the feasibility of acquiring the site, which make this alternative potentially infeasible from a development standpoint.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The State CEQA Guidelines require identification of an environmentally superior alternative. If the No Project Alternative is environmentally superior, CEQA requires selection of the "environmentally superior alternative other than the no project alternative" from among the project and the alternatives evaluated.

Table 7-1 (in Section 7 of this document) identifies whether each of the three alternatives would have "greater," "less," or "similar" impacts as the project for each of the 13 environmental issues evaluated in this Draft EIR. The No Project Alternative would have greater impacts than the project in one issue area, lesser impacts in nine, and similar impacts in three. The Mitigated Design Alternative would have lesser impacts than the project in 10 issue areas and similar impacts in 4. The Offsite Alternative would have similar impacts to the project in all 13 issue areas.

Based on the listing of lesser and greater impacts as identified in Table 7-1 (in Section 7 of this document), the No Project Alternative would appear to be the environmentally superior alternative. The project would result in 13 significant and unavoidable impacts in 5 resource areas: agricultural resources, visual resources, air quality, noise, transportation. The No Project Alternative, by comparison would not result in any significant and unavoidable impacts. It would have greater impacts than the project with respect to water quality (associated with stormwater runoff from agricultural activities). Nevertheless, because it would not result in any significant and unavoidable impacts, it is the environmentally superior alternative and it is superior to all other alternatives considered.

By comparison, the Mitigated Design Alternative would reduce, but not to a less-than-significant level, most of the project's significant and unavoidable impacts and would eliminate

the project's significant and unavoidable air quality impact. Because overall less development would occur, although this alternative would still contribute to the listed significant and unavoidable impacts, its contributions would be less than what would occur with the project. For these reasons, the Mitigated Design Alternative is environmentally superior to the project.

The environmental effects of the Off-Site Alternative would be comparable to the project, because it would result in a similar level of development on a substantially similar site and the same levels of construction and operational impacts (i.e., air quality, noise, traffic, biological resources). This alternative would not reduce or eliminate the project's listed significant and unavoidable impacts. Overall, this alternative would be environmentally similar to the project.

2.4 SUMMARY OF ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

Table 2-1, presented at the end of this chapter, provides a summary of the project-specific environmental impacts of the project, the level of significance of the impact before mitigation, recommended mitigation measures, and the level of significance of the impact after implementation of the mitigation measures.

The project would result in project-level significant and unavoidable adverse impacts in 5 areas: transportation and circulation, air quality, noise, agricultural resources, and aesthetic resources. In addition, the project would contribute to cumulative significant and unavoidable adverse impacts in 6 areas: transportation and circulation, air quality, noise, public utilities, agricultural resources, and aesthetic resources.

2.5 AREAS OF CONTROVERSY

Section 15123 of the CEQA Guidelines requires the summary section of an EIR to include "areas of controversy known to the lead agency."

The following issues, in no order of importance, are controversial issues known to the City of Manteca:

- ▶ Traffic congestion along area roadways
- ▶ Conversion of farmland to urban uses
- ▶ Visual impacts of the project (i.e., density, lighting, character)
- ▶ Extension of water and wastewater services to the site
- ▶ Continued drawdown of the local groundwater table
- ▶ Available capacity of wastewater treatment facilities

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.1 LAND USE</p> <p>4.1-1 Conflicts with Land Use Plans, Policies, or Regulations. The project would be annexed to the City of Manteca and subject to the City's land use authority. The project would be consistent with the City's land use designations for the site. Some of the City's zoning definitions would be modified to be consistent with proposed land uses outlined in the URSP, but the zoning definitions would be consistent with the City's General Plan land use designations. Following approval of the annexation of the project site to the City of Manteca by LAFCO, the proposed URSP would be consistent with the City's land use and zoning designations. This would be a less-than-significant impact.</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>
<p>4.1-2 Alteration of Land Use and Potential Conflicts with Existing or Future Land Uses Adjacent To the Project Site. Long-term impacts on adjacent land owners and conflicts associated with noise, odor, and dust from agricultural operations are expected to be minimal because the URSP site is bordered by urban and public/quasi-public land uses to the south. The proposed development is located adjacent to agricultural operations to the north, west, and east, and within the URSP area and implementation of the project could induce the conversion of adjacent agricultural lands to urban land uses. Potential conflicts between ongoing agricultural operations and development of the URSP area would be significant.</p>	<p>S</p>	<p>The project applicant shall phase the development of agricultural lands in the URSP area in such a way as to avoid the fragmentation of continuing agricultural operations. As development occurs in the URSP area, fencing, walls, or other suitable barriers shall be constructed or established at the interface between development and adjacent agricultural lands. Growers cultivating lands near or adjacent to urban development in the URSP area can be expected to comply with all necessary federal, state, and local restriction regarding buffers between pesticide/herbicide applications and sensitive areas, such as schools, residences, and parks. Required buffer distances may vary depending on the type of chemicals used and the method of application.</p>	<p>SU</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>Residents and other individuals purchasing property near agricultural lands shall be provided information on the types of conflicts that may occur and appropriate means to address these conflicts, consistent with the City's Right-to-Farm Ordinance.</p> <p>With regards to increased potential for the conversion of agricultural lands to the north, the project applicant shall implement Mitigation Measure 4.1-4 (below). The project applicant could also purchase land to the north to establish conservation easements to prevent future development of agricultural areas. However, these lands are designated for future residential lands uses in the City's General Plan and would conflict with intended land uses for the area. Further, it is the policy of the City to implement its General Plan. Therefore, implementation of conservation easements within the City would be infeasible.</p> <p>Although Mitigation Measure 4.1-4 would substantially lessen significant impacts associated with farmland conversion impacts, the fees paid to the SJMSCP would only partially offset conversion of Important Farmland. Therefore, full compensation for potential losses of Important Farmland would not be achieved, and this impact would remain significant and unavoidable.</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.1-3 Potential for Division of an Existing Community. The project would not physically divide an established community. The existing rural residences and associated outbuildings do not constitute a defined community and would be incorporated into the new community created by the project. For this reason, this would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.1-4 Direct Conversion of 530 Acres of Important Farmland to Nonagricultural Urban Use. Implementation of the project would result in the direct conversion of approximately 289 acres of Farmland of Statewide Importance and 241 acres of Prime Farmland to nonagricultural urban use. Conversion of agricultural land would be a significant impact.</p>	S	<p>The project applicant shall participate in the SJMSCP. Appropriate fees shall be paid by the project applicant to the City for forwarding to SJCOG on a per-acre basis for lost agricultural land during development of proposed URSP and associated offsite utility infrastructure. The SJCOG will use these funds to purchase conservation easements on agricultural and habitat lands in the project vicinity (in the Central Index Zone identified in the SJMSCP). The preservation in perpetuity of agricultural lands through the SJMSCP, a portion of which would consist of Important Farmland, would ensure the continued protection of farmland in the project vicinity, partially offsetting project impacts.</p> <p>Implementation of Mitigation Measure 4.1-4 would substantially lessen significant impacts associated with the conversion of Important Farmland on the URSP site and associated utility corridors because funding conservation easements would provide assistance to public and private sectors in protecting other farmland from the pressures of development. The easements are purchased for land exhibiting benefits to wildlife, including a combination of habitat, open space, and agricultural lands, so the</p>	SU

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>compensation provided by the fee contribution for the project would not be applied exclusively to agricultural lands. Therefore, fees contributed to the SJMSCP would only partially offset conversions of Important Farmland associated with project impacts implementation. In addition, no new farmland would be made available, and the productivity of existing farmland would not be improved as a result of the SJMSCP mitigation. Therefore, full compensation for losses of Important Farmland would not be achieved. Impact 4.1-4 would remain significant and unavoidable after mitigation.</p>	
<p>4.1-5 Consistency with San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. The project would be consistent with the land use designations of the City and County general plans and, therefore would be consistent with the SJMSCP. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.2 VISUAL RESOURCES</p>			
<p>4.2-1 Impacts on a Scenic Vista. No views on or near the URSP project site would be considered a scenic vista. Therefore, development of the project would not alter or obscure views of a scenic vista. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.2-2 Damage to Scenic Resources within a State Scenic Highway. No state scenic highways are located within the vicinity of the project site. Therefore, implementation of the project would not result in damages to scenic resources along a state scenic highway. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.2-3 Degradation of Visual Character. Implementation of the project would substantially alter the visual character of the project site through conversion of agricultural land to developed urban uses. Assessment of visual quality is a subjective matter and reasonable people can disagree as to whether such an alteration in the visual character of the project site would also be considered a substantial degradation of the visual character. For this analysis, a conservative approach is taken, and the potential for degradation of the visual character of the project site would be considered a significant impact.</p>	S	Because of the scale and location of the URSP project, there is no feasible mitigation available to address aesthetic resource impacts associated with the conversion of agricultural land to urban development. Although design, architectural, development, and maintenance standards are included in the URSP to ensure that urban development in the plan area remains within certain aesthetic guidelines, there is no mechanism to allow implementation of the project while avoiding the conversion of the local viewshed from agricultural to urban development. Thus, impacts related to the degradation of the local viewshed through conversion of agricultural lands to urban development are considered significant and unavoidable.	SU
<p>4.2-4 Impacts from Lighting. The project would require lighting of new development that could inadvertently cause light and glare for motorists on adjacent roadways. In addition, the degree of darkness would diminish as a result of development, effectively obscuring views of stars, constellations, and other features of the night sky. Implementation of lighting guidelines included in the URSP would substantially reduce the potential level of light generated by the</p>	LTS	No mitigation is necessary.	LTS

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>project, thereby minimizing the potential for these effects. This would be a less-than-significant impact.</p>			
<p>4.3 AIR QUALITY</p>			
<p>4.3-1 Increases in Regional Criteria Pollutants during Construction. Construction associated with the URSP would result in the generation of NO_x, ROG, and PM₁₀ emissions. Sufficient emissions could be generated during project construction such that applicable air quality standards could be violated, or emissions would contribute substantially to an existing or projected air quality violation at nearby receptors. This would be a significant impact.</p>	<p>S</p>	<p>The SJVAPCD emphasizes implementation of effective and comprehensive control measures rather than requiring a detailed quantification of construction emissions. The SJVAPCD requires that all feasible control measures (dependent on the size of the construction area and the nature of the construction operations) shall be incorporated and implemented. Based on available information, it appears that the application of standard construction mitigation measures for the control of fugitive dust (i.e., the application of water or soil stabilizers) are effective methods of reducing dust-related impacts on agricultural crops. In accordance with SJVAPCD guidelines (SJVAPCD 1998), the following mitigation measures, which includes SJVAPCD Basic, Enhanced, and Additional Control Measures, shall be incorporated and implemented. . . It is recognized that SJVAPCD Regulation VIII, upon which the following control measures are based, has recently undergone revision and that these control measures are subject to future periodic revision. Therefore, the project applicant shall annually contact the SJVAPCD to identify the most recent fugitive dust control measures required to be implemented by the proposed project and implement them accordingly during project construction.</p>	<p>SU</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> ▶ All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover. ▶ All onsite unpaved construction roads and offsite unpaved construction access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant. ▶ All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking. ▶ During demolition of buildings all exterior surfaces of the building shall be wetted. ▶ When materials are transported offsite, all material shall be covered, effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained. ▶ All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.) ▶ Following the addition of materials to, or the removal 	

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>of materials from, the surfaces of outdoor storage piles, piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.</p> <ul style="list-style-type: none"> ▶ Onsite vehicle speeds on unpaved roads shall be limited to 15 mph. ▶ Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1 percent. ▶ Wheel washers shall be installed for all exiting trucks and equipment, or wheels shall be washed to remove accumulated dirt prior to leaving the site. ▶ Excavation and grading activities shall be suspended when winds exceed 20 mph. ▶ The overall area subject to excavation and grading at any one time shall be limited to the fullest extent possible. ▶ Onsite equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. ▶ When not in use, onsite equipment shall not be left idling. <p>In addition to the measures identified above, the following measures from Table 6-3 of the <i>Guide for Assessing and Mitigating Air Quality Impacts</i> shall be implemented:</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> ▶ Install wind breaks at windward sides of construction areas. (This measure will be implemented if the City, in coordination with the SJVAPCD, determines that the fugitive dust control measures described above are not sufficiently effective.) ▶ Comply with the NESHAPS during the renovation/demolition of any existing buildings on the project site with the potential to contain asbestos. Consult the SJVAPCD's <i>Asbestos-Compliance Assistance Bulletin</i>, dated December 1994, to ascertain whether individual structures on the project site are subject to NESHAPS. <p>The City, after consultation with the applicant, shall require all feasible additional measures to control construction emissions. Such measures may include, but are not limited to the following items from Table 6-4 of the <i>Guide for Assessing and Mitigating Air Quality Impacts</i> and other sources:</p> <ul style="list-style-type: none"> ▶ Use alternative-fueled construction equipment, where reasonably available, such as equipment capable of using biodiesel or emulsified fuel. ▶ Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use at any one time. ▶ Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set). 	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> ▶ Curtail construction during periods of high ambient pollutant concentration; this may include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways (or ceasing/reducing heavy-duty equipment usage on Spare the Air Days). ▶ Before construction contracts are issued, the project applicant would perform a review of new technology, as it relates to heavy-duty equipment, to determine what (if any) advances in emissions reduction are available for use and are economically feasible. Construction contracts/bid specifications shall require contractors to utilize the available and economically feasible technology on an established percentage of the equipment fleet. It is anticipated that in the near future both NO_x and PM₁₀ control equipment will be available. The SJVAPCD shall be consulted with on this process. <p>Implementation of Mitigation Measure 4.3-1 would substantially lessen impacts resulting from emissions associated with construction activities. All actions required by the SJVAPCD shall be implemented, which would be considered the extent of available feasible mitigation measures. Under most circumstances this would be sufficient to reduce impacts related to construction emissions to less-than-significant levels. However, the SJVAB is currently in nonattainment for PM₁₀ (serious nonattainment for federal standards) and ozone (severe nonattainment for state and extreme</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.3-2 Exposure of Sensitive Receptors to Toxic Air Contaminants. Commercial land uses proposed under the URSP would have the potential to emit toxic air contaminants. Although these facilities would be subject to stringent regulations, because the locations of these facilities in relation to sensitive receptors is not known at this time, there is a potential that sensitive receptors could be located in proximity to stationary- or mobile-source TAC emissions in excess of SJVAPCD significance thresholds. This would be a potentially significant impact.</p>	PS	<p>nonattainment for federal standards). Therefore, even with implementation of the mitigation measures described above, construction emissions associated with a project the size of the URSP (approximately 553 acres) could be sufficient to result in violations of applicable air quality standards, or could contribute substantially to an existing or projected air quality violation. Impact 4.3-1 would remain a significant and unavoidable impact.</p> <p>As indicated in the discussion of Impact 4.3-2, implementation of the proposed project would result in potentially significant increases in stationary-source and mobile-source TACs associated with Commercial land uses. The SJVAPCD shall impose various permitting conditions for stationary TAC sources. These conditions reflect the stringent application of air quality laws and substantially lessen the severity of potential impacts. However, as discussed above, even with implementation of permit conditions there is a potential that elements of the public could be exposed to levels of TACs that would exceed SJVAPCD significance thresholds. The only available mitigation to ensure no exposure of sensitive receptors to significant levels of TACs would be to completely separate emission sources from all sensitive receptor. However, many stationary TAC sources (gas stations, dry cleaners, auto repair facilities) are typically integrated with land uses containing sensitive receptors. Restricting the locations of all TAC generating facilities to specific areas would not be practical or economically feasible. Thus, implementing the project would result in</p>	SU

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>a significant and unavoidable adverse impact with respect to stationary-source TACs.</p> <p>Mobile-source TACs are a relatively new concern for the ARB, so specific guidelines and practices regarding assessing impacts and providing mitigation are not available. It is also unclear what effects the ARB's new diesel engine emission standards and diesel particulate matter regulations would have on the level of impact and the necessity for, or type of, mitigation. Therefore, the specific conditions of mobile-source TAC impacts cannot be determined at this time. The only available mitigation—completely separating emission sources (diesel vehicles) from all sensitive receptor—is not feasible. Therefore, no feasible mitigation is available for Impact 4.3-2 to reduce the impact to a less-than-significant level. Thus, implementing the proposed project would result in a significant and unavoidable adverse impact with respect to mobile-source TACs. The project applicant shall coordinate with the SJVAPCD as the project proceeds to assess situations in which toxic risk from diesel PM may occur and to review methodologies that may become available to estimate the risk.</p> <p>No other feasible mitigation is available at this time to reduce this impact to a less-than-significant level. Therefore, the exposure of sensitive receptors to toxic air contaminants would be a significant and unavoidable impact.</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.3-3 Increases in Odorous Emissions. Implementation of the URSP may result in the exposure of sensitive receptors to significant odors. This would be a potentially significant impact.</p>	<p>PS</p>	<p>As indicated in the discussion of Impact 4.3-3, implementation of the proposed project would result in exposure of onsite receptors to nearby existing odor sources and potential odor sources associated with development within the commercial mixed use districts. Compliance with SJVAPCD permit and nuisance rules related to odors would help to limit exposure of receptors to offensive odors. However, as discussed above, increases in odor complaints could potentially occur, due primarily to increased development downwind of the existing solid waste transfer station and, to a lesser extent, with potential development of minor odor sources within the plan area (e.g., dry cleaning establishments, restaurants, gasoline stations).</p> <p>No other feasible mitigation is available at this time to reduce potential odor impacts to a less-than-significant level. Therefore, potential exposure of sensitive receptors to odorous emissions would be a significant and unavoidable.</p>	<p>SU</p>
<p>4.3-4 Increases in Local Mobile-Source CO Concentrations. Implementation of the project would result in the generation of CO at nearby intersections from increased vehicular traffic on the local transportation network. However, the project would not contribute to CO concentrations that exceed the CAAQS of 9.0 ppm for 8 hours or 20 ppm for 1 hour. Therefore, the project's contribution to localized mobile- source CO concentrations at sensitive receptors</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>would be less than significant.</p> <p>4.3-5 Increases in Long-term Regional Emissions. Implementation of the project would result in increases in long-term regional emissions, primarily associated with mobile sources that would exceed the SJVAPCD's recommended significance thresholds of 10 TPY for ozone precursor pollutants ROG and NOX. This would be a significant impact.</p>	<p>S</p>	<p>The City, after consultation with the applicant, shall require that all feasible emission control measures be incorporated into project design and operation. Such measures may include, but are not limited to, the following items recommended in the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD 1998) and other sources. It should be noted that many of these measures are already included in the proposed project design (as indicated in parenthetical notes below); however, they are repeated here to allow a complete listing of the SJVAPCD guidelines.</p> <ul style="list-style-type: none"> ▶ Provide transit enhancing infrastructure that includes transit shelters, benches, street lightening, route signs and displays, and/or bus turnouts/bulbs (already incorporated into project design). ▶ Provide park and ride lots. ▶ Provide pedestrian enhancing infrastructure that includes sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs/ infrastructure, street furniture and artwork, street lightening, and/or pedestrian signalization and signs (already incorporated into the project design). ▶ Provide bicycle enhancing infrastructure that includes bikeways/paths connecting to a bikeway system, secure bicycle parking, and/or employee lockers and showers (bicycle lanes and trails already 	<p>SU</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>incorporated into the project design).</p> <ul style="list-style-type: none"> ▶ Use solar, low-emissions, central, or tankless water heaters (residential and commercial), increase wall and attic insulation beyond Title 24 requirements (residential and commercial), orient buildings to take advantage of solar heating and natural cooling and use passive solar designs (residential, commercial, and industrial), replace wood-burning stoves and fireplaces with gas-fired fireplaces or inserts. ▶ Deciduous trees should be planted on the south-facing and west-facing sides of buildings. ▶ Natural gas lines and electrical outlets should be installed in patio areas to encourage the use of gas and/or electric barbecues. ▶ Businesses or individuals shall be allowed, through the zoning and building permit process, the option of installing electric/natural gas fuel hookups. ▶ If a gasoline service station is developed as part of the proposed project, it is encouraged that natural gas fueling be incorporated as part of the station. ▶ The project applicant shall develop and implement a program to encourage employers to promote the use of low-emission vehicles, thus providing emission reductions. The program may include financial incentives, preferred parking, or other benefits for employees and businesses that use low-emission vehicles. 	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>► The City shall encourage the project applicant to develop/participate in a program to provide, or subsidize the purchase cost of electric lawnmowers and electric edgers for project homeowners.</p> <p>With implementation of Mitigation Measure 3.3-e, significant impacts relating to long-term regional emissions would be substantially lessened, but not mitigated to less-than-significant levels (i.e., mitigated to levels below the SJVAPCD's recommended significant threshold of 10 Tons/Year for ROG and 10 Tons/Year for NO_x [Table 4.3-5]). No other feasible mitigation is available to reduce this impact to a less-than-significant level. Thus, increases in long-term regional emissions attributable to the project would be considered a significant and unavoidable impact.</p>	
<p>4.4 NOISE</p> <p>4.4-1 Increases in Short-term Construction-generated Noise. Depending on the construction activities being performed, as well as the duration and hours during which activities occur, construction-generated noise levels at nearby residences could result in increased levels of annoyance and sleep disruption for occupants of nearby residences. This would be a significant impact.</p>	S	<p>(a) Construction activities shall be limited to the least noise-sensitive daytime hours of 7 a.m. to 7 p.m. Construction activities shall not be allowed on Sundays and legal holidays. These limitations shall be specified in all construction contracts and successors in interest.</p> <p>(b) In addition, all construction vehicles or equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and acoustical shields or shrouds, in accordance with manufacturers' recommendations. Construction equipment and truck routes shall be arranged to minimize travel</p>	LTS

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.4-2 Stationary-Source Noise Generated by Onsite Land Uses. Increases in stationary-source noise associated with proposed project land uses could potentially exceed the City's maximum allowable noise standards. This would be a significant impact.</p>	<p>S</p>	<p>adjacent to occupied residences. Stationary construction equipment and staging areas shall be located as far as possible from sensitive receptors.</p> <p>(a) When tentative subdivision maps and commercial uses are proposed, site-specific acoustical analyses shall be conducted to determine predicted noise impacts attributable to the proposed project taking into account site-specific conditions (e.g., site design, location of structures, building characteristics). The acoustical analysis shall evaluate stationary and mobile source noise attributable to the proposed use and impacts to nearby noise-sensitive land uses, in accordance with adopted City of Manteca noise standards. Feasible measures shall be identified to reduce project-related noise impacts. Mitigation measures may include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▶ Use of increased noise-attenuation measures in building construction (e.g., dual-pane, sound-rated windows; mechanical air systems; exterior wall insulation, etc.); ▶ Locating mechanical equipment (e.g., air conditioning and ventilation systems, pump stations, etc.) at the farthest distance from and/or be shielded from nearby existing and proposed noise-sensitive land uses; ▶ Limit noise-generating operational activities associated with the proposed commercial land uses, 	<p>SU</p>

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>including truck deliveries and the loading and unloading of materials.</p> <p>(b) The following measures shall apply to noise-generating activities associated with proposed recreational land uses, including neighborhood and community parks, trails, and open space areas:</p> <ul style="list-style-type: none"> ▶ Onsite landscape maintenance equipment shall be equipped with properly operating exhaust mufflers and engine shrouds, in accordance with manufacturers' specifications. ▶ The operation of onsite landscape maintenance equipment shall be limited to the least noise-sensitive daytime hours of 7 a.m. to 7 p.m. ▶ Outdoor use of amplified sound systems shall be limited to the least noise-sensitive daytime hours of 7 a.m. to 7 p.m. ▶ Use of on-site outdoor recreational facilities shall conform to City regulations. <p>Implementation of Mitigation Measure 4.4-2(a, b), along with compliance with the County's General Plan noise policies, would reduce stationary-source noise impacts. However, noise levels at some offsite noise-sensitive land uses could potentially exceed local noise-sensitive land with implementation of all feasible mitigation measures. Single-event noise levels at residential uses located adjacent to or within areas designated for commercial mixed-use would be of particular concern, because of intermittent noise typically associated with truck</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>deliveries and the loading/unloading of materials. This impact would be considered significant and unavoidable.</p> <p>Measures for mitigating traffic noise at existing offsite receptors typically include construction of sound walls/barriers, relocation or demolition of adversely affected residences, as well as implementation of sound insulation measures, including retrofit of existing windows and doors and increased insulation in wall cavities. Construction of a sound wall along some roadways, such as Union Road and Airport Road, may block access to existing dwellings and, consequently, may not be feasible mitigation. Usually, construction of sound walls is the most practical and cost-effective way to reduce traffic noise levels where such walls are feasible.</p> <p>Implementation of other noise-reduction methods (i.e., relocation or retrofit of structures) would be dependent on predicted noise levels and site-specific conditions (e.g., setback distances, location of outdoor activity areas, building construction characteristics, intervening terrain/structures). Implementation of Mitigation Measure 4.4-2(a) would reduce traffic noise impacts at existing offsite noise-sensitive receptors, but not necessarily to a less-than-significant level for all adversely affected offsite receptors. This impact would be considered significant and unavoidable.</p>	
<p>4.4-3 Increases in Existing Traffic Noise Levels. Implementation of the proposed specific plan would contribute to an increase in traffic noise levels in excess of adopted noise standards. This is would be a</p>	S	<p>Implement Mitigation Measure 4.4-2(a). Implementation of Mitigation Measure 4.4-2(a, b), along with compliance with the County's General Plan noise</p>	SU

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
significant impact.		<p>politics, would reduce stationary-source noise impacts. However, noise levels at some offsite noise-sensitive land uses could potentially exceed local noise criteria, even with implementation of all feasible mitigation measures. Single-event noise levels at residential uses located adjacent to or within areas designated for commercial mixed-use would be of particular concern, because of intermittent noise typically associated with truck deliveries and the loading/unloading of materials. This impact would be considered significant and unavoidable.</p> <p>Measures for mitigating traffic noise at existing offsite receptors typically include construction of sound walls/barriers, relocation or demolition of adversely affected residences, as well as implementation of sound insulation measures, including retrofit of existing windows and doors and increased insulation in wall cavities. Construction of a sound wall along some roadways, such as Union Road and Airport Road, may block access to existing dwellings and, consequently, may not be feasible mitigation. Usually, construction of sound walls is the most practical and cost-effective way to reduce traffic noise levels where such walls are feasible.</p> <p>Implementation of other noise-reduction methods (i.e., relocation or retrofit of structures) would be dependent on predicted noise levels and site-specific conditions (e.g., setback distances, location of outdoor activity areas, building construction characteristics, intervening terrain/structures). Implementation of Mitigation Measure 4.4-2(a) would reduce traffic noise impacts at</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.4-4 Compatibility of Proposed Land Uses with Projected Onsite Noise Levels. Predicted noise levels at some noise-sensitive receptors associated with the project would exceed the County's "normally acceptable" land use compatibility noise standards. As a result, this would be a significant impact.</p>	<p>S</p>	<p>Implement Mitigation Measure 4.4-2(a-b). Implementation of Mitigation Measure 4.4-2 would help to ensure compliance with Title 24 of the California Code of Regulations, which requires the preparation of an acoustical analysis for multifamily residences to achieve an interior noise level of 45-dBA CNEL/ Ldn. However, although implementation of Mitigation Measure 4.4-2 would be effective in reducing average daily interior noise levels of single- and multiple family residences, noise levels within outdoor activity areas of some proposed residences could still exceed adopted noise standards. In addition, single-event noise levels at some receptors could still occur, resulting in increased levels of annoyance and sleep disruption. Residences proposed for construction along major roadways, as well as those located adjacent to or within areas designated for commercial mixed-use would be of particular concern, due to intermittent noise typically associated with commercial truck deliveries and the loading/unloading of materials.</p> <p>Although, as previously discussed, agricultural activities on adjacent parcels may contribute to onsite noise levels, agricultural activities occurring with San Joaquin County are protected by the County's Right-To-Farm ordinance. Mitigation measures already included to reduce onsite</p>	<p>SU</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>exterior and interior noise levels, which may include application of increased building attenuation measures or sound barriers, may also help to reduce noise levels from nearby agricultural sources. However, additional mitigation measures are not available to directly reduce potential noise impacts associated with nearby agricultural operations. This impact would be considered significant and unavoidable.</p>	
4.5 BIOLOGICAL RESOURCES			
<p>4.5-1 Impacts on Common Plants and Wildlife. Implementation of the project would not substantially reduce available habitat or the population of any common plant or animal. This impact would be less than significant.</p>	LTS	No mitigation is necessary.	LTS
<p>4.5-2 Impacts on Special-Status Plants. Implementation of the project would result in loss and disturbance of freshwater marsh habitat that could support special-status plant species. This would be a potentially significant impact.</p>	PS	<p>(1) The project applicant shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the URSP.</p> <p>(2) Potentially suitable habitat for special-status plant species that would be affected by implementation of the URSP is currently present in the irrigation ditches in the project site. During the SJMSCP application process, SJCOG will determine whether the project site supports suitable habitat for special-status plant species. If SJCOG determines suitable habitat is present on or adjacent to the project site, the following SJMSCP incidental take avoidance and minimization measures for special-status plant species</p>	LTS

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>shall be implemented:</p> <p>(a) Before project construction, surveys for the special-status plants listed in Table 4.5-1 shall be conducted by a qualified botanist at the appropriate time of year when the target species would be in flower or otherwise clearly identifiable. Surveys shall be conducted in accordance with specific methodologies described in Section 5.2.2.5 of the SJMSCP. If special-status plants are found, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ Sanford's arrowhead and slough thistle: The SJMSCP requires complete avoidance for these species; therefore, potential impacts on these species could not be covered through participation in the plan. If these species are present in the project area and cannot be avoided, a mitigation plan shall be developed, with review and input from the regulatory agencies (e.g., DFG). The mitigation plan shall identify mitigation measures for any populations affected by the project, such as creation of off-site populations through seed collection or transplanting, preserving and enhancing existing populations, or restoring or creating suitable habitat in sufficient quantities to compensate for the impact. All mitigation measures that the City determines through this consultation to be necessary shall be 	

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>implemented by the project proponent. These measures shall be designed to ensure that the project does not result in a net reduction in the population size or range of Sanford's arrowhead and slough thistle.</p> <ul style="list-style-type: none"> ▶ Rose mallow and Delta tulle pea: These species are considered widely distributed species by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If these species are found in the project area, the possibility of establishing a conservation easement shall be evaluated. If dedication of a conservation easement is not a feasible option, payment of SJMSCP development fees may be used to mitigate impacts on these species. Use of conservation easements or development fees for establishment of habitat preserves, or a combination of the two mechanisms, shall be sufficient to avoid an overall net reduction in the population size or range of rose-mallow and Delta tulle-pea. ▶ Wright's trichocoronis: This species is considered narrowly distributed by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If this species is found in the project area, the possibility of establishing a conservation easement shall be evaluated. If 	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>dedication of a conservation easement is not an option, the SJMSCP requires a consultation with the permitting agency representatives on the Technical Advisory Committee to determine the appropriate mitigation measures. These may include seed collection or other measures and would be determined on a population basis, taking into account the species type, relative health, and abundance. After the appropriate mitigation has been determined, it shall be implemented by the project proponent.</p>	
<p>4.5-3 Impacts on Swainson's Hawk. Implementation of the project would result in loss of potential foraging habitat for Swainson's hawk and could affect nesting Swainson's hawks. This would be a significant impact.</p>	<p>S</p>	<p>(1) The project applicant shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the URSP.</p> <p>(2) Potentially suitable nesting habitat for Swainson's hawk that would be affected by implementation of the URSP is currently present in large suitable nesting trees in the project site. During the SJMSCP application process, SJCOG will determine whether the project site supports suitable nesting habitat for Swainson's hawk. If SJCOG determines suitable habitat is present on or adjacent to the project site, the following SJMSCP incidental take avoidance and minimization measures for Swainson's hawk shall be implemented:</p> <p>(a) If the project proponent elects to remove nest trees, then nest trees shall be removed between</p>	<p>LTS</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.5-4 Impacts on Western Burrowing Owl. Implementation of the project could result in loss of active burrows and disturbance of nesting owls. This would be a potentially significant impact.</p>	PS	<p>September 1 and February 15, when the nests are unoccupied.</p> <p>(b) If the project proponent elects to retain a tree with an active nest or a nest becomes established in a suitable nest tree during the construction period, a setback shall be established that excludes all construction activities within a distance of two times the dripline of the tree, measured from the nest. This setback shall be maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave the nest. Setbacks shall be marked by brightly colored temporary fencing or other obvious markers.</p>	LTS
		<p>(1) The project applicant shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the URSP.</p> <p>(2) Potentially suitable nesting habitat for burrowing owl that would be affected by implementation of the URSP is currently present along the sandy banks of the irrigation ditches and along the dirt berm at the water storage basin in the project site. During the SJMSCP application process, SJCOG will determine whether the project site supports suitable nesting habitat for burrowing owl. If SJCOG determines suitable habitat is present on or adjacent to the project site, the following SJMSCP incidental take avoidance and minimization measures for burrowing owl shall</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>be implemented:</p> <p>(a) Burrowing owls may be discouraged from entering or occupying construction areas by discouraging the presence of ground squirrels. To accomplish this, the project proponent could prevent ground squirrels from occupying the project site by employing one of several methods outlined in Section 5.2.4.15 of the SJMSCP. These include retention of tall vegetation, regular discing of the site, or use of chemicals or traps to kill ground squirrels.</p> <p>(b) Preconstruction surveys for burrowing owls shall be conducted within 75 meters of areas of project activity in locations with potential burrow habitat, including field edges, roadsides, levees, and fallow fields. Actively farmed agricultural fields and regularly disced or graded fields do not provide suitable burrow sites and need not be surveyed. The survey shall be conducted within 1 week before the beginning of construction. If burrowing owls are found, the following measures shall be implemented:</p> <ul style="list-style-type: none"> ▶ During the nonbreeding season (September 1 through January 31), burrowing owls occupying the project site shall be evicted from the project site by passive relocation as described in the DFG's Staff Report on Burrowing Owls (DFG 1995). 	

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.5-5 Impacts on Nesting Raptors. Implementation of the project could result in loss of active nests and disturbance of nesting raptors. This would be a potentially significant impact.</p>	<p>PS</p>	<p>► During the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a 75-meter protective buffer until and unless the Technical Advisory Committee, with the concurrence of the permitting agencies' representatives on the Technical Advisory Committee, or a qualified biologist approved by the permitting agencies, verifies through noninvasive means that either (1) the birds have not begun egg laying or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. After the fledglings are capable of independent survival, the burrow can be destroyed.</p> <p>(1) The project applicant shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the URSP.</p> <p>(2) Potentially suitable nesting habitat for common raptors that would be affected by implementation of the URSP is currently present in large suitable nesting trees in the project site. During the SJMSCP application process, SJCOG will determine whether that specific project site supports suitable nesting habitat for common raptors. If SJCOG determines suitable habitat is present on or adjacent to the project site, the following SJMSCP incidental take avoidance</p>	<p>LTS</p>

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>and minimization measures for common raptors shall be implemented:</p> <p>(a) If project activity would occur during the raptor nesting season (February 15 through September 15), preconstruction surveys shall be conducted during the nesting season in suitable nesting habitat within 100 feet of areas of project activity. Large trees throughout the project area provide suitable habitat. The survey shall be conducted within 1 week before the beginning of construction or tree removal.</p> <p>(b) A setback of 100 feet from active nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of nests that are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing.</p>	
<p>4.5-6 Impacts on Protected and Heritage Trees. Implementation of the project would result in loss and disturbance of heritage trees, native oaks, and other existing trees that are protected by local ordinances. This would be a significant impact.</p>	<p>S</p>	<p>(1) Before project implementation, a delineation of waters of the United States, including wetlands, that would be affected by the project shall be made by qualified biologists through the formal Section 404 wetland delineation process. The delineation shall be submitted to and verified by USACE.</p> <p>(2) If, based on the verified delineation, it is determined that fill of waters of the United States would result</p>	<p>LTS</p>

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>from implementation of the project, authorization for such fill shall be secured from USACE through the Section 404 permitting process.</p> <p>(3) The project proponent shall also consult with DFG to determine whether a Section 1602 Streambed Alteration Agreement may be required for alteration of irrigation ditches and impacts to freshwater marsh habitat.</p> <p>(4) The acreage of waters of the United States and freshwater marsh habitat that would be removed shall be replaced or restored/enhanced on a “no net loss” basis in accordance with USACE and DFG regulations and Development Title 9-1505. Habitat restoration, enhancement, and/or replacement shall be at a location and by methods agreeable to USACE and DFG, as determined during the permitting processes for CWA Section 404 and California Fish and Game Code Section 1602.</p>	
<p>4.5-7 Impacts to Sensitive Habitats. Implementation of the project could result in fill or reconfiguration of up to approximately 1.29 acres of freshwater marsh habitat associated with the irrigation ditches traversing the project site. This would be a significant impact.</p>	<p>S</p>	<p>(1) Before project implementation, a tree survey shall be conducted by an arborist certified by the International Society of Arboriculture (ISA) to enumerate and evaluate all trees on the site that meet the standards in the City or County Codes.</p> <p>(2) All trees that meet the following criteria shall be avoided by construction and protected during all construction activity:</p>	<p>LTS</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> ▶ Native Oak Trees with a trunk at least 6 inches in diameter at a height of 4.5 feet above the ground. ▶ Heritage trees (all trees with a trunk diameter of 30 inches at a height of 2 feet above the ground. <p>(3) Trees that are subject to protection but must be removed as a result of project implementation shall be replaced with in-kind species in accordance with tree planting specifications established by City and County tree ordinances. Native oak trees shall be replaced at a ratio of 3 to 1 and heritage trees shall be replaced at a ratio of 5 to 1.</p> <p>(4) Replacement tree plantings shall be monitored for 3 years in accordance with monitoring protocols set forth in the City and County tree ordinances.</p> <p>(5) If monitoring indicates that replacement plantings are not meeting performance standards, remedial measures shall be implemented. Appropriate measures shall be determined in coordination with the City and County.</p>	
<p>4.5-8 Impacts to Wildlife Movement. Implementation of the project would not substantially impede wildlife movement or the use of important nursery sites as the project site does not link any areas of open space that serve as important wildlife habitat. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.5-9 Consistency with Federal, State, and Local Plans, Policies, and Ordinances. Implementation of the project would not conflict or be inconsistent with</p>	LTS	No mitigation is necessary.	LTS

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>adopted federal, state, or local policies that protect sensitive resources. This would be a less-than-significant impact.</p>			
<p>4.5-10 Consistency with Adopted Habitat Conservation Plan, Natural Community Conservation Plan or Other Approved Conservation Plan. Implementation of the project would not conflict with or be inconsistent with the adopted San Joaquin Multi-Species Conservation Plan. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.6 HAZARDS AND HAZARDOUS MATERIALS</p>			
<p>4.6-1 Create a Safety Hazard to Construction Workers and Residents. Although no hazardous environmental conditions have been identified to date on the project site, past agricultural and farming operations at the project site could have resulted in contamination of soil and/or groundwater in some locations. Demolition, excavation, and construction activities at the URSP site could result in the exposure of construction workers to hazardous materials, including asbestos, petroleum hydrocarbons, pesticides, herbicides, and fertilizers. Further, the presence of contamination in onsite soils could create a significant environmental or health hazard if left in place. This would be a potentially significant impact.</p>	PS	<p>▶ To avoid health risks to construction workers, the contractor shall prepare a site Health and Safety Plan. This plan will outline measures that shall be employed to protect construction workers and the public from exposure to hazardous materials during demolition and construction activities. These measures could include, but would not be limited to posting notices, limiting access to the site, air monitoring, watering, and installation of wind fences. Development contractors shall be required to comply with state health and safety standards for all demolition work. If necessary, this shall include compliance with OSHA and Cal-OSHA requirements regarding exposure to asbestos and lead-based paint.</p> <p>▶ Before demolition of any structures associated with past and current farming operations (e.g., buildings, ASTs, propane tanks, etc.), the project applicant shall investigate the extent to which soil and/or</p>	LTS

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>groundwater has been contaminated from these past operations. This investigation shall follow ESA and/or other appropriate testing guidelines and shall include, as necessary, analysis of soil and/or groundwater samples taken at or near the potential contamination sites. If the results indicate that contamination exists at levels above regulatory action standards, then the SJCDEH shall be notified and the site shall be remediated in accordance with recommendations made by SJCDEH, RWQCB, DTSC, or other appropriate federal, state, or local regulatory agencies. The agencies involved would depend on the type and extent of contamination. Remediation activities could include but would not be limited to the excavation of contaminated soil areas and hauling of contaminated soil materials to an appropriate offsite disposal facility, mixing of onsite soils, and capping (i.e., paving or sealing)of contaminated areas.</p> <ul style="list-style-type: none"> ▶ The project contractors shall prepare a site plan that identifies any necessary remediation activities appropriate for proposed land uses, including excavation and removal of onsite contaminated soils, and redistribution of clean fill material on the project site. The plan shall include measures that ensure the safe transport, use, and disposal of contaminated soil and building debris removed from the site. In the event that contaminated groundwater is encountered during site excavation activities, the contractor shall report the contamination to the appropriate regulatory agencies, dewater the excavated area, and 	

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>treat the contaminated groundwater to remove contaminants before discharge in the sanitary sewer system. The development contractors shall be required to comply with the plan and applicable local, state, and federal laws and the requirements of the City of Manteca for dewatering discharge. The plan shall outline measures for specific handling and reporting procedures for hazardous materials, and disposal of hazardous materials removed from the site at an appropriate offsite disposal facility.</p> <p>In addition, the following measures shall apply to construction activities as appropriate.</p> <p>(1) The SJCDEH shall be notified if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during excavation. Any contaminated areas shall be remediated in accordance with recommendations made by SJCDEH, RWQCB, DTSC, or other appropriate federal, state, or local regulatory agencies as generally described above.</p> <p>(2) Before demolition of any onsite buildings, the project applicant shall hire a qualified consultant to investigate whether any of these buildings contain asbestos-containing materials and lead that could become friable or mobile during demolition activities. If found, the asbestos-containing materials and lead shall be removed by an accredited inspector in accordance with EPA and Cal-OSHA standards. In addition, all activities (construction or demolition) in</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.6-2 Create a Significant Hazard to the Public or the Environment. The project would involve the storage, use, and transport of hazardous materials at the project site during construction activities. In addition, because the project includes commercial uses, it is likely that some facilities (e.g., dry cleaners and gas stations) could use hazardous materials during operation. However, use of hazardous materials at the site would be in compliance with local, state, and federal regulations. Therefore, impacts related to creation of significant hazards to the public through routine transport, storage, use, disposal, and risk of upset would be less than significant.</p>	LTS	<p>the vicinity of these materials shall comply with Cal-OSHA asbestos and lead worker construction standards. The asbestos-containing materials and lead shall be disposed of properly at an appropriate offsite disposal facility.</p> <p>No mitigation is necessary.</p>	LTS
<p>4.6-3 Potential Wildfire Hazard. The project site is not located in a designated wildland fire area or a High Fire Hazard Severity Zone. Therefore, the project would not expose people or structures to significant risk of loss of injury involving wildland fires. This would be a less-than-significant impact.</p>	LTS	<p>No mitigation is necessary.</p>	LTS

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
4.7 GEOLOGY, SOILS AND SEISMICITY			
<p>4.7-1 Rupture of a Known Earthquake Fault. Because of its distance from known earthquake faults, implementation of the project would not be likely to expose people or structures to potential substantial adverse effects resulting from rupture of a known earthquake fault. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.7-2 Strong Seismic Ground Shaking. In the event of a moderate to major seismic event along the Great Valley fault, ground shaking could result in lateral forces exceeding the capabilities of structures built to minimum CBC design standards. Severe structural and nonstructural damage and associated hazards resulting from such a seismic event would be a significant impact.</p>	S	Project facilities shall be designed for maximum horizontal ground surface accelerations of at least 0.22g.	LTS
<p>4.7-3 Liquefaction and Seismic-Related Ground Failure. Although the near-surface soils at the project site are relatively weak and moderately compressible, they would be sufficient to resist liquefaction provided that light structural loads and proper engineering designs are employed. Because the project developers would design and construct proposed facilities in conformance with the requirements of the CBC, and soils at the site would be sufficient to resist liquefaction under proper design standards, this would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.7-4 Construction-Related Soil Erosion. Construction activities during project implementation would involve excavations, fills, and movement and stockpiling of earth, which could expose soils to erosion and the loss of topsoil, particularly during periods of strong winds. This would be a potentially significant impact.</p>	PS	<p>Develop and Implement an Erosion Control Plan. A grading and erosion control plan shall be prepared by a California Registered Civil Engineer and submitted to the Manteca Department of Public Works for all new development. The plan shall be consistent with the CBC grading requirements and shall include the site-specific grading proposed for the new development. The project applicant shall ensure that the construction contractor is responsible for securing a source of transportation and deposition of excavated materials.</p> <p>Implement Best Management Practices (BMPs). To ensure that soils do not directly or indirectly discharge sediments into surface waters as a result of construction activities, water quality protection measures shall be implemented by the project applicant/construction contractor during construction as discussed in Section 3.9, Hydrology and Water Quality. The mitigation measures shall be in accordance with Central Valley RWQCB regulations involving control of stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) program, which requires the applicant to:</p> <ul style="list-style-type: none"> ▶ File a Notice of Intent (NOI) to discharge stormwater with the Central Valley RWQCB ▶ Prepare a Storm Water Pollution Prevention Plan (SWPPP) that identifies best management practices (BMPs) that would be employed to prevent or minimize the discharge of sediments and other contaminants with the potential to affect beneficial 	LTS

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>uses or lead to violation of water-quality objectives</p> <ul style="list-style-type: none"> ▶ Complete a self-implemented annual monitoring program and prepare a report on BMP performance ▶ BMPs shall include dust control measures such as wetting the top layer of exposed soils and covering soil stockpiles, as necessary. 	
<p>4.7-5 Expansive Soils (Shrink-Swell Potential). Project-related structures would be constructed on soil types with a low clay content. Thus, damage to structures, underground utilities, and other facilities on the project site during the operation of proposed development as a result of soil shrink/swell potential is low. This impact is considered less than significant.</p>	LTS	No mitigation is necessary.	LTS
<p>4.7-6 Mineral Resources. Because sand resources at the project site would not be suitable for aggregate mining, development of the project site would result in less-than-significant impacts to mineral resources.</p>	LTS	No mitigation is necessary.	LTS
4.8 PALEONTOLOGICAL RESOURCES			
<p>4.8-1 Disturbance of Paleontological Resources During Earth-Moving Activities. Although no previously recorded paleontological sites were observed or are known to occur at the project site, previously undiscovered paleontological resources could be present in sediments of the Modesto Formation that underlie the project site. In addition, fossils have been found at excavations in similar soils less than 3 miles from the project site. Therefore, construction activities could potentially disturb unknown subsurface</p>	PS	<p>For earth-moving activities at the project site, the project applicant shall implement the following measures:</p> <p>(1) Before the start of construction activities, construction personnel involved with earth-moving activities shall be informed of the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction activities, and proper notification procedures should fossils be encountered. This training shall be prepared and presented by a</p>	LTS

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>paleontological resources. This would be a potentially significant impact.</p>		<p>qualified paleontologist.</p> <p>(2) If paleontological resources are discovered during earth-moving activities, the construction crew shall immediately cease work in the vicinity of the find. The City or the project applicant shall retain a qualified paleontologist to evaluate the resource and prepare a proposed mitigation plan in accordance with Society of Vertebrate Paleontology guidelines (1995). The proposed mitigation plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations determined by the City to be necessary and feasible shall be implemented by the project applicant before construction activities can resume at the site where the paleontological resources were discovered.</p>	
<p>4.9 HYDROLOGY AND WATER QUALITY</p>			
<p>4.9-1 Temporary Construction-Related Water Quality Effects. Temporary construction-related ground disturbances within the URSP site could result in the discharge of stormwater and nonstormwater discharges containing pollutants to drainage systems and ultimately to the San Joaquin River. The discharge of pollutants to local waterways would be a potentially significant construction-related water quality impact.</p>	<p>PS</p>	<p>The project applicant shall consult with the Central Valley RWQCB to acquire the appropriate regulatory approvals that may be necessary to obtain Section 401 water quality certification, SWRCB statewide NPDES stormwater permit for general construction activity, Central Valley RWQCB NPDES permit for construction dewatering activity, and any other necessary site-specific WDRs or waivers under the Porter-Cologne Act. As required under the NPDES stormwater permit for general construction activity, the project applicant shall prepare and submit the appropriate NOIs and prepare</p>	<p>LTS</p>

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>the SWPPP and any other necessary engineering plans and specifications for pollution prevention and control. The SWPPP and other appropriate plans shall identify and specify the use of erosion and sediment control BMPs, means of waste disposal, implementation of approved local plans, nonstormwater management controls, permanent postconstruction BMPs, and inspection and maintenance responsibilities. The SWPPP would also specify the pollutants that are likely to be used during construction that could be present in stormwater drainage and nonstormwater discharges. A sampling and monitoring program would be included in the SWPPP that meets the requirements of SWRCB Order 99-08-DWQ to ensure that the BMPs are effective.</p>	
		<p>Construction techniques shall be identified that would reduce the potential for runoff, and the plan shall identify the erosion and sedimentation control measures to be implemented. The SWPPP shall also specify spill prevention and contingency measures, identify the types of materials used for equipment operation, and identify measures to prevent or clean up spills of hazardous materials used for equipment operation and hazardous waste. Emergency procedures for responding to spills shall also be identified. BMPs identified in the SWPPP shall be used in all subsequent site development activities. The SWPPP would identify personnel training requirements and procedures that would be used to ensure that workers are aware of permit requirements and proper installation and performance inspection</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>methods for BMPs specified in the SWPPP. The SWPPP shall also identify the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP. All construction contractors shall retain a copy of the approved SWPPP on the construction site.</p> <p>The project applicant shall also prepare and submit an NOI and acquire authorization for the Central Valley RWQCB NPDES permit for construction dewatering activities that may be necessary for foundation and utility installations within the URSP site.</p> <p>Under SWRCB Order 99-08-DWQ, as amended, the SWRCB has determined that implementation of a SWPPP, the BMPs identified in the SWPPP, and the monitoring and sampling program required in the SWPPP are considered to meet the water quality requirements of the Porter-Cologne Act, barring a violation identified by the monitoring or sampling procedures.</p>	
<p>4.9-2 Long-Term Water Quality Effects of Urban Runoff. Although the project would convert land that is primarily agricultural to residential and commercial uses and thereby change the amount and timing of potential waste discharges in stormwater runoff, the combination of nonstructural and structural BMPs proposed for the new stormwater drainage system would reduce the overall volume of potential contaminant discharges. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.9-3 Effects on Potential Onsite and Offsite Flooding Risk from Increased Stormwater Runoff. Implementation of the URSP project would increase the area of impervious surfaces onsite increasing surface runoff and discharge. The increased surface runoff could result in an increased potential for offsite and onsite flooding. However, the URSP project includes a stormwater runoff collection system, including drainage detention facilities, to provide onsite stormwater storage and discharge capacity sufficient to protect the URSP site during a 48-hour, 100-year flood event and avoid increases in offsite flooding. Therefore, this would be a less-than-significant impact.</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>
<p>4.9-4 Impacts to Groundwater. The project would construct groundwater wells that would be incorporated within the City's conjunctive use water supply system as part of the South County Surface Water Supply Project. These wells would be located in the deep aquifer, would be part of a conjunctive use water supply, and are not anticipated to result in the substantial lowering (i.e., 10 feet or more) of local groundwater levels. However, the underlying groundwater aquifer may be unsuitable for potable uses. Therefore, the project would result in a potentially significant groundwater impact.</p>	<p>PS</p>	<p>▶ The project applicant shall conduct groundwater testing in consultation with the City to ensure that groundwater beneath the site is suitable for potable uses and would meet applicable drinking water quality standards with treatment (if necessary). If testing concludes that well groundwater quality does not meet applicable standards, the applicant, in consultation with the City, shall locate a suitable alternate well location within the project site first and at offsite locations if necessary. The siting and location of these wells shall be done in coordination with the City Public Works Department.</p>	<p>LTS</p>

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.9-5 Reduction in Groundwater Recharge. The URSP site does not serve as a substantial groundwater recharge area. Therefore, development of the site would result in a less-than-significant groundwater recharge impact.</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>
<p>4.10 PUBLIC SERVICES AND UTILITIES</p>			
<p>4.10-1 Increased Demand for Water Supply and Distribution. Although the project would create demand for potable water that could not be met by existing City water production facilities (i.e., wells), the project includes the construction of two new groundwater wells that would provide groundwater supplies and distribution facilities to meet projected demands until the SCSWSP is operational. This would be a less-than-significant impact.</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>
<p>4.10-2 Environmental Impacts Associated with the SSJID SCSWSP. According to the EIR prepared for the SSJID SCSWSP, construction and operation of this facility could contribute to significant impacts for the following issue areas: hydrology, flooding, and water quality; air quality; geology, soils, and seismicity; biological resources; noise; hazardous materials / public health; visual resources; transportation and traffic circulation; public service and utilities/energy; cultural resources; and recreation. The SCSWSP would provide municipal water to the City, including the proposed project. These impacts would be reduced to less-than-significant levels with implementation of the mitigation</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>measures identified in the SCSWSP EIR.</p>			
<p>4.10-3 Interim Wastewater Conveyance Facilities. Implementation of the URSP project would result in increased generation of wastewater. Because concurrence on the adequacy of the proposed wastewater conveyance facilities has not been made by the City, adequate facilities may not be available to serve the project. This would be a significant impact.</p>		<p>An interim solution for conveying wastewater generated by the project to the City's collection system shall be designed and prepared in consultation with the City Public Works Department prior to construction of the project. Exclusive of model homes, no element of the project shall be occupied until adequate conveyance facilities are in place to serve the development, as deemed by the City. The proposed system shall comply with the City's requirements for wastewater infrastructure facilities. Specific details on the sizing of proposed pipelines shall be determined in consultation with the City and shall provide sufficient capacity to meet project-related wastewater conveyance demands.</p>	<p>LTS</p>
<p>4.10-4 Increased Demand for Permanent Wastewater Treatment and Conveyance Facilities. Implementation of the URSP project would increase demand for wastewater treatment and conveyance facilities. Existing wastewater treatment facilities and the City's proposed permanent wastewater conveyance improvements would be adequate to serve the proposed project. This would be a less-than-significant impact.</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>
<p>4.10-5 Increased Generation of Solid Waste. Although the project would substantially increase solid waste generation, Forward Landfill, which would receive solid waste from the project site, has sufficient available capacity accommodate the project's solid waste demands over the next 40 years. Therefore, this would</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>be a less-than-significant impact.</p> <p>4.10-6 Increased Demand and Required Extension of Electrical and Natural Gas Infrastructure. Implementation of the URSP project would increase demand for electricity and natural gas. PG&E is able to provide electricity and natural gas to the project, and the increase in demand for electricity and natural gas would not be substantial in relation to the existing electricity and natural gas consumption in PG&E's service area. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.10-7 Required Extension of Telephone Infrastructure. Implementation of the URSP project would require the extension of telephone infrastructure and Verizon Communications has indicated that it has the ability to serve the project. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.10-8 Increased Demand for Fire Protection Facilities and Services. Development of the URSP project would result in increased demand for fire protection services. However, the project would provide adequate land area for the siting of a new fire station within the URSP site. In addition, the project would be required to pay development fees to cover the costs of equipment and facilities, and streets would be designed to allow access for fire engines and emergency response. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.10-9 Increased Demand for Fire Flow. The URSP project would include the development of residential and commercial uses that would require adequate available water flow for fire suppression. The project would incorporate fire flow requirements into project designs. This would be a less-than-significant impact.</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>
<p>4.10-10 Increased Demand for Police Protection Facilities and Services. Development of the URSP project would increase demand for police protection facilities and services. The project would pay development fees to provide police equipment and facilities, and neighborhoods, streets, and open spaces would be designed to allow surveillance and access. This would be a less-than-significant impact.</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>
<p>4.10-11 Increased Demand for Public School Facilities and Services. Implementation of the URSP project would increase demand for elementary schools (K-8) and high schools in the MUSD. Elementary and high schools in the project area have sufficient available capacity to meet projected demand throughout project development. Therefore, this impact would be a less-than-significant impact.</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>
<p>4.10-12 Increased Demand for Recreational Facilities. Although development of the URSP project would increase the demand for recreational facilities, the project would include adequate facilities to meet anticipated demands. This would be a less-than-significant impact.</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.11 TRANSPORTATION AND CIRCULATION</p> <p>4.11-1 Increases in Peak Hour Traffic Volumes on Regional Roadways Resulting in Unacceptable Levels of Service. The URSP project would cause an increase in P.M. peak hour traffic volumes at the Lathrop Road/I-5 southbound ramp intersection, resulting in unacceptable levels of service and warranting the need for improvements such as traffic signals. Although mitigation is available in the form of roadway improvements that would improve intersection levels of service, these improvements are dependent on fair-share participation in City of Lathrop and San Joaquin County roadway improvement programs, which are not subject to the control of the City of Manteca. Because it is unknown whether these improvements would be implemented and the project would contribute to an unacceptable condition based on applicable standards, this impact would be significant.</p>	<p>S</p>	<p>The installation of a traffic signal at the Lathrop Road/I-5 intersection has been identified in the City of Lathrop CFF and would improve the operation of this intersection to acceptable levels, LOS C, with implementation of the project. The project applicant shall pay its fair share of the cost of these identified improvements through payment of traffic impact fees to the City of Lathrop CFF program. Based on Caltrans methodology to determine fair share costs, which divides project-generated traffic by the difference between the cumulative traffic and the existing plus approved projects traffic, the URSP fair share for this intersection would be 2.2% of the total cost for signalization. The total dollar amount shall be determined in consultation with the appropriate agencies when final project approvals are sought.</p> <p>Because implementation of this mitigation measure is dependent on circumstances beyond the applicant's and the City's control and would be subject to the control of the City of Lathrop, it is unknown whether this mitigation would be implemented by the time the URSP builds out. Therefore, for purposes of CEQA, this would be a significant and unavoidable impact.</p>	<p>SU</p>
<p>4.11-2 Increases in Peak Hour Traffic Volumes on Local and Project-Specific Roadways Resulting in Unacceptable Levels of Service. The URSP project would result in an increase in a.m. and/or p.m. peak hour traffic volumes at local study intersections and at intersections that would be constructed as part of the</p>	<p>S</p>	<p>4.11-2a: Operation of LOS E at the Lathrop Road/Main Street Intersection Under Existing Conditions and LOS F under Existing Plus Project Conditions. The project applicant shall pay its fair share of the cost for installation of a traffic signal at the Lathrop Road/Main Street intersection. Because this mitigation measure cannot be</p>	<p>LTS</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>project, resulting in the degradation of these intersections to unacceptable levels of service. Because the addition of project-generated traffic to local roadways would result in the exacerbation of already unacceptable levels of service of some local intersections, or would degrade currently acceptable LOS intersections to unacceptable conditions based on City of Manteca significance thresholds, this would be a significant impact.</p>		<p>implemented until the interchange configurations for Lathrop Road and Main Street are finalized as part of the SR99 widening to six lanes, the applicant shall coordinate with the City as to timing of implementation of this mitigation measure. Implementation of this measure would improve the operations of this intersection to LOS D. Using Caltrans methodology to determine fair share costs, the URSP project would be responsible for approximately 15.8% of the total cost of this improvement. The total dollar amount shall be determined in consultation with the appropriate agencies when final project approvals are sought. Payment for improvements shall occur as part of the collection of PFIP fees at issuance of building permits.</p> <p>4.11-2b: Operation of LOS F at the Airport Way/Louise Avenue Intersection Under Existing Conditions and LOS F under Existing Plus Project Conditions. The project applicant shall pay its fair share of the cost for installation of a traffic signal at the Airport Way/Louise Avenue intersection. Implementation of this measure would improve operations at this intersection to LOS C. Using Caltrans methodology to determine fair share costs, the URSP project would be responsible for approximately 3.0% of the total cost for this improvement. The total dollar amount shall be determined in consultation with the appropriate agencies when final project approvals are sought. Payment for improvements shall occur as part of the collection of PFIP fees at issuance of building permits.</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>4.11-2c: Operation of LOS E at the Lathrop Road/McKinley Avenue Intersection Under Existing Plus Project Conditions. The project applicant shall pay its fair share of the cost for installation of a traffic signal at the Lathrop Road/McKinley Avenue intersection. Implementation of this measure would improve operations at this intersection to LOS B. Using Caltrans methodology to determine fair share costs, the URSP project would be responsible for approximately 28.6% of the total cost for this improvement. The total dollar amount shall be determined in consultation with the appropriate agencies when final project approvals are sought. Payment for improvements shall occur as part of the collection of PFIP fees at issuance of building permits.</p> <p>4.11-2d: Operation of LOS F at the Lathrop Road/Union Road Intersection Under Existing Plus Project Conditions. The project applicant shall pay its fair share of the cost for construction of southbound left turn and right turn lanes along Union Road at the Lathrop Road/Union Road intersection. The project applicant shall also pay its fair share of the cost for construction of a right turn lane along westbound Lathrop Road at this intersection. These improvements shall be constructed concurrently with Union Ranch development. Implementation of these measures would improve operations of this intersection to LOS D. Using Caltrans methodology to determine fair share costs, the URSP project would be responsible for approximately 35.6% of the total cost for this improvement. The total dollar</p>	

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>amount shall be determined in consultation with the appropriate agencies when final project approvals are sought. Payment for improvements shall occur as part of the collection of PFIP fees at issuance of building permits.</p> <p>4.11-2e: Operation of LOS F at the Union Road/CMU North Access Intersection Under Existing Plus Project Conditions. The project applicant shall construct northbound and southbound left turn lanes along Union Road at the Union Road/CMU North access intersection to provide access to the CMU site. The northbound left turn lane shall provide 225 feet of storage and the southbound left turn lane shall provide 125 feet of storage. The project applicant shall also install a traffic signal at this intersection. Implementation of these measures would improve operations of this intersection to LOS C.</p> <p>4.11-2f: Operation of LOS F at the Lathrop Road/CMU West Access Intersection Under Existing Plus Project Conditions. The project applicant shall construct an eastbound left turn lane along Lathrop Road at the Union Road/CMU West Access intersection to provide access to the CMU site. The left turn lane shall provide 275 feet of storage. The project applicant shall also install a traffic signal at this intersection. This signal shall be placed no closer than 1,200 feet from the existing traffic signal at the Lathrop Road/Union Road intersection. Implementation of these mitigation measures would improve operations of this intersection to LOS B.</p>	

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
		<p>4.11-2g: Operation of LOS F at the Lathrop Road/CMU East Access Intersection Under Existing Plus Project Conditions. The project applicant shall construct an eastbound left turn lane along Lathrop Road at the Union Road/CMU East Access intersection to provide access to the CMU site. The left turn lane shall provide 175 feet of storage. The project applicant shall also install a traffic signal at this intersection. Implementation of these measures would improve operations of this intersection to LOS A.</p>	
<p>4.11-3 Increased Traffic Resulting from Vehicle Trips under Cumulative (Future Plus Project) Traffic Conditions (2025). Operational traffic conditions for cumulative conditions at most intersections in the project study area would be acceptable. However, the project would result in LOS levels at the intersection of Yosemite Avenue/ Airport Way, Lathrop Road/McKinley Avenue, and Airport Way/AAC access that would exceed the City of Manteca's LOS thresholds under cumulative conditions. This would be a significant impact.</p>	S	<p>4.11-3a: Operation of LOS F at Airport Way/Yosemite Avenue Under the 2025 No Project and Cumulative Plus Project Scenario. Mitigation for this impact would require the construction of additional lanes at this intersection above and beyond those already called for in the City of Manteca General Plan. Roadway easements that would accommodate additional lanes are not available and/or feasible to obtain. Therefore, no feasible mitigation measures are available to reduce this impact to a less-than-significant level. This would be a significant and unavoidable impact.</p> <p>4.11-3b: Operation of LOS F at the Airport Way/AAC north access Intersection Under the 2025 Cumulative Plus Project Scenario. The project applicant shall install a traffic signal at this intersection. Implementation of this measure would improve operation of this intersection to LOS A. This would be a less-than-significant impact.</p>	SU

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.11-4 Increased Roadway Congestion from Construction Traffic. It is estimated that approximately 150-200 construction workers could access the project site on a daily basis during peak construction periods. This could result in adverse effects on the operation of area roadways during the peak commute periods. In addition, construction traffic, particularly truck traffic, could degrade pavement conditions along roadways used for access. This would be a significant impact.</p>	<p>S</p>	<p>Before project construction activities begin, the project applicant shall prepare a construction traffic control plan that shall be applied to all construction activities associated with the URSP project. The plan shall include, at a minimum, the following conditions: Local roadways will be jointly monitored by the City and project applicant every six months to determine whether project related construction traffic is degrading roadway conditions. Roadways with potential to be damaged by construction traffic and included in the monitoring effort shall be agreed to by the City and the project applicant. All degradation of pavement conditions because of URSP-related construction traffic will be fully repaired by the project applicant to the satisfaction of the City of Manteca.</p>	<p>LTS</p>
<p>4.11-5 Vehicular Site Access and Onsite Circulation Impacts. Proposed vehicular circulation routes for the URSP project would adequately serve the active adult and traditional single-family housing developments and would meet the City's design standards for internal circulation roadways. Substantial increases in hazards as a result of design features or incompatible land uses within these two housing development areas are not expected. However, circulation patterns within the CMU areas are not currently known and if not properly designed could result in increased hazards or safety concerns with onsite and adjacent land uses. Further, the Union Ranch development does not provide vehicular connectivity with proposed development to</p>	<p>PS</p>	<p>The CMU developer shall work with the City to design vehicular, pedestrian, and bicycle access within the Union Ranch CMU areas, and between the Union Ranch development and proposed development to the north and west that meets both City of Manteca General Plan standards and URSP standards.</p>	<p>LTS</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>the north and west. This would be a potentially significant impact.</p>			
<p>4.11-6 Impacts to Emergency Vehicle Access. The project would provide adequate emergency access to the project site. However, construction vehicles could temporarily obstruct local roadways, which could impair the ability of local agencies to respond to an emergency in the project area. This would be a potentially significant impact.</p>	PS	<p>The project applicant shall prepare a Construction Management Plan and submit the plan to the City of Manteca Public Works Department for review and approval. The Construction Management Plan shall identify the timing of construction and the timing of elements that would result in the full or partial blockage of local roadways. The plan shall specify the measures that would be implemented to minimize traffic-related impacts including construction parking during construction, which shall be limited to onsite areas or facilities designated for parking uses (i.e., parking garage). These measures could include, but are not limited to the following: use of signage notifying travelers that they are entering a construction zone, and use of cones, flaggers, and guide-vehicles to direct traffic through the construction zone. A copy of the plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct local roadways.</p>	LTS
<p>4.11-7 Conformity with City Parking Requirements. The URSP project would provide adequate parking for proposed residential development in the active adult housing and traditional single-family housing areas in conformance with City parking standards. However, the CMU areas have not yet been designed and specific parking plans for these areas are not available. If not</p>	PS	<p>The CMU developer shall coordinate with the City of Manteca to identify the required number of parking spaces for both CMU areas. The developer shall design the CMU areas to provide the appropriate number of spaces, and shall design the commercial parking areas in accordance with the City's zoning code as far as stall size,</p>	LTS

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>properly designed, development of the CMU areas could result in the provision of inadequate parking onsite. This would be a potentially significant impact.</p>		<p>aisle size, and access driveways.</p>	
<p>4.11-8 Pedestrian and Bicycle Circulation Impacts. The project's proposed network of pedestrian and bicycle trails does not conform to the City's General Plan policies requiring connectivity between residential, shopping, and employment centers, and thus could result in potential bicycle and pedestrian circulation hazards. Further, the URSP does not include some bicycle facilities that were identified in the City of Manteca Bicycle Master Plan. This would be a significant impact.</p>	<p>S</p>	<p>The project applicant shall coordinate with the City of Manteca Public Works Department to identify the necessary facilities that would be required to provide the following:</p> <ol style="list-style-type: none"> 1. Connect the project's proposed bicycle lanes and/or multi-use trail to the existing London Avenue bicycle lanes; 2. Add bicycle lanes along the east side of Airport Way as part of project-related Airport Way road improvements; 3. Add bicycle lanes along both sides of Union Road to the northern edge of proposed development; 4. Provide bicycle and pedestrian connectivity between the two Union Ranch housing developments and the planned commercial centers; and 5. Provide bicycle and pedestrian connectivity between the two Union Ranch housing developments and proposed development to the north and west. 	<p>LTS</p>
<p>4.11-9 Bus Transit Services. Implementation of the URSP project would generate a need for public bus transportation services. Because limited bus services for only the elderly and disabled are currently available to serve the southern end of the project and none are proposed under the URSP, this would be a significant</p>	<p>S</p>	<p>The City is currently developing a citywide bus transportation system. The project developers shall coordinate with the City to ensure that bus transportation services are provided to the project in accordance with City standards.</p>	<p>LTS</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
impact.			
4.12 CULTURAL RESOURCES			
4.12-1 Known Archaeological Resources. There are no known archaeological resources in the URSP project area. Therefore, this would be a less-than-significant impact.	LTS	No mitigation is necessary.	LTS
4.12-2 Known Historic Resources. Project construction would result in the removal of several existing structures. None of these structures appears to be eligible for listing on the California Register of Historical Resources. This would be a less-than-significant impact.	LTS	No mitigation is necessary.	LTS
4.12-3 Undiscovered/Unrecorded Archaeological Sites. Construction of the project may uncover or otherwise disturb previously undiscovered or unrecorded archaeological sites. Potential disturbance of a unique archaeological site would be a potentially significant impact.	PS	At the onset of construction, all construction personnel shall be alerted to the possibility of buried cultural resources. If artifacts or unusual amounts of stone, bone, or shell or significant quantities of historic-era artifacts are uncovered during construction activities, work within 50 feet of the specific construction site at which the suspected resources have been uncovered shall be suspended, and the property owner shall be immediately contacted. At that time, the City or the project proponent shall retain a professional archaeologist, who shall conduct a field investigation of the specific site and recommend mitigation deemed necessary for the protection or recovery of any cultural resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA. The City or the project proponent shall implement the	LTS

Table 2-1

Summary of Project Impacts and Mitigation Measures

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.12-4 Undiscovered/Unrecorded Human Remains. Project-related construction activities could uncover or otherwise disturb previously undiscovered or unrecorded human remains. This would be a significant impact.</p>	<p>S</p>	<p>mitigation before the resumption of construction activities at the construction site.</p> <p>If human remains are discovered at any project construction sites during any phase of construction, work within 50 feet of the remains shall be suspended immediately, and the City of Manteca, the project proponent, and the county coroner shall be notified immediately. If the remains are determined by the county coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The City or the project proponent shall also retain a professional archaeologist with Native American burial experience who shall conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD) identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the MLD including the excavation and removal of the human remains. The City or the project proponent shall implement any mitigation before to the resumption of activities at the site where the remains were discovered.</p>	<p>LTS</p>
<p>4.13 POPULATION AND HOUSING</p>			
<p>4.13-1 Consistency with Housing Policies. The County General Plan and City General Plan contain various goals, objectives, and policies related to the provision of higher density housing in mixed use neighborhoods; affordable housing; housing for the</p>	<p>LTS</p>	<p>No mitigation is necessary.</p>	<p>LTS</p>

**Table 2-1
Summary of Project Impacts and Mitigation Measures**

Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>elderly and handicapped, and non-single-family housing (e.g., apartments); and energy efficient features and durable construction materials. The project would meet the desired availability of these housing types and construction techniques, and the project would be consistent with housing policies in these planning documents. This would be a less-than-significant impact.</p>			
<p>4.13-2 Housing Displacement. Existing dwelling units within the URSP project site consist mainly of agricultural operations interspersed with rural residences and associated outbuildings. All 23 existing residences would be removed from the site, and 2,301 new homes would be constructed onsite. Construction of residential dwelling units would replace the 23 units removed during project construction. Therefore, this would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.13-3 Housing Demand from Project Development. Development of the project would increase the number of housing units and jobs in the City of Manteca. At full buildout, the jobs-housing index for the URSP area would be 2.4, indicating that the proposed development would be housing rich and would not generate demand for new housing in the region for onsite employees. The project is not expected to induce substantial new housing demand. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS

Table 2-1 Summary of Project Impacts and Mitigation Measures			
Impacts	Significance Before Mitigation	Mitigation Measures	Significance After Mitigation
<p>4.13-4 Population Growth. The project would develop new homes, which would result in direct increases in population. The project-related estimated increases in population are roughly comparable to and consistent with the increases in population that would have resulted from the planned residential growth in the project area for which provision is made in the City and County General Plans. Direct impacts that would occur with development and associated population growth are evaluated in appropriate sections of this Draft EIR (e.g. air quality, transportation). This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS
<p>4.13-5 Population Growth and Housing Demand during Construction. The project would result in a temporary increase in employment in the City, related to construction jobs, during the peak construction period. The number of existing construction personnel in the region is considered sufficient to meet demand associated with the project; therefore, this temporary increase in employment is not expected to generate any substantial new population growth in the area or generate the need for substantial additional housing for construction workers. This would be a less-than-significant impact.</p>	LTS	No mitigation is necessary.	LTS

3 PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SETTING

The Union Ranch Specific Plan (URSP) area encompasses approximately 553 acres adjacent to and north of the existing corporate limits of the City of Manteca (City) in San Joaquin County, California. The City of Manteca is situated in the San Joaquin Valley, approximately 60 miles south of Sacramento and 70 miles east of San Francisco (Exhibit 3-1). The URSP area is located 11 miles south of the City of Stockton, 15 miles east of the City of Tracy, and one mile east of City of Lathrop (Exhibit 3-2). Regional access to the project site is provided by Interstate 5 (I-5) to the west and State Route 99 (SR 99) to the east. Local access to the project site is provided by Airport Way, Lathrop Road, and Union Road (Exhibit 3-2). The URSP area is within the planning area and urban services boundary of the City of Manteca but lies north of the existing City limits (Exhibit 3-2), and project approval and implementation would require expansion of the sphere of influence boundary and annexation of the specific plan area into the City.

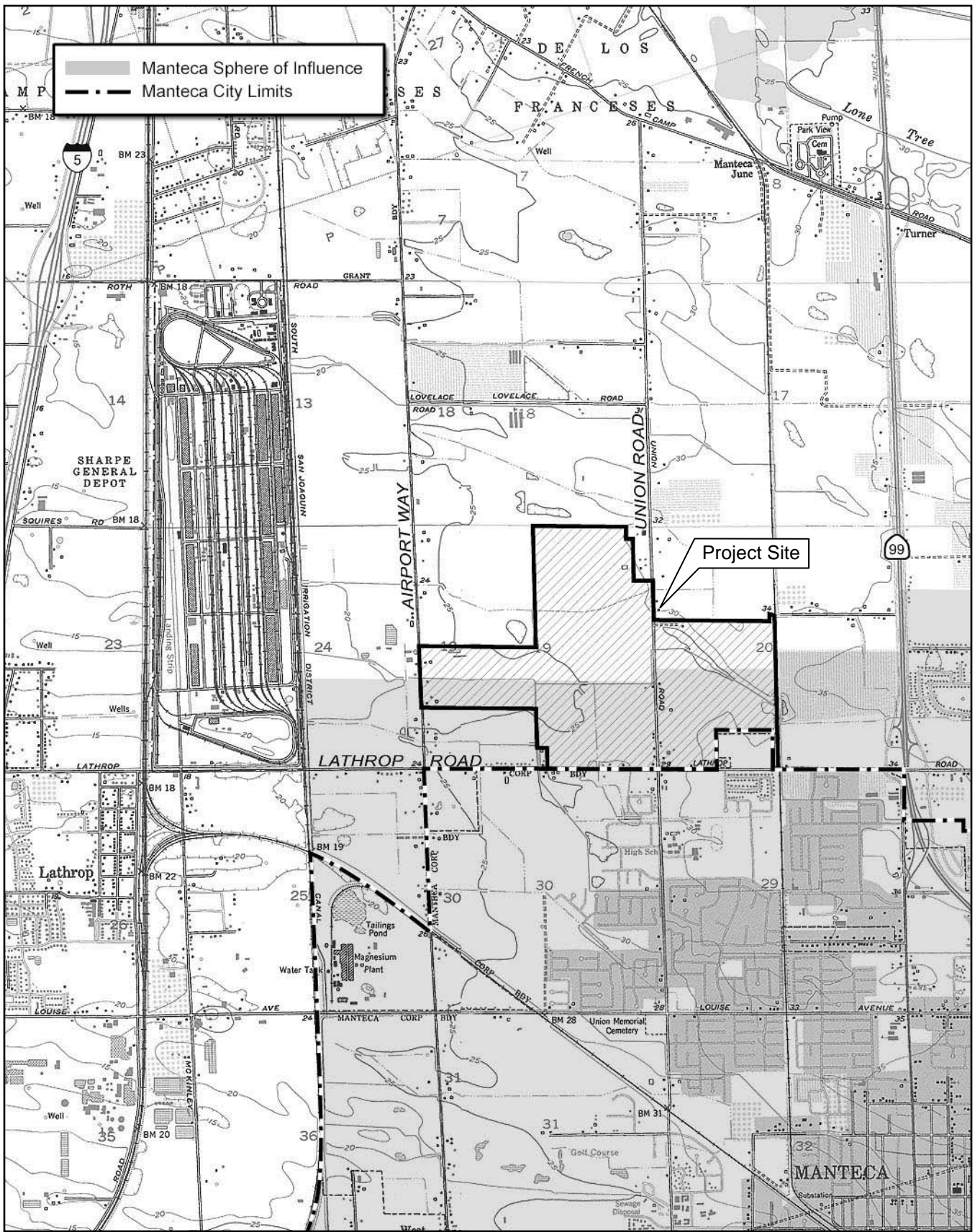
The URSP area and adjacent lands are primarily used for agricultural operations interspersed with farmsteads and associated outbuildings. Land south of the project site includes urban, residential, and commercial development within the Manteca city limits. Land north, west and east of the project site is primarily in agricultural use. Although lands within the specific plan area are in agricultural production, none of these lands are under Williamson Act contract. The Union Pacific Railroad intermodal facility, the Defense Distribution Depot San Joaquin Sharpe, and other industrial uses are located west of Airport Way. Airport Way forms the western boundary of the project site, while Lathrop Road forms the southern boundary. Union Road bisects the project site north of Lathrop Road.

3.2 PROJECT BACKGROUND

The project applicant (Union Ranch Partners, LLC) submitted an application to the City of Manteca for the development of a residential and commercial planned community on the project site. The proposed land uses are described in the Draft URSP prepared by the HLA Group in 2004. A copy of this report is included in Appendix B. The Draft URSP is the “project” considered in this Draft EIR. Once the EIR is completed and certified, the Draft URSP will be finalized. The Final URSP, based on the discretion of the developer and the requirements of the City, or both, will be revised to incorporate some or all of the mitigation measures included in this Draft EIR¹.

A land use pattern similar to the URSP proposal was considered during review of potential land use patterns north of Lathrop Road for the City of Manteca’s General Plan. Although the specific plan area lies north of the corporate limits of the City, the General Plan, adopted in

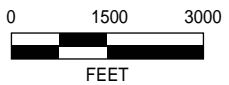
¹ The specific plan will be required to include all mitigation measures that are adopted by the City to reduce environmental impacts if the plan is approved.

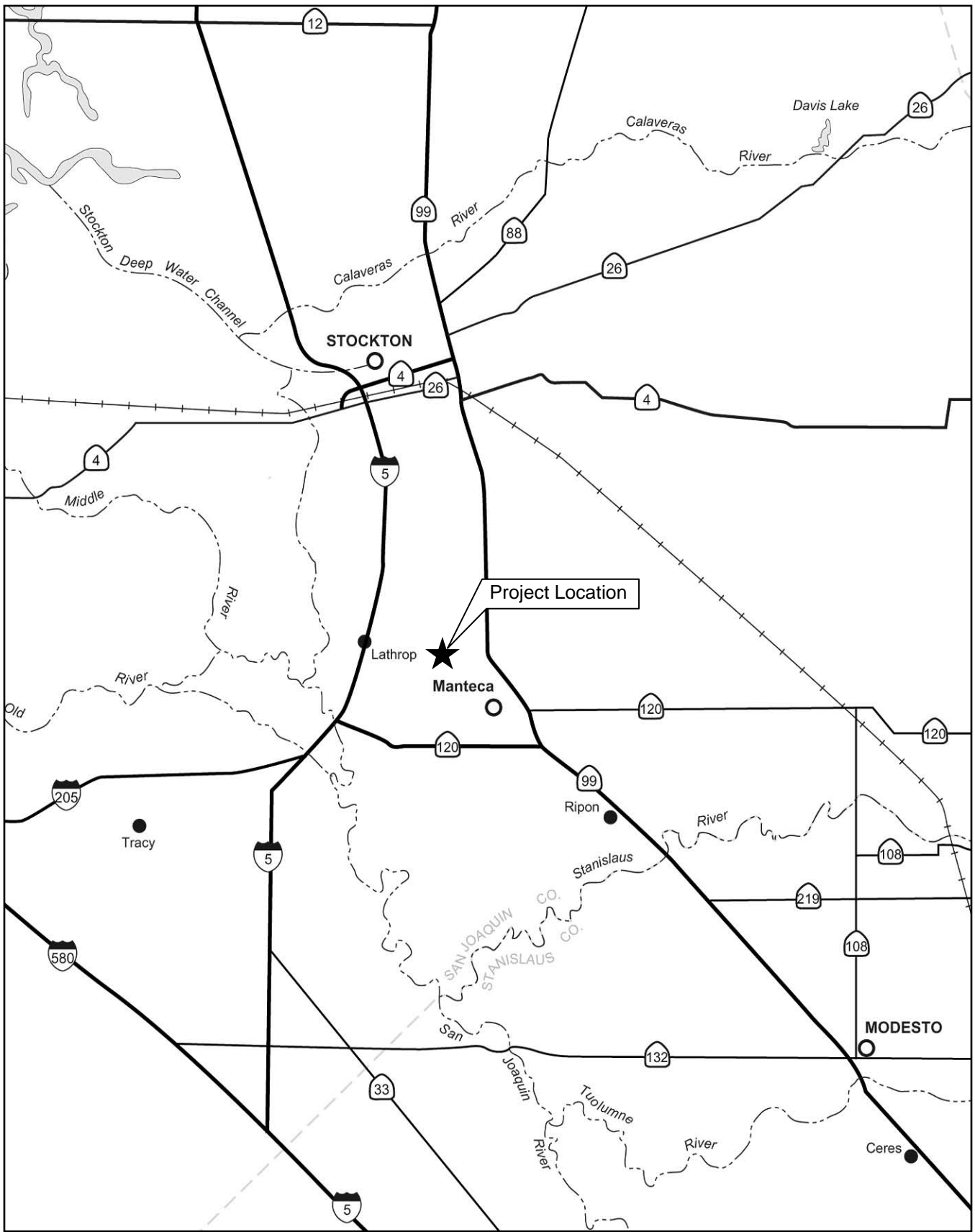


Source: U.S.G.S. Lathrop and Manteca Quad 1952 (revised 1994) -- Contour Interval 5 Feet

URSP Project Site

EXHIBIT 3-2





Source: EDAW 2004

Regional Project Location Map

EXHIBIT 3-1



2003, designated the specific plan area for future urban development. The City planned for development of the majority of the specific plan area with primarily low-density residential development (i.e., 2.1–8 dwelling units per acre [du/ac]). A small portion of the specific plan area was designated for commercial mixed use development near the intersection of Lathrop Road and Union Road. This commercial mixed use development designation requires development of high density residential land uses (i.e., 15.1 –25 du/ac) on at least 35% of the land area and other commercial land uses (i.e., public facilities, office buildings, and parking facilities) with maximum site coverage of 50%. The City’s General Plan also identified the provision of four parks within the specific plan area.

The proposed URSP is consistent with the land use designations evaluated and approved in the City’s General Plan and EIR. The project would be developed consistent with the URSP and would be enforced by a development agreement between the City and project applicant. The proposed land uses are described in greater detail in Section 3.4, Project Characteristics.

3.3 PROJECT OBJECTIVES

The goal of the URSP is to develop a plan for the orderly and systematic development of an integrated, mixed-use community that would be consistent with goals and policies of the City of Manteca General Plan.

In support of this goal, the project developers have identified the following objectives for the URSP:

- ▶ Provide to the City of Manteca (and the surrounding region) long-term community benefits, including generation of permanent employment opportunities and fiscal benefits from tax-generating land uses.
- ▶ Provide a residential community that is consistent with the land use patterns envisioned in the City of Manteca General Plan and that provides supporting commercial, open space, and public facilities.
- ▶ Develop an integrated mixed-use master-planned community that includes employment-generating uses, recreation opportunities, and a range of housing types including a master planned active adult community.
- ▶ Integrate the project site with the surrounding development and circulation pattern by creating street and pedestrian connections.
- ▶ Provide a pedestrian-friendly, human scale community environment that provides a safe and pleasant place for people to live, work and recreate.
- ▶ Develop design guidelines that establish criteria for all land use features, whether public improvements or on-site improvements, to address landscape signage, architecture, parking, lighting, site furnishing, and similar visual environments

3.4 PROJECT CHARACTERISTICS

3.4.1 LAND USE PLAN

The URSP would guide development of approximately 553 acres of mixed land uses including low density residential, commercial/mixed use, parks, and open space/trails (Exhibit 3-3).

Table 3-1 specifies the proposed land use categories, zoning, acreage, and approximate number of residential units for each land use designation.

LOW DENSITY RESIDENTIAL (LDR)

The URSP would guide development of two independent low density residential (active senior housing and traditional single-family) housing communities, which would account for 78% of the plan area. The two communities would be linked thematically with a common landscape, common bike and pedestrian trails, and a common materials palette for walls, fences, and entry monuments.

General Plan Designation	Proposed Zoning Designation	# of Dwelling Units	Total Acreage	% of Site
High Density Residential (within Commercial/Mixed-Use)	HDR	341	13.6	3%
Low Density Residential Min Lot Size 6,600 square feet (sf)	R-1-6-UR	535	127.77	23%
Low Density Residential Min Lot Size 7,500 sf	R-1-6-WB	421	116.08	21%
Low Density Residential Min Lot Size 5,500 sf	R-1-5-WB	614	126.20	22%
Low Density Residential Min Lot Size 4,600 sf	R-1-4-WB	390	64.98	12%
Commercial Mixed Use	CMU	N/A	25.34	4%
Open Space/Trails	OS	N/A	32.16	6%
Park	P	N/A	37.29	7%
Major Right-of-Ways	N/A	N/A	9.31	2%
Totals		1,960	552.73	100%
Source: HLA Group 2004				

A senior restricted housing community would be developed on approximately 366 acres in the central and western portions of the specific plan area, and would include development of 1,425 active adult single-family dwelling units, a recreation center, parkland, open space, and access to commercial uses.

A traditional single-family housing development would be developed in the eastern portion of the specific plan area on approximately 127 acres, and would include development of 535

traditional single-family dwelling units, parkland, open space, and an extension of the City’s Tidewater Bike Trail.

Table 3-2 provides an estimate of the projected population density within the specific plan area at buildout.

Table 3-2 Estimated Population of the URSP at Buildout			
Community	Number of Units	Density per Unit	Population
Senior Housing	1,425 units	1.8 persons	2,565 residents
Traditional Single Family	535 units	3.11 persons	1,664 residents
High Density Residential (within Commercial/Mixed Use area)	341 units	2.7 persons	921 residents
Total Estimated Population			5,150 total residents
Source: URSP 2004			

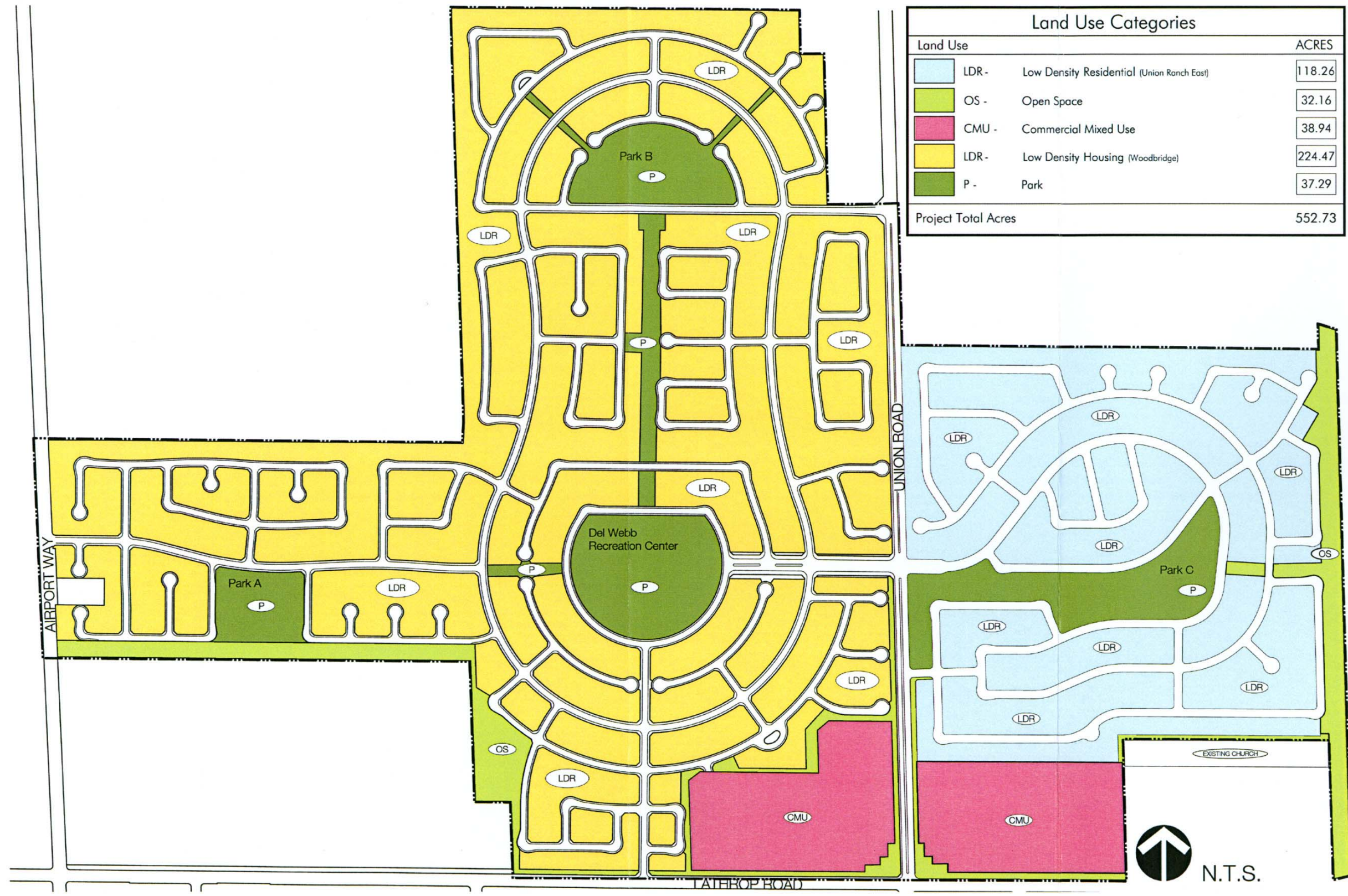
COMMERCIAL-MIXED USE (CMU)

The URSP includes the development of approximately 40 acres located near the intersection of Union Road and Lathrop Road with a mix of commercial and residential land uses that would include:

- ▶ community/neighborhood activity/socializing areas within the Neighborhood Work Center or on an adjacent park;
- ▶ on-site storm water detention facilities designed as a landscape amenity;
- ▶ public service facilities (i.e., post office, library, fire station, or government offices);
- ▶ Neighborhood Work Centers with space for private offices for telecommuters or where residents in the neighborhood may work near their homes;
- ▶ shared parking program so as to reduce the parking required for each individual use; and/or
- ▶ high density housing on at least 35% of the site with an FAR of 1.0 in the CMU area.

PARKS AND OPEN SPACE

The URSP project site includes a total of approximately 37 acres of park and 32 acres of open space land uses. Several types of park and open space areas are designated in the URSP area including community parks, greenbelts and visual corridors, landscape setbacks adjacent to right-of-ways, and open space trail systems. In general, parks would provide ball fields, tot lots and play apparatus, benches, picnic areas, shade structures, and integrated onsite storm water detention facilities. Three parks would be located within the active adult community and



Source: HLA Group 2004

URSP Land Use Diagram

Union Ranch Specific Plan Draft EIR
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Not to Scale



would be private facilities. A fourth park would be located within Union Ranch East and would be a public facility. Open space and greenbelt areas would be provided along the eastern and southern edges of the project site and around the commercial-mixed use areas.

3.4.2 TRAFFIC AND VEHICULAR ACCESS PLAN

Approximately 9 acres or 2% of the specific plan area would be dedicated for an internal transportation network. The proposed circulation plan is shown in Exhibit 3-4. In general, the circulation plan would consist of existing roads, improved roads along existing roadway alignments, and new roads to provide internal circulation within the specific plan area. The major arterials in the specific plan area would be Airport Way, Lathrop Road, and Union Road. These existing roads would prioritize the movement of through traffic while providing some access to adjacent properties and would be improved along their existing alignments with a center median with curb and gutter, sidewalk, multi-use path, masonry wall, and landscaping. Signal modifications would also occur along Union Road and Airport Way.

A 120-foot wide residential collector roadway would be constructed within the specific plan area to prioritize traffic flow between the active adult community and the traditional single family development community. In general, this collector roadway would be oriented in an east-west direction. A network of smaller local neighborhood streets ranging from 44 feet to 60 feet wide would provide access to residential areas within both communities. Access to the commercial/mixed use development area would be provided from Lathrop Road and Union Road.

Primary freeway access to the specific plan area would be provided via the Lathrop Road interchange on I-5 and SR 99.

3.4.3 DRAINAGE PLAN

The City of Manteca currently operates a storm drainage system consisting of gravity storm drain lines that terminate at detention or retention facilities. Existing City detention facilities discharge into a network of open channels and underground pipes owned and maintained by the South San Joaquin Irrigation District (SSJID), which discharges stormwater to the French Camp Outlet Canal. Several of these open channels and underground pipes owned by the SSJID bisect the specific plan area and would need to be relocated and/or improved with implementation of the project.

Four separate storm drainage collection systems would be constructed in the specific plan area to accommodate projected stormwater volumes associated with the URSP. These collection systems would collect stormwater via standard storm drains in streets and other impervious surface areas and would convey stormwater to one of 4 separate detention basins that would be located in the north, east, and west corners of the project site and in the center of the project site (Exhibit 3-5). The storm water would continue through an underground storm drain system to one of the pump stations within each basin in the specific plan area, and would then be discharged to the nearest SSJID storm drain.

The collection system and basins would be sized to collect storm runoff from a 10-year, 48-hour storm event consistent with City design guidelines. The drainage system would be developed in phases concurrent with development of the specific plan area. The detention basins would be “multi-use” in that they would be landscaped and vegetated and would include recreation features such as play fields, walking paths, and dog exercise areas. The multi-use basins would be designed to function as detention basins during storm events and remain available for park uses during the remainder of the year.

3.4.4 PUBLIC UTILITIES PLAN

POTABLE WATER SUPPLY

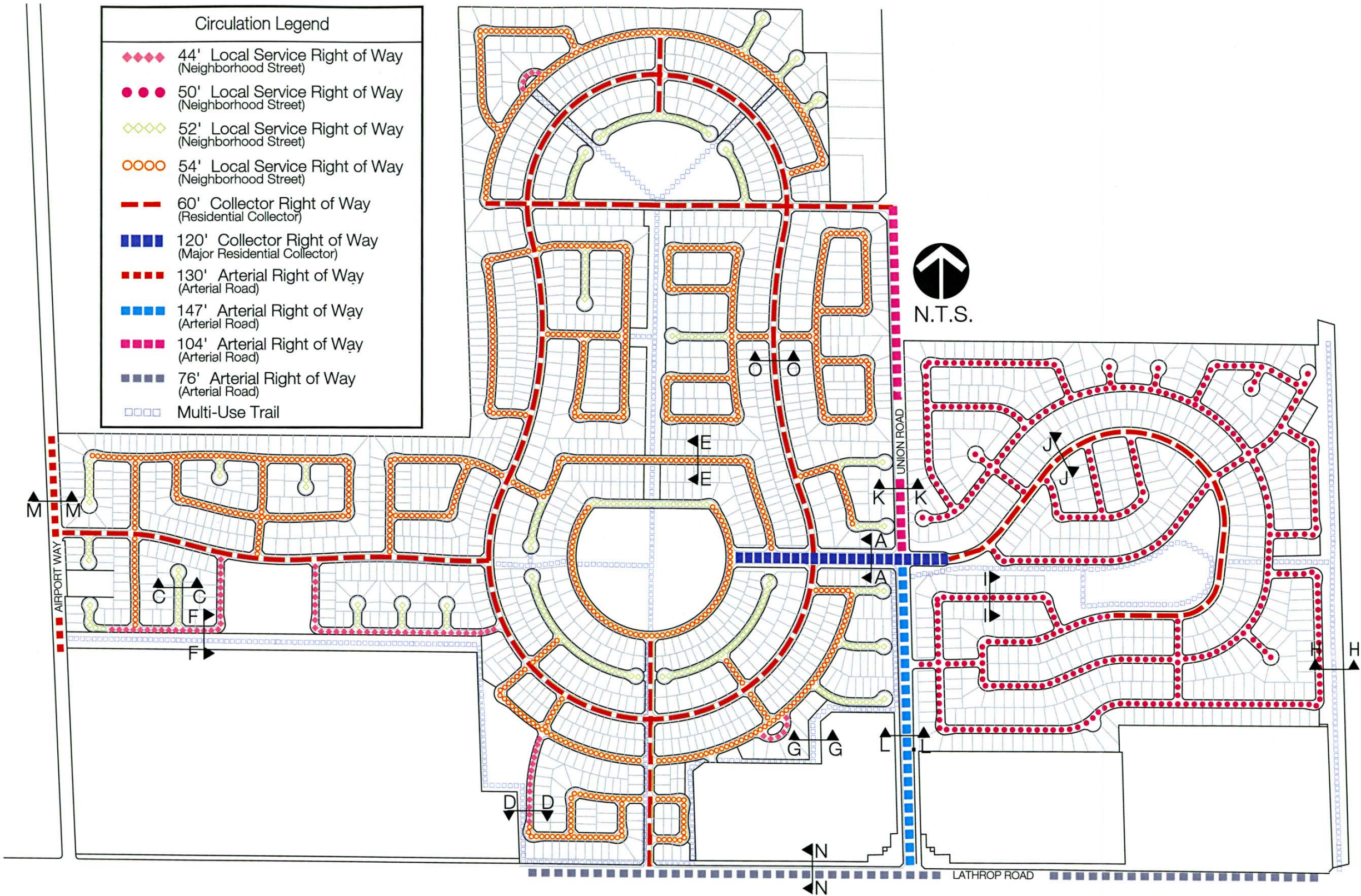
The City’s Urban Water Management Plan provides for phased development of water infrastructure in the specific plan area and throughout the city. The City of Manteca is a participant in the South County Surface Water Supply Project (SCSWSP), which includes development of a water treatment plant and approximately 40 miles of pipeline that would deliver treated surface water to the cities of Manteca, Lathrop, Tracy, and Escalon. The water supply pipelines for the SCSWSP that would serve the City of Manteca have been constructed. Further, one of two water storage tanks has been constructed on Lathrop Road east of Union Road, the other is located on West Yosemite Avenue. The SCSWSP is expected to deliver water to the City of Manteca in 2005. In absence of this water supply, and in the event that this water supply project is stalled, the project would extend two existing City water mains to the specific plan area and would develop two new water wells: one within the specific plan area and one adjacent to the SCSWSP water tank on Lathrop Road.

The project includes the extension of the existing 12-inch water line in Lathrop Road to the project site. Also, the existing 12-inch water line at the intersection of Lathrop Road and Airport Way would be extended north within the Airport Way right-of-way adjacent to the project frontage. These extensions would result in a 12-inch-line loop that would provide a reliable source of water supply throughout the specific plan area. The water distribution system would be developed in phases concurrent with development on the project site. Each phase would connect to a 12-inch-diameter water transmission line and other connection points in preceding phases.

SANITARY SEWER

The City of Manteca currently provides sanitary sewer service to its customers through a network of gravity and force main sewer lines. Several pump stations and lift stations are located throughout the City to augment this sewer line network. The conveyance system terminates at the City of Manteca Wastewater Quality Control Facility (WQCF), which treats and disposes of wastewater and is located in the southwest portion of the City.

The proposed sewer collection system would consist of a network of gravity sewer lines located throughout the project site ranging from 6 to 15-inches in diameter. The system would generally direct flows from east to west across the specific plan area according to the existing



Source: HLA Group 2004

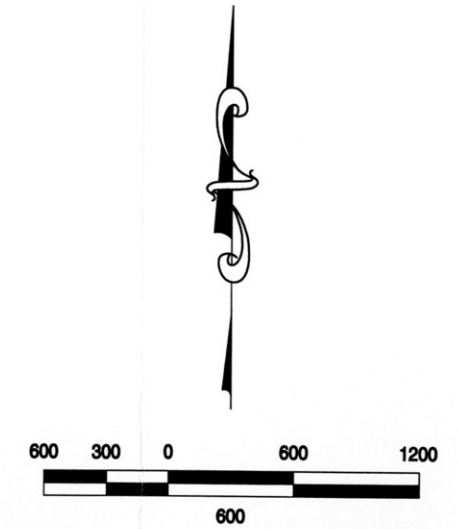
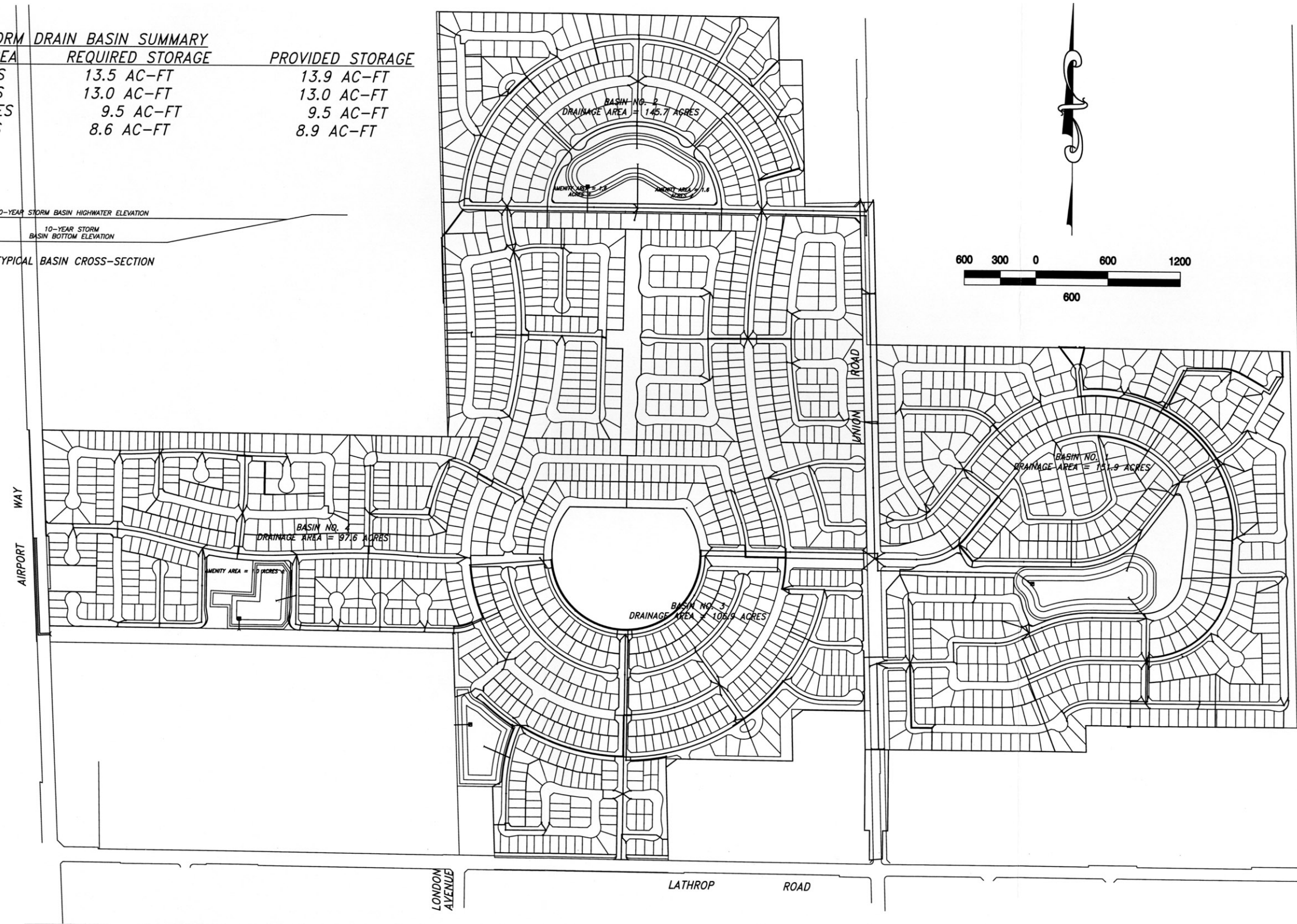
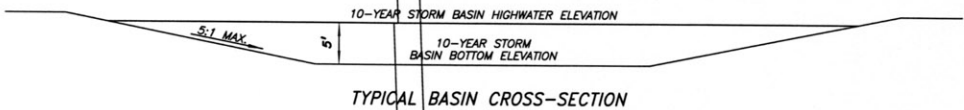
URSP Circulation Network

Union Ranch Specific Plan Draft EIR
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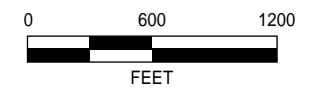


BASIN NO.	TRIBUTARY AREA	STORM DRAIN BASIN SUMMARY REQUIRED STORAGE	PROVIDED STORAGE
1	151.9 ACRES	13.5 AC-FT	13.9 AC-FT
2	145.7 ACRES	13.0 AC-FT	13.0 AC-FT
3	106.9 ACRES	9.5 AC-FT	9.5 AC-FT
4	97.6 ACRES	8.6 AC-FT	8.9 AC-FT



Source: Thompson-Hysell Engineers 2004

URSP Storm Drain Basin Plan



slope. A 15-inch sewer trunk line would terminate at Airport Way. This system would connect to the City's existing sanitary sewer system.

The nearest connection point to the City's existing sewer system is located approximately two miles south of the specific plan area in Airport Way. The City of Manteca Sewer Master Plan (1993) identifies and recommends the extension of a sewer trunk line north to a point adjacent to the specific plan area. Until these improvements are implemented, the project developers propose to construct a temporary pump station at the southwest corner of the specific plan area and would convey wastewater generated by the project within a new 12-inch force main that would be constructed in the Airport Way roadway alignment to the closest point of connection with the City's existing system (Exhibit 3-6). This connection point is located approximately 1,000 feet north of the intersection of Airport Way and West Yosemite Avenue. When the City extends the sewer trunk line to the specific plan area, the temporary pump station and 12-inch force main along Airport Way would be abandoned in accordance with City requirements. The sanitary sewer collection system would be developed in phases concurrent with project development.

ELECTRICITY

Pacific Gas and Electric Company (PG&E) currently provides electrical service to the specific plan area via a number of existing transmission lines. PG&E would continue to be the electrical service provider for the project, delivering power via connections to existing main electrical feeder lines in the developed portion of the City on the south side of Lathrop Road. As the plan area is developed, some existing aboveground electrical lines would be relocated underground or replaced with new underground lines. All new power lines in the specific plan area would also be installed underground. Existing overhead lines along Airport Way would be relocated (set back) to provide for arterial street widening.

NATURAL GAS

PG&E currently supplies natural gas to the specific plan area via a number of existing pipelines. PG&E would continue to be the natural gas provider for the project, delivering gas via connections to existing main pipelines in the developed portion of the City on the south side of Lathrop Road. As the plan area is developed, new underground supply pipelines would be installed in the neighborhood street right-of-ways.

3.4.5 PHASING

For planning purposes, and to assist with the orderly development of the specific plan area, implementation of the URSP is proposed to proceed in 7 phases, as indicated in Exhibit 3-7. Construction of Phase 1 is estimated to begin in 2005 and complete project buildout is estimated for 2011. Project elements included in each phase are briefly described below.

PHASE 1

Phase 1 construction would involve the following general project components:

- ▶ roadway and traffic signal improvements along Union Road and Airport way,
- ▶ drilling and installation of a water well within the active adult community,
- ▶ project entry landscape and monumentation at the intersection of Union Road at Lathrop Road,
- ▶ installation of offsite sanitary sewer lift station and force main within Airport Way,
- ▶ storm drain channel construction,
- ▶ improvements to portions of the development trail to the Tidewater Bike Trail adjacent to the Woodbridge storm drain channel, Park “C,” and the project entry at Union Ranch East,
- ▶ construction of 371 senior restricted housing units, recreation center, and stormwater detention basin in the active adult community, and
- ▶ construction of 119 housing units and one park in the traditional single family community.

PHASE 2

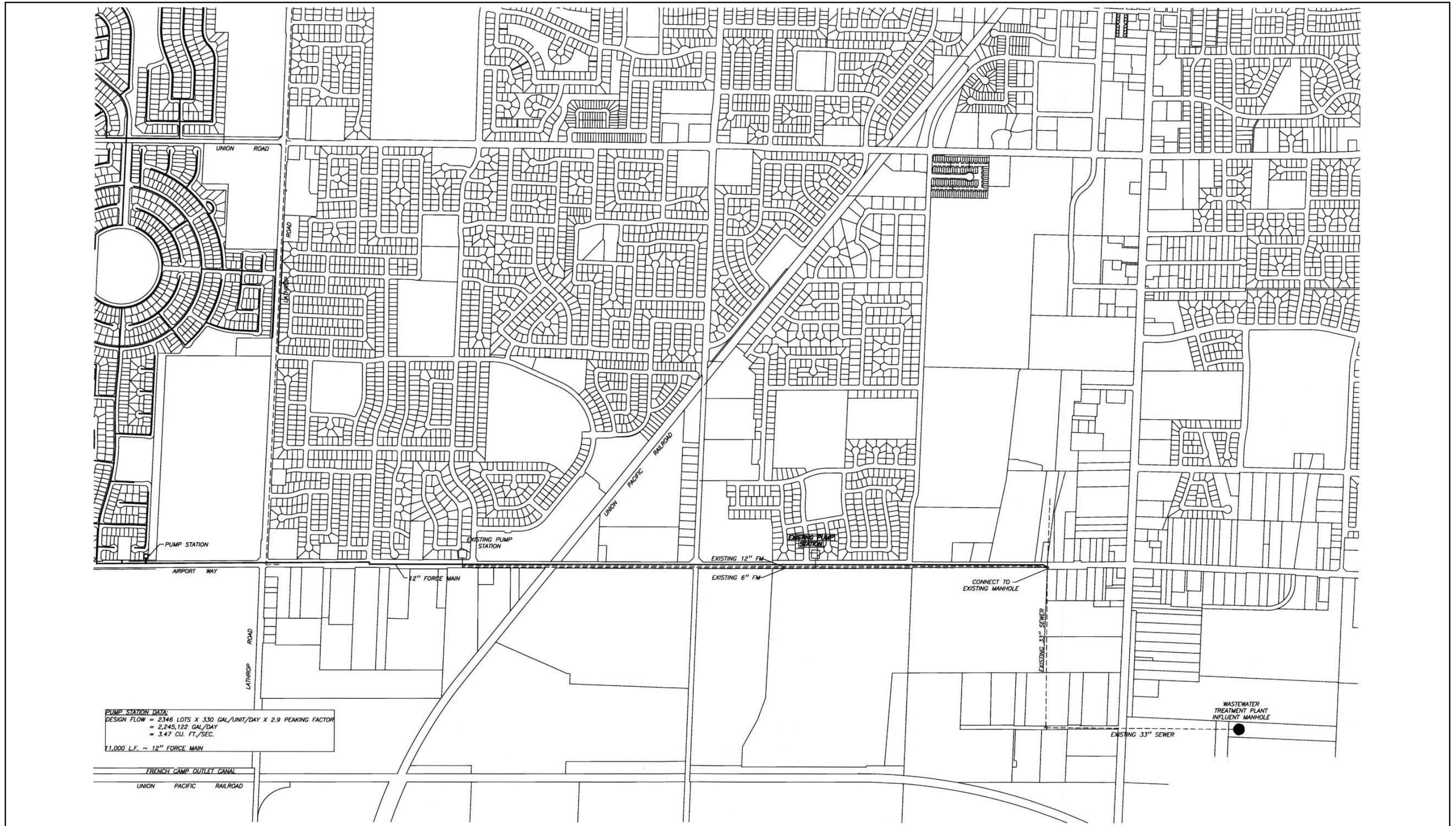
Phase 2 construction would involve the following general project components:

- ▶ improvements to Lathrop Road,
- ▶ construction of 211 senior restricted housing units and a storm drainage basin in the active adult community, and
- ▶ construction of 83 housing units in the traditional single family community.

PHASE 3

Phase 3 construction would involve the following general project components:

- ▶ improvements to the Tidewater Bike Trail from Lathrop Road north to the Phase 3 boundary of the traditional single family community,
- ▶ traffic signal installation on Lathrop Road at the Tidewater Bike Trail crossing,
- ▶ drilling and installation of a water well in the traditional single family community,
- ▶ construction of 239 senior restricted housing units in the active adult community, and
- ▶ construction of 65 housing units in the traditional single family community,



Source: Thompson-Hysell Engineers 2004

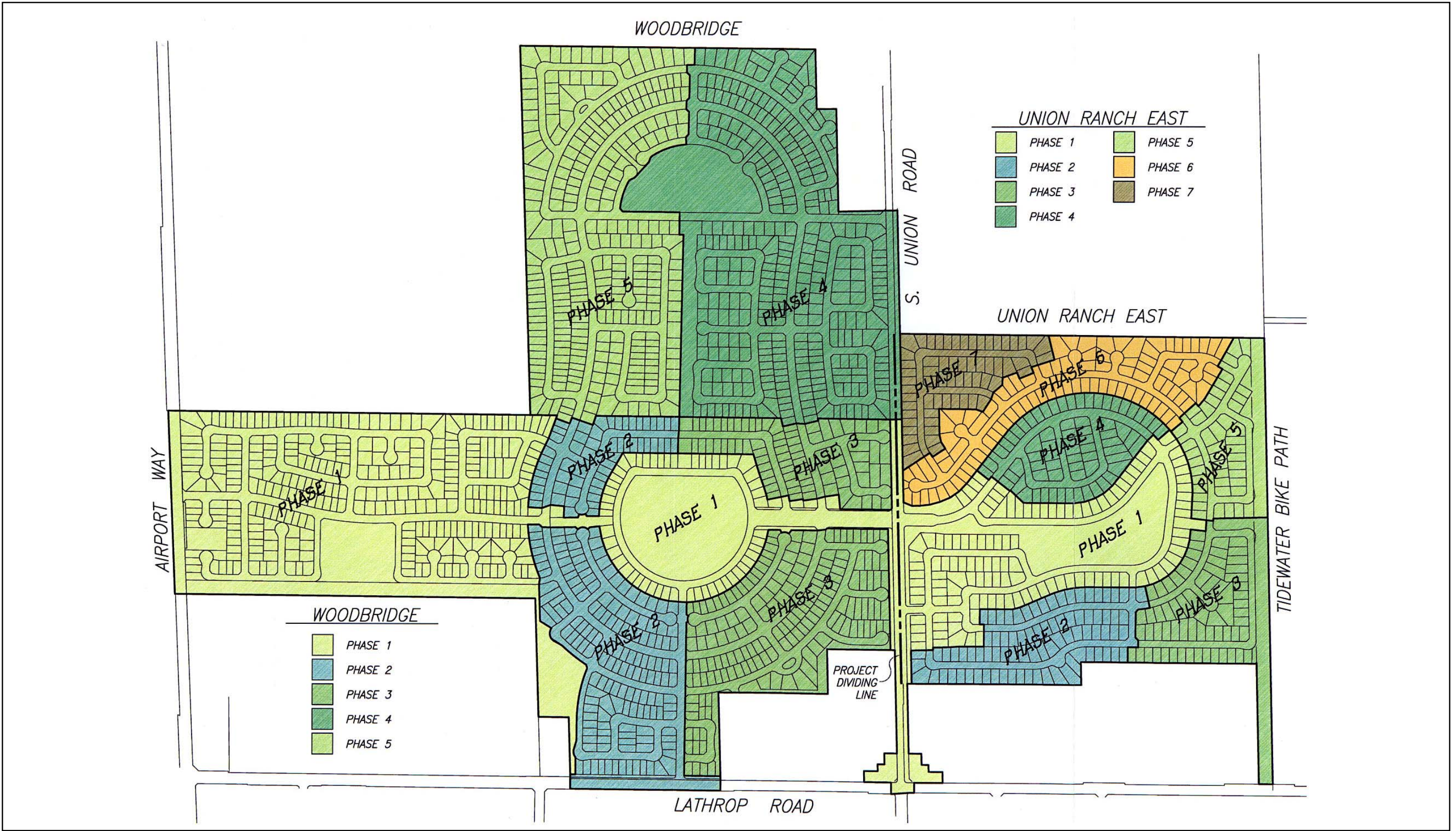
Partial City of Manteca Sewer Plan

Union Ranch Specific Plan Draft EIR
 P 4T040.01 08/04

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NORTH

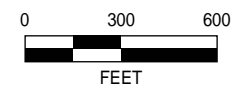
EDAW



Source: Thompson-Hysell Engineers 2004

URSP Phasing Diagram

Union Ranch Specific Plan Draft EIR
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PHASE 4

Phase 4 construction would involve the following general project components:

- ▶ improvements to Union Road,
- ▶ construction of a park and storm drainage basin,
- ▶ construction of 315 senior restricted housing units in the active adult community, and
- ▶ construction of 70 housing units in the traditional single family community.

PHASE 5

Phase 5 construction would involve the following general project components:

- ▶ Improvements to the Tidewater Bike Trail from the Phase 3 North Line to the project boundary,
- ▶ Construction of 289 senior restricted housing units in the active adult community, and
- ▶ Construction of 44 housing units in the traditional single family community.

PHASE 6

Phase 6 construction would involve the following general project components:

- ▶ construction of 92 units in the traditional single family community.

PHASE 7

Phase 7 construction would involve the following general project components:

- ▶ construction of 62 units in the traditional single family community.

3.5 REQUESTED ENTITLEMENTS

Implementation of the URSP would require the following entitlements from the City of Manteca:

- ▶ Adoption of rezoning designations for the site.
- ▶ LAFCO approval of a Sphere of Influence boundary expansion, services plan and annexation of the specific plan area to the City of Manteca.
- ▶ Approval of tentative subdivision maps.
- ▶ Approval of development agreements between the City and developer.
- ▶ Approval of a phasing plan for development.

- ▶ Adoption of design guidelines for the specific plan area.
- ▶ Approval of the specific plan.

Adoption of the specific plan would establish the land use entitlements for all land within the specific plan area. No further General Plan amendments or zoning designations would be required for specific developments within the specific plan area as long as the development is consistent with the land uses and standards described in the specific plan.

4 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES, AND MITIGATION MEASURES

Sections 4.1 through 4.13 of this draft environmental impact report (EIR) present a discussion of existing conditions, environmental impacts associated with implementation of the project, mitigation measures to reduce the level of impact, and residual significant impacts (i.e., impacts that would be significant and unavoidable despite the imposition of any proposed mitigation measures). Issues evaluated in these sections consist of a full range of environmental topics originally identified for review in the notice of preparation (NOP) prepared for the URSP project. The NOP is included as Appendix A. Sections 4.1 through 4.12 each include the following components.

- ▶ **Existing Conditions:** This subsection presents the existing environmental conditions on the project site and in the surrounding area as appropriate, in accordance with the California Environmental Quality Act Guidelines (State CEQA Guidelines) §15125. The discussions of the environmental setting focus on information relevant to the issue under evaluation.
- ▶ **Regulatory Background:** This subsection presents information on the laws, regulations, plans, and policies that relate to the issue area being discussed. Regulations originating from the local, state, and federal levels are each discussed as appropriate.
- ▶ **Environmental Impacts:** This subsection identifies the impacts of the proposed project on the existing environment, in accordance with State CEQA Guidelines §§15125 and 15143. Before presenting an evaluation of impacts, the section describes the analysis methodology used, and the thresholds of significance used to identify impacts are then listed. Project impacts are identified alphanumerically and sequentially throughout this section. For example, impacts in Section 4.4 are identified as 4.4-1, 4.4-2, and so on. An impact statement precedes the discussion of each impact and provides a summary of the impact and its level of significance. The discussion that follows the impact statement includes the evidence on which a conclusion is made regarding the level of impact. The discussions of cumulative impacts and growth-inducing impacts are presented in Chapter 5 and Chapter 6, respectively.
- ▶ **Mitigation Measures:** This subsection identifies potentially feasible mitigation measures to reduce significant and potentially significant impacts of the proposed project, in accordance with State CEQA Guidelines §15002(a)(3), §15021(a)(2), and §15091(a)(1). Each mitigation measure is identified alphanumerically to correspond with the number of the impact being reduced by the measure. For example, Impact 4.3-1 would be mitigated with Mitigation Measure 4.3-1. This subsection also describes whether the mitigation measures would reduce impacts to less-than-significant levels. Significant and unavoidable impacts are identified as appropriate in this subsection, as well as in the “Residual Significant Impacts” subsection described below. Significant and unavoidable impacts are also summarized in Chapter 6.

- ▶ **Level of Significance After Mitigation:** This section identifies any significant impacts that would remain significant following implementation of the mitigation measures.

4.1 LAND USE AND AGRICULTURAL RESOURCES

This section evaluates the environmental impacts of the project on existing land uses (including agricultural resources). A description of the existing site characteristics and setting is followed by an analysis focused on the relationship between the project and existing plans and policies, and the relationship with existing onsite and adjacent land uses. Mitigation is recommended to reduce project impacts where feasible.

4.1.1 ENVIRONMENTAL SETTING

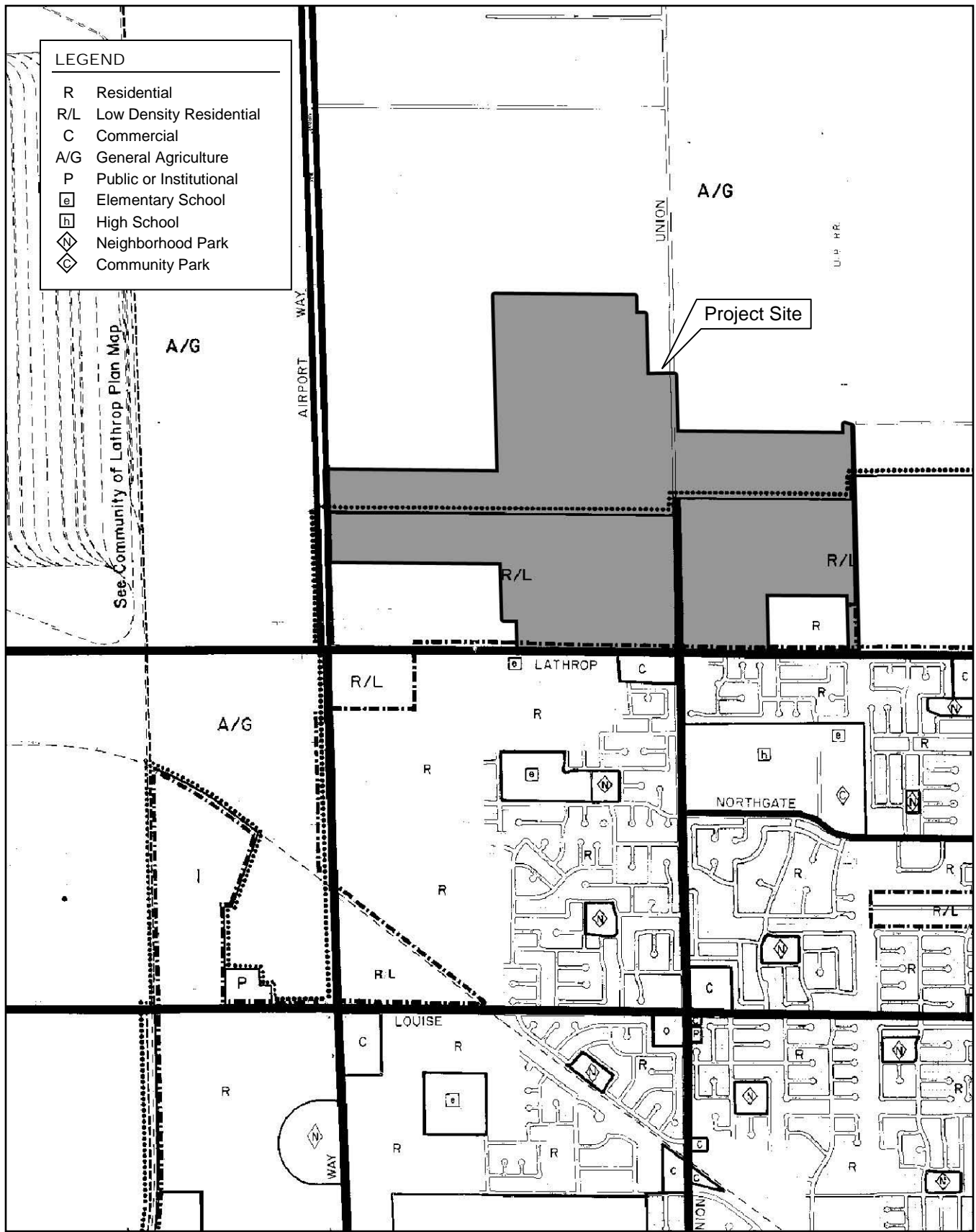
PROJECT SITE

The URSP project site encompasses approximately 553 acres adjacent to and north of the existing corporate limits of the City of Manteca (City) in San Joaquin County, California. The site is located east of Interstate 5 (I-5) and west of State Route 99 (SR 99) within the Primary Urban Service Boundary (USB) lines for the City. Currently, the project site includes agricultural uses such as orchards, cattle grazing, fallow farmland, and rural residences and associated outbuildings. An existing hay supply business is located at the northwest corner of the Union Road and Lathrop Road intersection on the project site.

Because of its adjacency to the city limits of the City of Manteca, the project includes the annexation of the project site to the City. An annexation is the incorporation of land and water area into an existing community (i.e., City of Manteca) with a resulting change in the boundaries of that community. Annexation is often the precursor to urbanization of an existing county area. The State of California has delegated the authority for approving annexation to the Local Agency Formation Commission (LAFCO), rather than to a city to which the property is proposed for annexation or to the County in which the property is located. A discussion of LAFCO's role and authority is provided in the regulatory setting below.

The project site is currently located within the land use authority of San Joaquin County. If the project is approved by the City and annexation is approved by LAFCO, the project site would be located within the limits of the City of Manteca and subject to the City's land use authority. For purposes of this analysis, the project is compared to both the County and the City's General Plan to determine the consistency of the project with existing land use designations.

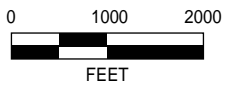
The San Joaquin County General Plan (County General Plan) (Exhibit 4.1-1) designates the southern portion of the project site as Low Density Residential (R/L) on both sides of Union Road. The remaining portion of the project site is designated General Agriculture (A/G). According to the San Joaquin County Zoning Map, the part of the property adjacent to Lathrop Road is zoned AU-20 (Agriculture Urban Reserve) and the northern part of the project site is zoned AG-40 (General Agriculture). The R/L designation denotes areas for single-family dwelling units at 2-6 dwelling units per acre. The A/G designation denotes areas generally committed to agriculture with viable commercial agricultural enterprises that require



Source: San Joaquin County Community Development Department 02/97

San Joaquin County Land Use Designations

EXHIBIT 4.1-1



large land areas to efficiently produce their crops (County of San Joaquin 1992). According to the County General Plan, typical uses in the General Agriculture district are crop production, feed and grain storage and sales, aerial crop spraying, and animal raising and sales. Additional activities in this district include resource recovery, dairy and canning operations, stockyards, and animal feedlots. Other types of land uses are presumed to be incompatible for reasons that include adverse environmental effects on agriculture.

The project site is designated for Commercial/Mixed Use, Low Density Residential, Open Space, and Park uses by the City of Manteca's General Plan (City General Plan) (Exhibit 4.1-2). A brief description of these land use designations summarized from the City General Plan is provided below:

Commercial Mixed Use (CMU) (15.1 to 25 dwelling units per acre) – The Commercial Mixed Use designation accommodates a variety of purposes including high density residential, employment centers, retail commercial, and professional offices. The mixed use concept integrates a mix of compatible uses on a single site that include sales, services and activities that residents may need on a daily basis. With pedestrian access, these sites enable residents to walk or bike for many local trips, instead of driving.

Low Density Residential (LDR) (2.1 to 8.0 dwelling units per gross acre) – The Low Density Residential land use establishes a mix of dwelling unit types and characters determined by the individual site and market conditions. The density range allows substantial flexibility in selecting dwelling unit types and parcel configurations to suit particular site conditions and housing needs. The type of dwelling units anticipated in this density range include small lots and clustered lots as well as conventional large lot detached residences.

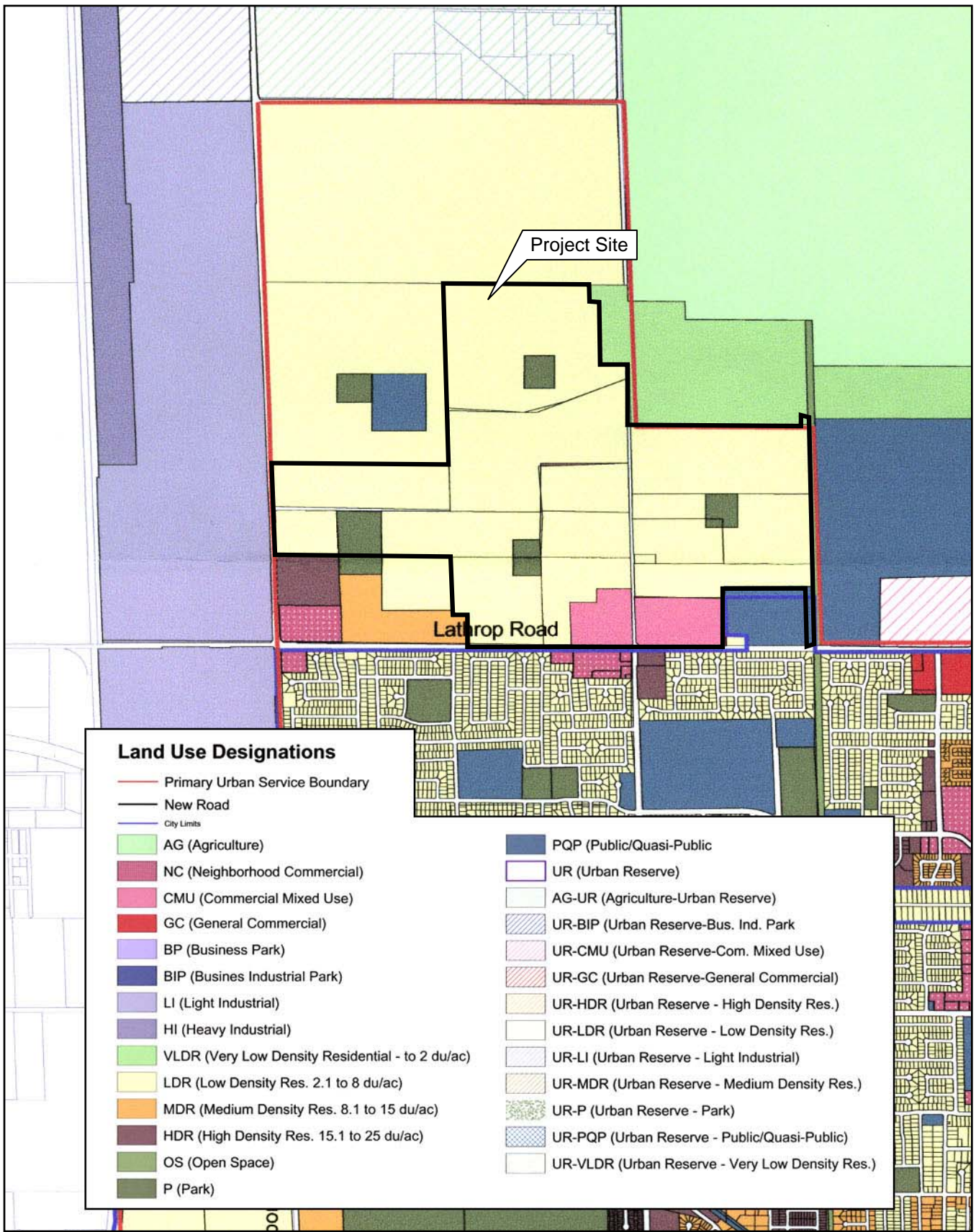
Open Space (OS) – The Open Space land use designation encompasses habitat, open space, natural areas, lands of special status species, wetlands and riparian areas. These areas are set aside as permanent open space preserves to protect environmentally sensitive areas.

Park (P) – This designation provides for neighborhood, community, and regional parks, golf courses, and other outdoor recreational facilities within urban development. Specific uses include public recreation sites, including ball fields, tot lots and play apparatus, adult softball and soccer playing fields, swimming pools, community center buildings, meeting facilities, libraries, art centers, after school care facilities, art in public places, facilities for night-time recreation, trails benches, interpretive markers, picnic areas, barbecue facilities, landscaping, irrigation, city wells, trees, and natural habitat areas.

ADJACENT LAND USES

Areas north of the URSP area are primarily used for agricultural operations. A few large residential lots are located north of the project site along Union Road.

Land south of the project site includes residential and commercial development south of Lathrop Road at the southwest corner of Union Road and Lathrop Road, within the Manteca city limits. The southeast corner of the same intersection is zoned High Density Residential



Source: City of Manteca General Plan 2003

Manteca General Plan Land Use Designations



and includes a new senior apartment complex. An existing church is located southeast of the project site and north of Lathrop Road.

To the east of the project site is the existing right-of-way of the Tidewater Southern Railway. This right-of-way is currently used as a pedestrian and bicycle path (Tidewater Bike Trail) south of Lathrop Road, extending to the central business district of the City. Delta College owns a large parcel to the east of Union Road and north of Lathrop Road off of Brunswick Road, which is used for experimental agriculture practices with some classroom activities in a small onsite building.

Land west of the project site is primarily in agricultural use. The Union Pacific Railroad intermodal facility, the Defense Distribution Depot San Joaquin Sharpe, and other industrial uses are located west of Airport Way.

AGRICULTURAL RESOURCES SETTING

The City's General Plan policies are intended to represent the City's long-term vision for the area, and most of the remaining agricultural land within city limits is expected to be converted to urban uses over time. Although most of the project site is in agricultural production or is associated with agricultural uses, the City envisions that the project site and surrounding land areas would be developed with residential and commercial land uses, as shown in the City General Plan land use diagram and Exhibit 4.1-2. Regardless, the following describes the agricultural setting of the site and the relevant programs that classify, designate and conserve agricultural resources within California.

Soil Capability Classification

The Soil Capability Classification System takes into consideration soil limitations, the risk of damage when the soils are used, and the way in which soils respond to treatment. Soil capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils, which are unsuitable for agriculture. Generally, as the ratings of the capability classification system increase, the yields and profits are more difficult to obtain.

Soils in the project area consist of Veritas fine sandy loam, Tinnin loamy sand, and Tinnin loamy course sand. Veritas sandy loam has a Class II soil capability classification, which indicates that soils have moderate limitations that reduce the choice of plants and require moderate conservation practices. Tinnin loamy sand and Tinnin loamy course sand have a Class III capability classification. This classification indicates that onsite soils are suitable for production but have severe limitations that reduce the choice of plants, require conservation practices, or both.

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the U.S. Soil Conservation Service (SCS). The intent of the SCS (renamed the U.S. Natural Resources Conservation Service

[NRCS] in 1998) was to produce agricultural resource maps based on soil quality and land use across the nation. The California Department of Conservation (CDC) sponsors the FMMP and is also responsible for establishing agricultural easements in accordance with Public Resources Code §§10250-10255 (FMMP 2001).

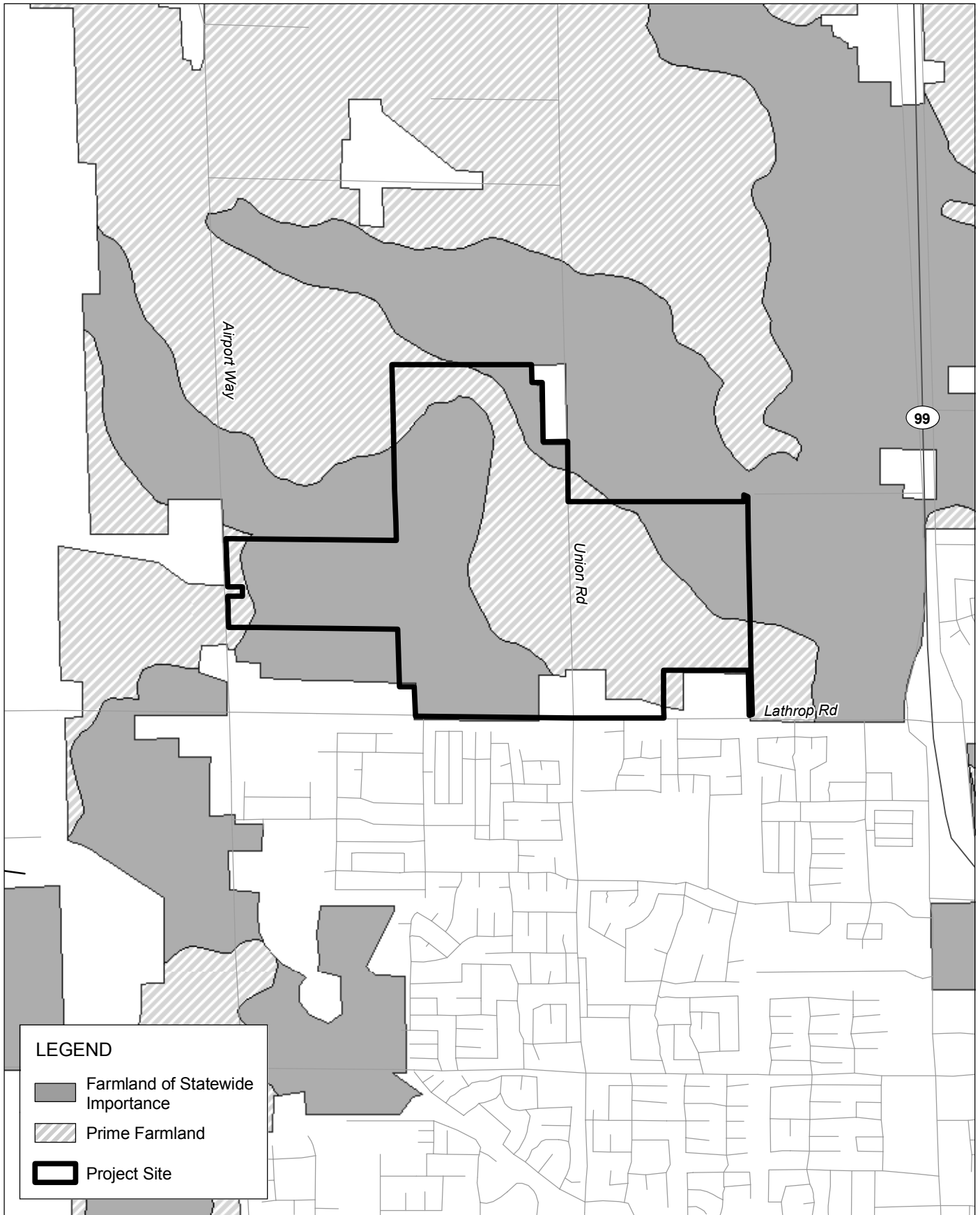
As part of the nationwide agricultural land use mapping effort, the SCS/NRCS developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified the land’s suitability for agricultural production. Suitability included both the physical and chemical characteristics of soils as well as the actual land use. Important Farmland maps are derived from the SCS/NRCS soil survey maps using the LIM criteria and are available by county. Important Farmland maps classify land into one of the following eight categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, Grazing Land, Urban and Built-Up Land, Other Land, and Water.

The Important Farmland map for San Joaquin County designates the project site as consisting of approximately 289 acres of Farmland of Statewide Importance (Exhibit 4.1-3). Farmland of Statewide Importance is described as “Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture; land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date” (FMMP 2004). The remaining 241 acres of the project site is designated as Prime Farmland, defined as "land that has the best combination of features for the production of agricultural crops" (FMMP2004).

Table 4.1-1 below shows the amount of farmland in San Joaquin County over a five-year period.

Land Use Category	1992	1994	1996	1998	2000
Prime Farmland	436,003	434,328	433,130	429,173	423,158
Farmland of Statewide Importance	99,548	99,132	98,162	96,800	93,846
Unique Farmland	47,084	47,202	48,760	52,719	57,977
Farmland of Local Importance	53,020	54,252	53,481	53,677	56,009
Total	635,655	634,914	633,533	632,369	630,990
Sources: FMMP 1994, 1996, 1998, 2000a, 2002, 2003					

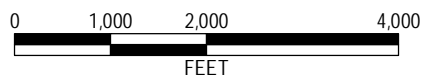
As shown in Table 4.1-1, the total amount of Important Farmland within San Joaquin County decreased by approximately 4,665 acres, or 2%, between 1992 and 2000. Prime Farmland and Farmland of Statewide Importance has decreased by 12,845 acres and 5,702 acres, respectively. Designation of new areas as Unique Farmland and Farmland of Local Importance has resulted in net increases for these categories between 1992 and 2000. Many



Farmland of Statewide Importance

Union Ranch Specific Plan Draft EIR
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EXHIBIT 4.1-3



changes in Important Farmland also involve reclassification of the land use type by the FMMP, including Grazing Land, Other Land, and Urban and Built-Up Uses. The majority of the areas converted to Grazing Land resulted from agricultural land being fallow (FMMP 2000b). The classification "Other Land" may include land uses such as feedlots and other rural uses, low-density rural residential, government lands, and road systems.

Williamson Act

The California Land Conservation Act of 1965, also known as the Williamson Act, is designed to preserve agriculture and open space lands by discouraging their premature and unnecessary conversion to urban uses. The act enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments which are much lower than normal because they are based on farming and open space uses as opposed to full market value. None of the project site is currently under Williamson Act contracts (City of Manteca 2003).

4.1.2 REGULATORY SETTING

The land use planning and zoning authority of local jurisdictions in California are set forth in the state's planning laws. The URSP project site is currently under the planning jurisdiction of both the County of San Joaquin and with implementation of the project and approval of the land annexation by the San Joaquin County Local Agency Formation Commission (LAFCO), would be under the planning jurisdiction of the City of Manteca. A summary of local land use policies applicable to the project site, as well as policies and goals related to agricultural land uses, are provided below.

STATE PLANNING AND ZONING LAWS

California Government Code §65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Finally, although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The State Zoning Law (California Government Code §65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance

may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (Gov. Code, §65860, subd. (c)).

SAN JOAQUIN LAFCO

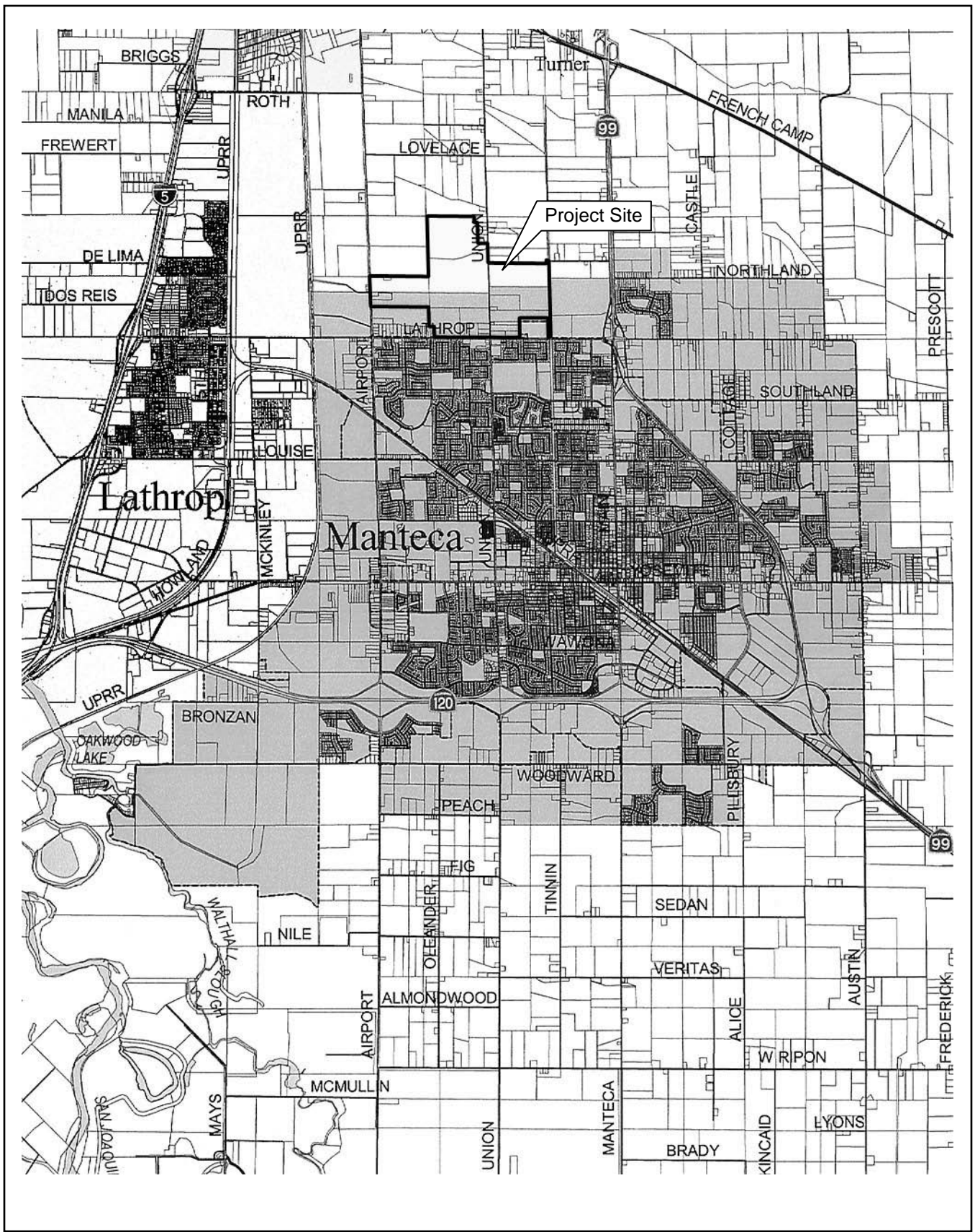
The Local Government Reorganization Act of 2000 (California Government Code §56000 et seq.) establishes the process through which a local agency boundary change is made and associated planning authority is transferred from one local agency to another. The LAFCO of each county oversees and approves such boundary changes. To encourage orderly growth, LAFCOs establish a sphere of influence for each city and each special district. The sphere of influence is an area that is subject to the planning influence (though not direct land use authority) of a city or special district because the city/special district has identified an intention to at sometime annex the area into its physical boundary and service area. Exhibit 4.1-4 shows the sphere of influence established by the San Joaquin LAFCO for the City of Manteca.

Established in 1963, San Joaquin LAFCO is responsible for coordinating logical and timely changes in local governmental boundaries within San Joaquin County, including annexations and detachments of territory; incorporations of cities; formations of special districts; and consolidations, mergers, and dissolutions of districts. San Joaquin LAFCO also reviews ways to reorganize, simplify, and streamline governmental structure, and has the authority to initiate proposals involving district consolidation, mergers, and reorganizations. In addition, San Joaquin LAFCO is responsible for reviewing out-of-agency service agreements between property owners and service providers. LAFCO's role is to encourage orderly development, preserve agricultural land, discourage urban sprawl, and encourage efficiently serviced development. The five member LAFCO board consists of two county supervisors, representatives from two of the cities within the county, and one member at large. If the project is approved by the City, the City would submit an annexation application to the San Joaquin LAFCO for annexation of the entire project site to the City.

The City is required to prezone the project site prior to submitting the annexation application to San Joaquin LAFCO. The proposed zones must be consistent with the city general plan and a public hearing must be held to receive comments on the proposed zones.

San Joaquin LAFCO has adopted its Guidelines for Formation and Development of Local Governmental Agencies (San Joaquin LAFCO Guidelines), which are generally based on statutory criteria and identify several standards against which annexation proposals would be evaluated. The following excerpts from the Proposal Evaluation Standard pertain to environmental issues and are relevant to the analysis presented in this Draft EIR (San Joaquin LAFCO n.d.):

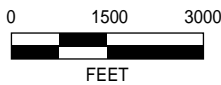
- C. The Executive Officer's report on all annexations or formations shall ascertain if the adoption of the proposal would result in two or more districts or a City and a district possessing, in any common territory, the authority to perform the same or similar functions. Proposals, which would result in duplication of authority to perform similar functions, will be opposed.



Source: San Joaquin County 2002

Manteca Sphere of Influence

EXHIBIT 4.1-4



- E. Annexation to an adjacent City will be favored over a proposal for providing urban services by special districts.
- F. Annexations to agencies providing urban services shall be progressive steps toward filling in the territory designated by the affected agency's adopted Sphere of Influence. Proposed growth shall be from inner toward outer areas.
- G. Boundaries which create islands, strips or corridors within an agency providing urban services shall be avoided.
- H. Annexation to or formation of a multiple service agency will be favored over a proposal for providing urban services by a multiplicity of limited service districts.
- I. Annexation to an existing agency will be favored over a proposal for forming a new agency to provide the same services.
- K. Economical efficiency of a larger annexation will be favored over a proposal for "single parcel" or "piecemeal" annexation.
- L. A proposal establishing urban encroachment of areas designated by the County General Plan for open space or agricultural use will be opposed unless it complies with a previously adopted Sphere of Influence of an incorporated City.

SAN JOAQUIN COUNTY GENERAL PLAN 2010

The current San Joaquin County General Plan 2010 was adopted in 1992 and includes community plans for each of the County's 11 planning sub-areas. The URSP project site is located in the Manteca Planning Area. The County General Plan establishes within each planning sub-area a broad range of land use designations to classify different types of land uses and identifies appropriate development guidelines for each. As shown in Exhibit 4.1-1, the southern portion of the URSP project site is designated Low Density Residential (R/L), which denotes areas for single-family dwellings at a density of 2-6 units per acre. The northern portion of the project site is designated and zoned General Agriculture (A/G), which denotes areas generally committed to agriculture with viable commercial agricultural enterprises that require large land areas to efficiently produce their crops (County of San Joaquin 1992).

The County prepared a review and revision of the County General Plan in 2000. This General Plan 2010 Review includes maps of existing and expected future urban growth areas through 2020. The URSP area is expected to be within the city limits of the City of Manteca within the life of the General Plan 2010 Review (County of San Joaquin 2000a).

CITY OF MANTECA GENERAL PLAN

The City General Plan includes the following policies related to land use that are relevant to this analysis:

Policy LU-P-7: All lands within the Primary and Secondary Urban Service Boundary lines to be ultimately developed to urban standards should be developed under the jurisdiction of the City of Manteca. Pending annexation to the City, all such lands should remain in agricultural, open space, or other low intensity uses. The City shall work cooperatively with the County to ensure that development approval by the County on unincorporated lands within the Primary and Secondary Urban Service Boundary lines is developed according to standards consistent with those of the City of Manteca. The City shall request all proposals for development on unincorporated lands within the Primary and Secondary Urban Services Boundary lines be referred to the City for review and comment prior to formal consideration by the County.

Policy LU-P-9: The City will consider applications for annexations that:

- ▶ are contiguous with city boundaries and provide for a logical expansion to the city;
- ▶ create clear and reasonable boundaries;
- ▶ ensure the provision of adequate municipal services;
- ▶ reflect a long-term fiscal balance to the city and its residents, when reviewed cumulatively with other annexations;
- ▶ are consistent with State law and San Joaquin County Local Agency Formation Commission standards; and
- ▶ are consistent with the General Plan.

Policy LU-P-12: The City will encourage the use of specific plans as needed to ensure orderly, well-planned growth.

Policy LU-P-49: The City shall give priority to in-fill development and new development contiguous to existing developed areas, whenever practical.

SAN JOAQUIN COUNTY MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) is a 50-year plan to provide a strategy for balancing the desires to conserve open space in San Joaquin County, maintain the agricultural economy, and allow development of more than 109,300 acres of open space while protecting habitat for several endangered species (County of San Joaquin 2000). The SJMSCP was prepared by the County and the U.S. Fish and Wildlife Service, and the County and cities within the County can participate in the terms of the plan by each choosing to adopt it and its implementation agreement.

The City of Manteca City Council adopted the SJMSCP on February 5, 2001, and has signed the implementation agreement. Among other purposes, the SJMSCP addresses potential impacts on nearly 100 special-status plant, fish, and wildlife species in 52 vegetative communities located throughout San Joaquin County. Projects that would cause impacts associated with specifically covered species are required to implement avoidance and minimization measures to lessen the impacts and provide compensation through payment of fees (or in-lieu land dedication) for conversion of open space lands. These fees are to be used to fund the purchase of conservation easements on agricultural lands and the preservation and creation of natural habitats to be managed in perpetuity through the establishment of habitat preserves. Final management of SJMSCP conservation areas is determined by the San Joaquin Council of Governments (SJCOG).

AGRICULTURAL RESOURCES REGULATION

California Department of Conservation Farmland Mapping and Monitoring Program

The CDC FMMP is described above under the Agricultural Resources Setting.

Williamson Act

The Williamson Act is described above under the Agricultural Resources Setting. None of the project area is under Williamson Act contracts.

San Joaquin County Right to Farm Ordinance

As required by Agricultural Lands Implementation Policy 2 in the San Joaquin County General Plan 2010 (County of San Joaquin 1992), the San Joaquin County Right to Farm Ordinance was adopted to preserve, protect, and encourage the development and improvement of agricultural land in San Joaquin County for the production of food and other agricultural products. The purpose of the ordinance is to reduce the loss of the county's commercial agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. Existing agricultural lands (in operation for more than one year) may not be considered a nuisance as a result of subsequently changed conditions in the area, such as urbanization. Under the County's current ordinance, building permit applicants are provided a disclosure statement regarding the Right to Farm Ordinance, but there is no mandatory process for notifying prospective property owners. The goal of disclosure is to inform the buyer or owner of the presence of possible irritants, like tractor noise and odors, to prevent future nuisance complaints.

San Joaquin County General Plan 2010

The County General Plan includes the following policies related to agricultural lands that are relevant to this analysis:

Policy No. 5: Agricultural areas shall be used principally for crop production, ranching, and grazing. All agricultural support activities and non-farm uses shall be compatible with agricultural operations and shall satisfy the following criteria:

- (a) The use requires a location in an agricultural area because of unusual site area requirements, operational characteristics, resource orientation, or because it is providing a service to the surrounding agricultural area;
- (b) The operational characteristics of the use will not have a detrimental impact on the management or use of surrounding agricultural properties;
- (c) The use will be sited to minimize any disruption to the surrounding agricultural operations; and
- (d) The use will not significantly impact transportation facilities, increase air pollution, or increase fuel consumption.

Policy No. 7: There shall be no further fragmentation of land designated for agricultural use, except in the following cases:

- (a) Parcels for home sites may be created, provided that the General Plan density is not exceeded.
- (b) A parcel may be created for the purpose of separating existing dwellings on a lot, provided the Development Title regulations are met.
- (c) A parcel may be created for a use granted by permit in the A/G zone, provided that conflicts with surrounding agricultural operations are mitigated.

Policy No. 8: To protect agricultural land, non-agricultural uses which are allowed in the agricultural areas should be clustered, and strip or scattered development should be prohibited.

Policy No. 9: Agriculture shall be protected from nuisance complaints from non-agricultural land uses by appropriate regulatory and land use planning mechanisms.

Policy No. 10: Non-agricultural land uses at the edge of agricultural areas shall incorporate adequate buffers (e.g., fences and setbacks) to prevent conflicts with adjoining agricultural operations.

City of Manteca Right to Farm Ordinance

Chapter 8.24 of Manteca Municipal Code is a “Right to Farm” Ordinance intended to protect agricultural productivity in the City. The Ordinance states: [note to WP – exact quote, please indent]

It is the policy of this City to preserve, protect and encourage the use of viable agricultural land for the production of food and other agricultural products. When nonagricultural land uses extend into or approach agricultural areas, conflicts often arise between such land uses and agricultural operations. Such conflicts often result in the involuntary curtailment or cessation of agricultural operations, and discourage investment in such operations. This chapter is intended to reduce the occurrence of conflicts between nonagricultural and agricultural land uses within the City.

City of Manteca General Plan

The City General Plan includes the following policies and implementation programs related to agricultural resources that are relevant to this analysis:

Policy LU-P-41: The City shall encourage the continuation of agricultural uses on lands within the Primary and Secondary Urban Services Boundary lines pending their development as urban uses consistent with the General Plan.

Policy RC-P-19: The City shall support the continuation of agricultural uses on lands designated for urban use, until urban development is imminent.

Policy RC-P-20: The City shall provide an orderly and phased development pattern so that farmland is not subjected to premature development pressure.

Policy RC-P-21: In approving urban development near existing agricultural lands, the City shall take actions so that such development will not unnecessarily constrain agricultural practices or adversely affect the viability of nearby agricultural operations.

Policy RC-P-24: Provide buffers at the interface of urban development and farmland, in order to minimize conflicts between these uses.

Policy RC-P-25: The City shall ensure, in approving urban development near existing agricultural lands, that such development will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural operations.

Policy RC-P-30: The City of Manteca will participate in a county-wide program to mitigate the conversion of Prime Farmland and Farmlands of Statewide Importance to urban uses.

Policy RC-I-30: Apply the following conditions of approval where urban development occurs next to farmland.

- ▶ Require notifications in urban property deeds that agricultural operations are in the vicinity, in keeping with the City’s right-to-farm ordinance.
- ▶ Require adequate and secure fencing at the interface of urban and agricultural use.
- ▶ Require phasing of new residential subdivisions; so as to include an interim buffer between residential and agricultural use.

4.1.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

The focus of this land use analysis is on land use impacts, including those related to agricultural resources, which would result from implementation of the project. Evaluation of potential land use impacts of the project was based on a review of the planning documents pertaining to the project study area, including the City and County General Plans and associated EIRs, city zoning ordinances, the SJMSCP, the California Department of Conservation Important Farmland Map for San Joaquin County, the California Department of Conservation Farmland Conversion Reports, consultation with appropriate agencies, and field review of the project site and surroundings.

THRESHOLDS OF SIGNIFICANCE

The project would result in significant land use or agricultural impacts if it would:

- ▶ conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect;
- ▶ conflict with adjacent land uses;
- ▶ physically divide an established community;
- ▶ convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to non-agricultural use;
- ▶ conflict with existing zoning for agricultural use, or a Williamson Act contract; or
- ▶ involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use.

IMPACT ANALYSIS

Impact 4.1-1

Conflicts with Land Use Plans, Policies, or Regulations. *The project would be annexed to the City of Manteca and subject to the City's land use authority. The project would be consistent with the City's land use designations for the site. Some of the City's zoning definitions would be modified to be consistent with proposed land uses outlined in the URSP, but the zoning definitions would be consistent with the City's General Plan land use designations. Following approval of the annexation of the project site to the City of Manteca by LAFCO, the proposed URSP would be consistent with the City's land use and zoning designations. This would be a **less-than-significant** impact.*

The URSP would allow the development of urban uses on existing agricultural land. The majority of the project site is designated General Agriculture (A/G) while a small portion of the site (southern portion of site straddling Union Road) is designated Low Density Residential (R/L). The project would be consistent with the Low Density Residential (R/L) designation; however, the project would remove the project site from agricultural uses and, therefore, would not be consistent with the County's existing General Agricultural (A/G) land use designation. The project includes the rezoning and annexation of the site to the City of Manteca. Once annexed, the project site would be subject to the planning jurisdiction of the City. Annexation of the project site would be a negotiated agreement between the City and the County such that the County would agree to transfer planning jurisdiction to the City. Although proposed land uses would be inconsistent with existing County land use designations, proposed land uses would be consistent with the City of Manteca's land use designations who would have land use authority over the project once implemented.

The project site is partially located within the City of Manteca's Sphere of Influence (SOI). These proposed land uses would be consistent with existing land use designations identified for the project site in the City General Plan.

The project would require modification of the existing LDR zoning category. This modification would change the definitions of the low density designation as it applies to the project site only, but the project site would continue to be designated as LDR consistent with existing General Plan land use designations. The project site would be zoned as R-1 (Single-Family Residential District) within the LDR land use designation. The R-1 designation includes the following subcategories: R-1-4 (minimum lot sites of 4,600 square feet [sf]), R-1-5 (minimum lot site of 5,500 sf), and R-1-6 (minimum lot sites of 6,000 sf), which would allow a mix of housing types defined by lot size and the character of different neighborhoods. The project involves development of single-family residences on lots that are a minimum of 4,600 and 7,500 square feet. According to the City's zoning code, the primary purpose of the R-1 district is to provide for the development of single-family detached housing and compatible uses within the low-density residential neighborhoods of the city. Development proposed under the URSP would not conflict with the land use or zoning designations.

The proposed URSP land use plan is anticipated to meet the general requirements for annexation established by state law. Availability of organized community services and water

supplies is analyzed in Section 4.10, Public Services and Utilities. Social, economic, and other effects on adjacent areas are described throughout this document, to the extent required by CEQA, including Chapter 6, which includes an assessment of growth-inducing impacts. Following approval of the zoning amendment by the City and approval of the annexation of the project site to the City of Manteca by LAFCO, the proposed URSP would be consistent with the City's land use and zoning designations. This would be a less-than-significant impact.

Impact
4.1-2

Alteration of Land Use and Potential Conflicts with Existing or Future Land Uses Adjacent To the Project Site. *Long-term impacts on adjacent land owners and conflicts associated with noise, odor, and dust from agricultural operations are expected to be minimal because the URSP site is bordered by urban and public/quasi-public land uses to the south. The proposed development is located adjacent to agricultural operations to the north, west, and east, and within the URSP area and implementation of the project could induce the conversion of adjacent agricultural lands to urban land uses. Potential conflicts between ongoing agricultural operations and development of the URSP area would be **significant**.*

The project site currently includes agricultural uses such as orchards, cattle grazing, fallow farmland, and rural residences. Implementation of the project would change the natural or cultivated setting of the area to developed urban uses. The project site would be developed in phases and would result in urban land uses adjacent to agricultural land uses.

Agricultural-urban interfaces generally result in potential for conflicts between agricultural practices and adjacent land owners. Pesticide application, generation of dust and noise from farm equipment, and shared roadways with farm trucks and tractors are common sources of these conflicts. Farmland owners may also suffer increased incidence of trespass, vandalism, and theft. In most instances, potential long-term conflicts between URSP residents and adjacent agricultural operations are expected to be minimal. Lands to the south of the URSP consist of urban uses in the City. Lands to the east and west are primarily devoted to agricultural uses.

Agricultural activities are present adjacent and north/northwest of the URSP area and these areas are designated for low and very low density residential and agricultural land uses by the City's General Plan. The project is the logical extension of existing urban areas of the city, would be designed to connect to the City's urban core, and would not result in fragmentation of rural or agricultural areas. The project also would not create an isolated area of development because it represents an extension of urban development directly adjacent to the project site on the south side of Lathrop Road. The project developers have incorporated landscape features including fences and walls that are 6 feet tall, and greenbelts and open spaces that provide separation between adjacent land uses. Access to existing farmlands by new residences would be minimized by limiting street extensions into agricultural areas. However, as development proceeds throughout the proposed URSP project, there is potential for conflicts when the development edge is adjacent to ongoing agricultural operations on undeveloped portions of the URSP site and adjacent agricultural and low density residential land uses. If appropriate buffers cannot be maintained between development and ongoing

agricultural operations, conflicts between these two land uses would constitute a significant impact.

Implementation of the project would extend the urban core of the City further to the north. This development is the logical expansion of the City's urban boundaries and would locate development adjacent to other industrial, public/quasi-public, and urban land uses. However, this project could induce further growth and expansion of the urban City limits to the north because it extends infrastructure to previously undeveloped areas, which could increase pressure for areas to the north of the site to similarly convert to residential land uses. This would be a significant impact.

Impact
4.1-3

Potential for Division of an Existing Community. *The project would not physically divide an established community. The existing rural residences and associated outbuildings do not constitute a defined community and would be incorporated into the new community created by the project. For this reason, this would be a **less-than-significant impact.***

The project would not physically divide an established community. The project would be located in an agricultural area north of the developed portion of the City of Manteca. To the east, west, and north, the proposed development would be surrounded by land designated for agricultural uses. There are approximately 23 farm residences located within the URSP project site. These residences are not formally or informally known as a community. Because the project would not divide an established community, this would be a less-than significant impact.

Impact
4.1-4

Direct Conversion of 530 Acres of Important Farmland to Nonagricultural Urban Use. *Implementation of the project would result in the direct conversion of approximately 289 acres of Farmland of Statewide Importance and 241 acres of Prime Farmland to nonagricultural urban use. Conversion of agricultural land would be a **significant impact.***

The Important Farmland map for San Joaquin County designates the project area as consisting of approximately 289 acres as Farmland of Statewide Importance and 241 acres of Prime Farmland. Implementation of the project would result in the direct conversion of agricultural land to nonagricultural urban use. The total amount of agricultural land that would be converted to urban use by the project (530 acres) represents approximately 0.1% of the important farmland in San Joaquin County.

The City General Plan designates the site for CMU (Commercial/Mixed Use), LDR (Low Density Residential), OS (Open Space), and P (Park). These designations indicate that the City has planned for conversion of this agricultural land to urban uses, and that the General Plan does not envision nor designate this area for permanent agricultural uses. The EIR for the City General Plan found that conversion of prime agricultural land, including the project site, to urban uses to be a significant and unavoidable impact with no feasible mitigation. As part of adopting the General Plan, the City Council adopted Findings of Fact and a Statement of

Overriding Consideration that indicated urban development was of greater benefit to the community than preserving agricultural land within city limits.

Although conversion of this land to urban uses would be consistent with the General Plan, conversion of Farmland of Statewide Importance to nonagricultural use would be a significant effect.

Impact
4.1-5

Consistency with San Joaquin County Multi-Species Habitat Conservation and Open Space Plan. *The project would be consistent with the land use designations of the City and County general plans and, therefore would be consistent with the SJMSCP. This would be a **less-than-significant impact**.*

Because of its location in San Joaquin County, the project would be within the area covered by the SJMSCP. Specifically, the URSP project site is identified in the SJMSCP as a part of the Central Zone, which encompasses the lands surrounding each of the county's seven incorporated cities. The SJMSCP identifies the Central Zone as the area where most of the county's existing urban development is located and where proposed new development is anticipated to occur. The SJMSCP defers to city general plans and the County General Plan for land use designations. Therefore, with regard to land use and planning, the project's consistency with the city and county general plans implies consistency with the SJMSCP. Because the project would not conflict with the SJMSCP, this would be a less-than-significant impact.

4.1.4 MITIGATION MEASURES

No mitigation measures are necessary for the following less-than-significant impacts.

- 4.1-1: Conflicts with Land Use Plans, Policies, or Regulations.
- 4.1-3: Potential for Division of an Existing Community.
- 4.1-5: Consistency with San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The following mitigation measures are provided for significant impacts:

- 4.1-2: Alteration of Land Use and Potential Conflicts with Existing or Future Land Uses Adjacent To the Project Site.

The project applicant shall phase the development of agricultural lands in the URSP area in such a way as to avoid the fragmentation of continuing agricultural operations. As development occurs in the URSP area, fencing, walls, or other suitable barriers shall be constructed or established at the interface between development and adjacent agricultural lands. Growers cultivating lands near or adjacent to urban development in the URSP area can be expected to comply with all necessary federal, state, and local restriction regarding buffers between pesticide/herbicide applications and sensitive areas, such as schools, residences, and parks. Required buffer distances may vary depending on the type of chemicals used and the method of application. Residents and other individuals purchasing property near agricultural

lands shall be provided information on the types of conflicts that may occur and appropriate means to address these conflicts, consistent with the City's Right-to-Farm Ordinance.

With regards to increased potential for the conversion of agricultural lands to the north, the project applicant shall implement Mitigation Measure 4.1-4 (below). The project applicant could also purchase land to the north to establish conservation easements to prevent future development of agricultural areas. However, these lands are designated for future residential lands uses in the City's General Plan and would conflict with intended land uses for the area. Further, it is the policy of the City to implement its General Plan. Therefore, implementation of conservation easements within the City would be infeasible.

Although Mitigation Measure 4.1-4 would substantially lessen significant impacts associated with farmland conversion impacts, the fees paid to the SJMSCP would only partially offset conversion of Important Farmland. Therefore, full compensation for potential losses of Important Farmland would not be achieved, and this impact would remain significant and unavoidable.

4.1-4 Direct Conversion of 530 Acres of Important Farmland to Nonagricultural Urban Use.

The project applicant shall participate in the SJMSCP. Appropriate fees shall be paid by the project applicant to the City for forwarding to SJCOG on a per-acre basis for lost agricultural land during development of proposed URSP and associated offsite utility infrastructure. The SJCOG will use these funds to purchase conservation easements on agricultural and habitat lands in the project vicinity (in the Central Index Zone identified in the SJMSCP). The preservation in perpetuity of agricultural lands through the SJMSCP, a portion of which would consist of Important Farmland, would ensure the continued protection of farmland in the project vicinity, partially offsetting project impacts.

Implementation of Mitigation Measure 4.1-4 would substantially lessen significant impacts associated with the conversion of Important Farmland on the URSP site and associated utility corridors because funding conservation easements would provide assistance to public and private sectors in protecting other farmland from the pressures of development. The easements are purchased for land exhibiting benefits to wildlife, including a combination of habitat, open space, and agricultural lands, so the compensation provided by the fee contribution for the project would not be applied exclusively to agricultural lands. Therefore, fees contributed to the SJMSCP would only partially offset conversions of Important Farmland associated with project impacts implementation. In addition, no new farmland would be made available, and the productivity of existing farmland would not be improved as a result of the SJMSCP mitigation. Therefore, full compensation for losses of Important Farmland would not be achieved. Impact 4.1-4 would remain significant after mitigation.

4.1.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

There are no other feasible mitigation measures available to completely reduce the project's potential to induce farmland conversion (Impact 4.1-2) and important farmland impacts (Impact 4.1-4) to a less-than-significant level. Therefore, this would be a significant and unavoidable impact of the project. No other significant and unavoidable impacts related to land use or agricultural resources would result from implementation of the project.

4.2 VISUAL RESOURCES

This section describes the existing visual characteristics of the URSP site and evaluates the visual effects of the project. The visual impact analysis considers existing scenic resources and the potential visibility of the site from surrounding areas, including both the physical characteristics of the development and lighting and glare. The descriptions of the existing visual setting are accompanied by exhibits that provide photographs of representative views taken during a site visit in September 2004 (Exhibits 4.2-2 through 4.2-5). Photograph locations are shown in Exhibit 4.2-1. All exhibits are provided together at the end of this section.

4.2.1 ENVIRONMENTAL SETTING

VISUAL CHARACTER OF THE PROJECT SITE

The project site is located in a rural farm community with several older agricultural residences and small farm operations located throughout the site. These farming operations consist of small row crops, including alfalfa and hay fields, almond orchards, and pasture lands for livestock. In general, almond orchards dominate the majority of the project site. A mix of other smaller farm operations are located along Lathrop Road near its intersection with Union Road.

The topography of the site is generally flat with an elevation of 35 feet above mean sea level (msl). The project site is generally a rural tract of land located adjacent and north of the developing urban core of the City of Manteca. Views from roadways near the project site generally consist of scattered homesteads, fallowed land, orchards, and row crops.

Union Road and Airport Way are local roadways that provide north-south access to the project area, while Lathrop Road and Lovelace Road provide east-west access to the project area. Lathrop Road is a highly traveled roadway that provides access to State Route 99 (SR 99) to the east and Interstate 5 (I-5) to the west.

VISUAL CHARACTER OF THE SURROUNDING AREA

The City of Manteca is centrally located in the Central Valley near the northern end of the San Joaquin Valley, in San Joaquin County. Because the topography of Manteca is relatively flat, views of the cityscape and surrounding landscape are only available from the ground-level perspective and are limited to localized views rather than broad landscape views. Therefore, views of the site from the surrounding areas within the City would be limited to those areas that have direct, unobstructed sight lines to the project site in all directions, or certain isolated locations that are at a slightly higher elevation than the project site and surrounding area.

In general, land surrounding the URSP site to the north, east, and west is mostly agricultural, consisting of irrigated field and row crops, orchards, farmsteads, and outbuildings. Residential development is located south of the project site. The general character of the surrounding area is described below.

- ▶ **North:** Areas north of the site include agricultural lands interspersed with farmsteads and associated outbuildings.
- ▶ **East:** Areas east of the site include agricultural lands, residential housing, and the San Joaquin Delta College Farm Lab, which consists of farm outbuildings and fallow and row crop fields. SR 99 is located approximately 1/2 mile east and parallel to Union Road and is visible in the distant background.
- ▶ **South:** Residential and commercial development, including a school and church, are located along Lathrop Road, south of the project site. A large, white, water tank is located near the southeast corner of the project site at the intersection of Union Road and Lathrop Road.
- ▶ **West:** Agricultural lands interspersed with farmsteads and associated outbuildings are located along the western edge of the project site west of Airport Way. I-5 is located approximately 2 miles west and is not visible from the project site. The San Joaquin Sharpe General Depot is located approximately 1/2 mile west of the project site, immediately adjacent to the Union Pacific Rail yards. This area is generally characterized as industrial.

REPRESENTATIVE VIEWPOINTS

Views of the project site from surrounding areas are limited because of the relatively flat surrounding topography and the presence of existing development and vegetation. Distant views of the site from the east are obstructed by the elevated SR 99, agricultural outbuildings, and surrounding orchard trees.

Open views of the site are generally limited to local roadways in the project area. Representative offsite areas with views of the project site can be defined by 4 viewpoints. These viewpoints represent areas where publicly-accessible direct views of the site were available (Exhibit 4.2-1). The analysis presented below does not attempt to document how views of the site would change from every possible viewpoint in the local area. Rather it depicts the project from the key, representative viewpoints. The general nature of existing views of the project site from the key representative viewpoints is described below.

Views from SR 99 (Viewpoints 1 and 2)

The project site is visible from SR 99 at its overcrossing at Lathrop Road and from some isolated areas that parallel the project site. In general, motorists traveling in the southbound direction have limited views of the site because of the high-rate of vehicle speeds and the presence of existing vegetation. Motorists and passengers would need to look over their shoulders as their vehicle parallels the site. Where views are available, the project site would be located in the distant background and would appear to be a relatively undeveloped property adjacent to the urban core of the City of Manteca. Motorists and passengers traveling in the northbound direction would not have views of the site because of the presence of the highway median and approaching traffic in the southbound direction.

Similar to SR 99, the frontage road that parallels SR 99 to the west also provides some limited, partially obstructed views of the site (Exhibit 4.2-2, Viewpoint 1). Views from this roadway would be more limited than from SR 99 because this roadway is located at ground elevation and would not provide aerial views of the site. Where views are available, they would be isolated between vegetation or buildings and would be for short durations as motorists pass the site. No expansive views of the site are available from either SR 99 or the frontage road.

The on/off ramp overpass to SR 99 at Lathrop Road also provides some distant views of the project site. This overpass is located at a higher elevation and provides open views of agricultural areas of the project site (Exhibit 4.2-2, Viewpoint 2). Tree tops and industrial buildings associated with nearby industrial operations of the Sharpe General Depot are visible in the distant background.

Views from Lathrop Road (Viewpoints 3, 4, 5 and 6)

Lathrop Road is a highly traveled roadway because it provides a direct route between regional transportation facilities (i.e., SR 99 and I-5). Lathrop Road serves as the project sites southern border. Views of the project site from Lathrop Road are close-range and vary depending on the specific location, but generally consist of trees and rural residences in the foreground and obscured views of agricultural fields and orchards in the background (Exhibit 4.2-3, Viewpoints 3 and 4). Open views of the site are also available at Lathrop Road where it crosses over the Union Pacific railroad grade approximately 0.75 miles west of the site. This viewpoint is located at a higher elevation, which provides eastbound motorists a direct view of the site in the background (Exhibit 4.2-4, Viewpoint 6). Open views would only be available for a short duration as the vehicle crosses over the railroad grade and returns to ground elevation. Relatively open views of the project site are also available to motorists near the intersection of Union Road and Lathrop because of the lack of tall trees or vegetation bordering the roadway (Exhibit 4.2-4, Viewpoint 5).

Residential and commercial development is located adjacent and south of Lathrop Road, including the Chadwick Square residential development. The Calvary church and school are located near the southeast corner of the project site. Existing views of the site from the church and school are obstructed by almond orchards, which are located immediately adjacent to the project site. In general, residential development to the south does not have direct views of the site because of the presence of sound walls, fencing, and existing landscaping.

Views from Airport Way (Viewpoint 7)

Airport Way forms the western boundary of the project site. Airport Way is a moderately traveled roadway and serves as a connection to Roth Road, which provides primary access to the Sharpe General Depot. Views of the project site from Airport Way are close-range and generally consist of orchards, rural residences, and some open land areas (Exhibit 4.2-5, Viewpoint 7). Because of the height of orchard areas that border most of the site along Airport Way, views of other portions of the site are substantially limited.

Views from Union Road (Viewpoint 8)

Union Road runs through the eastern half of the project site in a north-south direction, views from this roadway are substantially similar to views from Airport Way and consist of close-range views of orchards, fallow lands, and rural residences (Exhibit 4.2-5, Viewpoint 8). Some of the properties along Union Road are not planted with orchards and therefore mid-distance views of some central portions of the project site are available. Similar to other views of the site, these mid-distance views consist of orchards and row crops.

LIGHT AND GLARE

Currently, minimal lighting exists on the project site. Existing nighttime lighting sources at the site consist of perimeter lighting associated with limited onsite rural residential housing. These lighting sources are generally isolated and sparse. In general, dominant nighttime lighting sources in the project area originate from the adjacent residential development to the south of the project site, and from industrial development to the west of the site. Lighting associated with SR 99 is visible to the east.

4.2.2 REGULATORY BACKGROUND

CALIFORNIA SCENIC HIGHWAY PROGRAM

The California Department of Transportation (Caltrans) manages the California Scenic Highway Program. The goal of this program is to preserve and protect scenic highway corridors from changes that would affect the aesthetic value of the land adjacent to highways.

There are no state-designated highways or eligible routes or roadways in the immediate project area. The nearest state-designated highway segment is I-5, approximately 17 miles southwest of the project site. Views of the project site from this segment of I-5 are not available because of the extended distance to the site and intervening topography (Caltrans 2004). Neither SR 99, approximately 1/2 mile to the east, nor the segment of I-5 approximately two miles west of the project site are state-designated scenic highways.

SAN JOAQUIN COUNTY GENERAL PLAN 2010

San Joaquin County considers its roadside scenery an important contributor to the scenic value of the area. In particular, views of the County's scenic resources (agricultural land) are among the County's significant scenic assets. The San Joaquin County General Plan 2010 (County General Plan) includes the following policies relevant to aesthetic resources in the project vicinity:

Open Space

Policy 11: Outstanding scenic vistas shall be preserved and public access provided to them whenever possible.

Policy 13: Development proposals along scenic routes shall not detract from the visual and recreational experience.

The County General Plan also states that landscaping is required for all non-residential uses along minor arterials and higher classification roadways.

CITY OF MANTECA GENERAL PLAN (2023)

The City of Manteca General Plan (City General Plan) outlines goals and policies associated with aesthetic resources. The following policies are relevant to the project:

Resource Conservation (RC) Element

Policy RC-P-16: Provide public and private open space within urbanized parts of Manteca, in order to provide visual contrast with the built environment and to provide for the recreational needs of residents.

Policy RC-P-18: New development shall maximize the potential open space and visual experiences.

Community Design (CD) Element

Policy CD-P-7: The City shall implement neighborhood design standards in the residential districts that contribute to the overall character of the neighborhood by emphasizing traditional residential features that enhance the sense of community, ensure a safe pedestrian orientation, and minimize the visual prominence of garages.

Policy CD-P-24: The City shall ensure through design guidelines that the walls surrounding residential area neighborhoods are attractive and well designed.

Policy CD-P-44: Provide minimal levels of street, parking, building, site, and public area lighting to meet safety standards and provide direction.

Policy CD-P-45: Provide directional shielding for all exterior lighting to minimize the annoyance of direct or indirect glare.

Policy CD-P-46: Provide automatic shutoff or motion sensors for lighting features in newly developed areas.

Policy CD-P-47: The City shall adopt light and glare standards that minimize the creation of new light source and the annoyance of direct and indirect glare.

Policy CD-P-48: Allow pockets of agricultural activity to remain within the urban areas of the city where such uses are compatible with the surrounding urban uses.

Policy CD-P-50: In order to establish a visual character that retains the agricultural heritage, the City will permit the use of orchard trees (or similar non-fruiting species) in

landscape corridors along major streets adjacent to residential neighborhoods, in-lieu of formalized landscape. In such landscapes, the groundcover may be limited to bare earth and weed control and/or groundcovers compatible with the orchard characteristics.

DRAFT UNION RANCH SPECIFIC PLAN DESIGN GUIDELINES

The design of the URSP is primarily based upon the agricultural history of the area, with an emphasis on the traditional farming vernacular often associated with small town America. Some basic elements are as follows:

- ▶ Stone, or stone veneer in cool natural colors, shall be the predominant accent material for wall accents and pilasters.
- ▶ Elements traditionally constructed of wood such as arbors, lattice screens and rail fencing shall be constructed of metal for durability and ease of maintenance. Finish colors shall be mainly lighter shades of natural or earthen colors to compliment the cool natural colors of the accompanying natural stone finishes.
- ▶ Stucco finishes will be employed liberally, but used as backdrops for signage on entry walls; it will also be a dominant finish for residential and commercial architecture.
- ▶ A palette of plants with an emphasis on color, texture and layered forms to add a distinctive richness to the landscape of Union Ranch.

4.2.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

This visual impact analysis is based on field surveys and a review of existing representative viewpoints of the site in relation to the surrounding vicinity. The elements of the project were compared to existing views of the site to determine how the project would change foreground, middleground, and background views where appropriate. Although the project site would be annexed to the City before development occurs, County regulations are considered in this section because some project features would be visible from surrounding County properties. In addition, the project was reviewed for its overall visual impacts using the standards of quality, consistency, and symmetry typically used for a visual assessment. The visual impacts were compared against the thresholds of significance discussed below.

THRESHOLDS OF SIGNIFICANCE

The URSP project would cause a significant impact related to aesthetic resources if it would:

- ▶ have a substantial adverse effect on a scenic vista;
- ▶ substantially degrade the existing visual character or quality of the site and its surroundings;

- ▶ cause a substantial inconsistency between the project and guidelines in the City or County General Plan; or
- ▶ create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

IMPACT ANALYSIS

Impact 4.2-1

Impacts on a Scenic Vista. *No views on or near the URSP project site would be considered a scenic vista. Therefore, development of the project would not alter or obscure views of a scenic vista. This would be a **less-than-significant** impact.*

A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. The URSP project site itself does not provide any aesthetic resources that would be considered a scenic vista because it primarily consists of agricultural lands and rural residences that are relatively common in other areas of the County and are not unique the surrounding visual setting. Further, because the onsite agricultural production activities have altered the natural landscape, the project site does not provide views of the indigenous natural landscape. Although the current land uses provide views of an agricultural landscape that is representative of the project region, the project site does not contain resources that are exemplary of the agricultural history of the area (i.e., historic structures or landmarks) (see Section 4.12 Cultural Resources). Views of the project site are not unique in the region.

The project site is generally flat and many of the views of the site are screened by agricultural outbuildings or orchard trees. No areas that would qualify as a scenic vista are located near the project site. Therefore, there is little opportunity for project activities to obscure views of scenic vistas that may be located outside the project site. Because the project would not have a substantial adverse affect on a scenic vista, this would be a less-than-significant impact.

Impact 4.2-2

Damage to Scenic Resources within a State Scenic Highway. *No state scenic highways are located within the vicinity of the project site. Therefore, implementation of the project would not result in damages to scenic resources along a state scenic highway. This would be a **less-than-significant** impact.*

A scenic resource is generally a resource, landmark, or area that has been noted for its outstanding scenic qualities and is thereby protected because of those qualities. A scenic resource within a state scenic highway is a resource that is noted for its outstanding scenic qualities and is visible from a state-designated scenic highway. There are no scenic state-designated highways or eligible routes, or City or County designated roadways, in the immediate project area. The nearest state-designated scenic highway is a segment of I-5, approximately 17 miles southwest of the project site; the designation is from the San Joaquin County line to Interstate 580. The project site is not visible from this scenic highway segment. Therefore, the project would have a less-than-significant impact on scenic resources within a state-designated highway.

**Impact
4.2-3**

Degradation of Visual Character. *Implementation of the project would substantially alter the visual character of the project site through conversion of agricultural land to developed urban uses. Assessment of visual quality is a subjective matter and reasonable people can disagree as to whether such an alteration in the visual character of the project site would also be considered a substantial degradation of the visual character. For this analysis, a conservative approach is taken, and the potential for degradation of the visual character of the project site would be considered a **significant** impact.*

The 553-acre URSP project site consists primarily of agricultural land and rural residential uses. Implementation of the project would result in conversion of these uses to urban development and supporting land uses (e.g., parks, open space). In the vicinity of the project site, the conversion from agricultural and rural residential uses to urban development would result in a substantial alteration of the visual character of the plan area. After project development, the altered visual condition of the project site would only be visible to residents within the plan area, residents at nearby residential developments, motorists traveling along Lathrop Road, Union Road, Airport Way, and southbound motorists on SR 99.

Views from SR 99

Where the URSP area is visible in the background view from SR 99, the site consists of a common agricultural viewshed found in many locations in San Joaquin County. With implementation of the project, the rural agricultural setting of the project site would change to an urban residential development similar to adjacent residential developments to the south. The project would continue to be visible in the background and views would consist of orderly rows of homes along minor roadways, surrounded by fencing and trees. A small area along Lathrop Road would include views of commercial development that appears to be at higher densities than the residential areas. It is anticipated that views of the project would be similar to views of established urban settings found elsewhere in the project vicinity. From this viewpoint, the project would appear to extend the developed urban areas of the City to the north. The URSP includes several design, architectural, development, and maintenance standards and guidelines to preserve and maintain the general visual quality of the development and to ensure that the character of development would be consistent with viewer expectations for similar urban environments.

The conversion of agricultural land to urban development may be considered by some as a loss of an aesthetically pleasing and valuable viewshed. Agricultural lands can be considered a valuable aesthetic resource that is representative of the visual character of much of San Joaquin County. Because reasonable people may differ as to the aesthetic value of the agricultural lands in the project area, and whether development of urban uses at the project site would constitute a substantial degradation of the existing visual character or quality of the site and its surroundings, a conservative approach was taken for this analysis and the alteration of views from SR 99 is considered a significant impact.

Views from Lathrop Road, Union Road, and Airport Way

With implementation of the project, the rural agricultural setting of the project site would change to an urban residential development similar to adjacent residential developments to the south. Views along Lathrop Road, Union Road, and Airport Way would be close-range and would include views of sidewalks, masonry walls with trees and landscaping, direct and indirect views of homes, and views of access roadways to the site. Similar to views from SR 99, the project would substantially change views of the local area through conversion of agricultural land uses to urban land uses. Further, views of the site from surrounding rural residences would substantially change and in some locations the project would be a prominent feature in foreground views. Similar to the discussion above, implementation of design, architectural, development, and maintenance standards and guidelines to preserve and maintain the general visual quality of the development as described in the URSP would ensure that the character of development would be consistent with viewer expectations for similar urban environments. However, because the project would result in substantial foreground changes in the visual environment for drivers along local roadways and surrounding rural residences, this would be considered a significant visual impact.

Impact 4.2-4

Impacts from Lighting. *The project would require lighting of new development that could inadvertently cause light and glare for motorists on adjacent roadways. In addition, the degree of darkness would diminish as a result of development, effectively obscuring views of stars, constellations, and other features of the night sky. Implementation of lighting guidelines included in the URSP would substantially reduce the potential level of light generated by the project, thereby minimizing the potential for these effects. This would be a **less-than-significant** impact.*

Under current conditions, the URSP project site contains only scattered residential and commercial development that generates sources of light, glare, or light trespass into the night sky. Development of the URSP would require lighting of roadways, parks, housing developments, the commercial mixed-use area, and other facilities. A substantial increase in the amount of nighttime light and glare compared to existing conditions would result from implementation of the project, potentially obscuring views of stars, constellations, and other features of the night sky. In addition, nighttime lighting in the office/commercial areas, or the presence of reflective surfaces on buildings in this area (e.g., reflective window glazing), may result in light and glare shining onto motorists on Lathrop Road, Union Road, and Airport Way.

The project applicant has prepared and included in the URSP lighting guidelines that focus on balancing the safety of residents with the value of darkness. The URSP requires that light fixtures have light sources that are focused downwards, and the use of harsh mercury vapor, low-pressure sodium, or fluorescent bulbs is prohibited for public lighting in residential neighborhoods. Guidelines are also provided in the URSP regarding use of appropriate building materials, lighting, and signage in the office/commercial areas to prevent light and glare from adversely affecting motorists on local roadways. These guidelines are consistent with other planning documents in the County and City and would effectively minimize

potential light and glare impacts associated with the project. Further, proposed lighting sources associated with the project would be similar to existing residential and commercial nighttime lighting sources adjacent and south of the project site, and would be consistent with the intensity of nighttime lighting of other residential and commercial developments in the City. Therefore, impacts related to nighttime light and glare and views of the night sky would be less-than-significant.

4.2.4 MITIGATION MEASURES

No mitigation measures are necessary for the following less-than-significant impacts:

4.2-1: Impacts to a Scenic Vista.

4.2-2: Damage to Scenic Resources within a State Scenic Highway.

4.2-4: Impacts from Lighting.

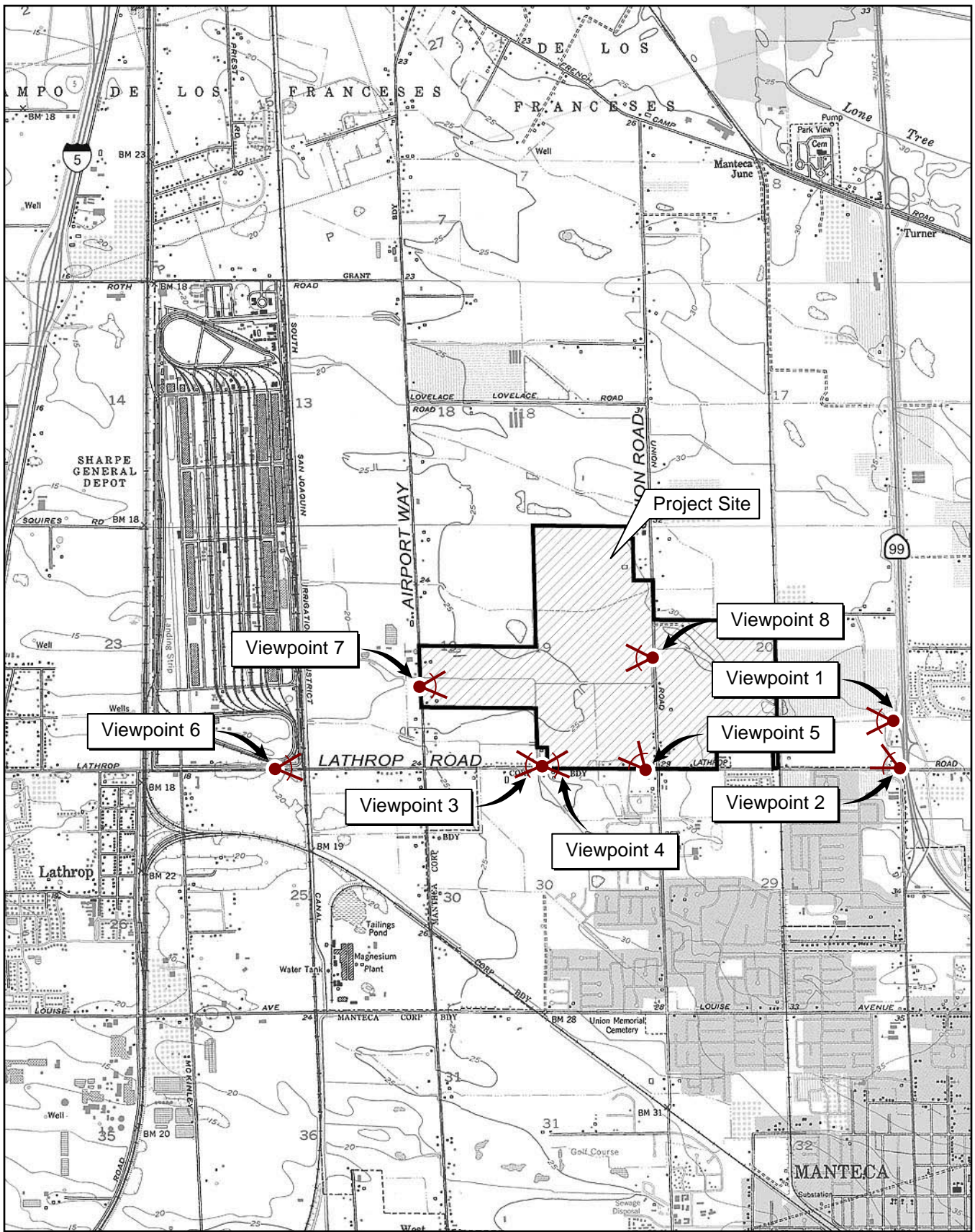
Mitigation is recommended for the following potentially significant impact.

4.2-3: Degradation of Visual Character.

Because of the scale and location of the URSP project, there is no feasible mitigation available to address aesthetic resource impacts associated with the conversion of agricultural land to urban development. Although design, architectural, development, and maintenance standards are included in the URSP to ensure that urban development in the plan area remains within certain aesthetic guidelines, there is no mechanism to allow implementation of the project while avoiding the conversion of the local viewshed from agricultural to urban development. Thus, impacts related to the degradation of the local viewshed through conversion of agricultural lands to urban development are considered significant and unavoidable.

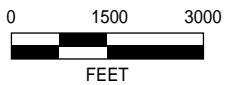
4.2.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The project's scenic resources and nighttime lighting impacts would be less-than-significant and no mitigation is required. However, conversion of the agricultural viewshed at the URSP project site to urban development is identified as a significant impact, and no feasible mitigation is available to reduce this impact to a less-than-significant level. Therefore, the project's impact to the local visual character of the project site (Impact 4.2-3) would be a significant and unavoidable impact.



Source: U.S.G.S. Lathrop and Manteca Quad 1952 (revised 1994) -- Contour Interval 5 Feet

Viewpoint Locations Map





Viewpoint 1- This view of an agricultural field is from the frontage road paralleling State Route 99, looking west. The project site is screened by almond orchards and is barely visible in the background.



Viewpoint 2- This view is from the State Route 99/Lathrop Road overpass, looking northwest. The foreground shows a fallow agricultural field. The project site is visible in the distant background.

Source: EDAW 2004

Representative Photographs

EXHIBIT 4.2-2



Viewpoint 3- Westbound view of Lathrop Road taken from the intersection of Lathrop Road and London Avenue. Residential housing on the right side of Lathrop Road is part of the project site.



Viewpoint 4- Eastbound view of Lathrop Road taken from the intersection of Lathrop Road and London Avenue. Residential housing on left side of Lathrop Road is part of the project site.

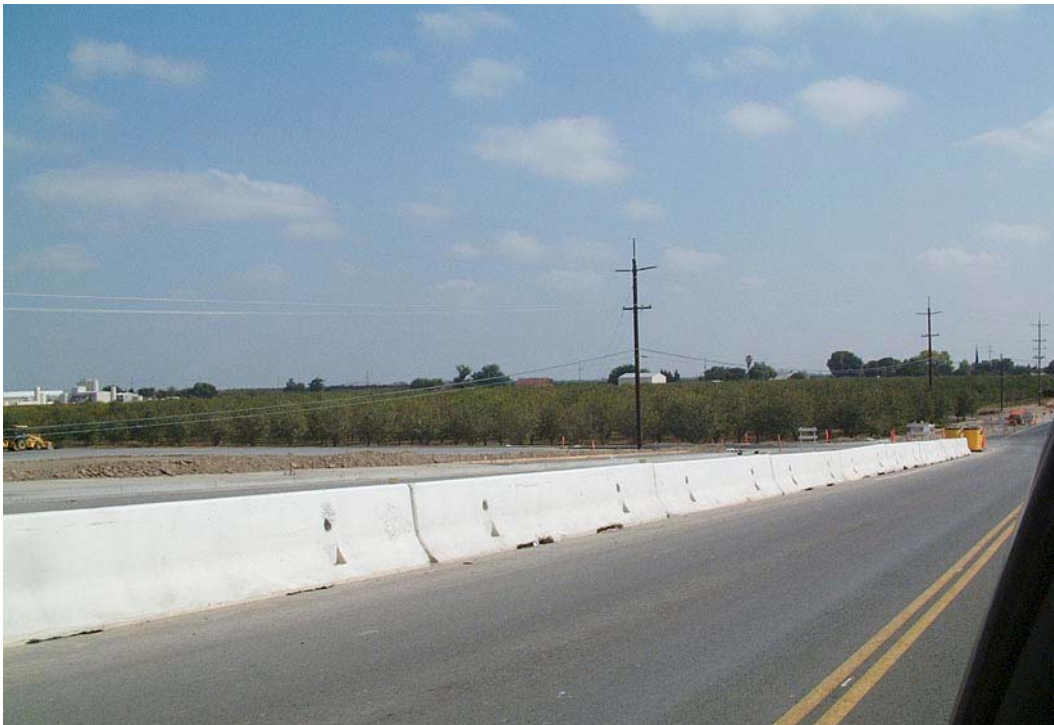
Source: EDAW 2004

Representative Photographs

EXHIBIT 4.2-3



Viewpoint 5- View of a typical homestead on the project site, looking northwest along Lathrop Road.



Viewpoint 6- View from eastbound Lathrop Road crossing over the slightly elevated Union Pacific railroad grade. The project site is visible in the background.

Source: EDAW 2004

Representative Photographs

EXHIBIT 4.2-4



Viewpoint 7- View of the project site looking east from Airport Way. Views along Airport Way consist of agricultural land and farmsteads.



Viewpoint 8- Views of the project site looking west from Union Road. Views along Union Road are typical of an agricultural community.

Source: EDAW 2004

Representative Photographs

4.3 AIR QUALITY

This section includes a summary of local and regional air quality conditions and an analysis of potential air quality impacts associated with the URSP project. Mitigation measures are recommended, as necessary, to reduce potentially significant adverse air quality impacts. The information contained in this section is based, in part, on documents prepared by the San Joaquin Valley Air Pollution Control District (SJVAPCD), U.S. Environmental Protection Agency (EPA), and California Air Resources Board (ARB). The air quality modeling output for operational air emissions is provided in Appendix C of this Draft EIR.

4.3.1 ENVIRONMENTAL SETTING

The URSP site is located in the San Joaquin Valley Air Basin (SJVAB), which is under the jurisdiction of the SJVAPCD. Existing air quality conditions in the SJVAB and the factors affecting air quality conditions in the basin are discussed below.

TOPOGRAPHY, METEOROLOGY, AND DISPERSION

The dispersion of air pollution in an area is determined by such natural factors as topography, meteorology, and climate, coupled with atmospheric stability conditions and the presence of inversions. The factors affecting the dispersion of air pollution with respect to the SJVAB are discussed below.

Topography

The SJVAB, which occupies the southern half of the Central Valley, is approximately 250 miles long and, on average, 35 miles wide. The Coast Ranges, which have an average elevation of 3,000 feet, are located on the western border of the SJVAB. The San Emigdio Mountains, which are part of the Coast Ranges, and the Tehachapi Mountains, which are part of the Sierra Nevada, are both located on the south side of the SJVAB. The Sierra Nevada forms the eastern border of the SJVAB. The northernmost portion of the SJVAB is San Joaquin County. There is no topographic feature delineating the northern edge of the basin. The SJVAB is basically flat with a downward gradient in terrain to the northwest.

Meteorology and Climate

The climate of the SJVAB is strongly influenced by the presence of mountain ranges. The mountain ranges to the west and south induce winter storms from the Pacific Ocean to release precipitation on the western slopes producing a partial rain shadow over the valley. In addition, the mountain ranges block the free circulation of air to the east, trapping stable air in the valley for extended periods during the cooler half of the year.

Winter in the SJVAB is characterized as mild and fairly humid, and the summer is hot, dry, and cloudless. The climate is a result of the topography and the strength and location of a semipermanent, subtropical high-pressure cell. During summer, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions

and a steady northwesterly wind flow. Upwelling of cold ocean water from below to the surface as a result of the northwesterly flow produces a band of cold water off the California coast. In winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms.

The annual temperature, humidity, precipitation, and wind patterns reflect the topography of the SJVAB and the strength and location of the semipermanent, subtropical high-pressure cell. Summer temperatures that often exceed 100 degrees Fahrenheit (°F) and clear sky conditions are favorable to ozone formation. Most of the precipitation in the valley occurs as rainfall during winter storms. The winds and unstable atmospheric conditions associated with the passage of winter storms result in periods of low air pollution and excellent visibility. However, between winter storms, high pressure and light winds lead to the creation of low-level temperature inversions and stable atmospheric conditions resulting in high CO concentrations and PM accumulation. The orientation of the wind flow pattern in the SJVAB is parallel to the valley and mountain ranges. Summer wind conditions promote the transport of ozone and precursors from the San Francisco Bay Area through the Carquinez Strait, a gap in the Coast Ranges, and low mountain passes such as Altamont Pass and Pacheco Pass.

With respect to the URSP area, San Joaquin County is located in the northern portion of the SJVAB. The climate is semi-arid, with an annual normal precipitation of approximately 14 inches. January temperatures range from a normal minimum of 37°F to a normal maximum of 53°F. July temperatures range from a normal minimum of 61°F to a normal maximum of 95°F (NOAA 1992). The wind is predominantly from the north-northwest at 10 mph (ARB 1992).

Atmospheric Stability and Inversions

Stability describes the resistance of the atmosphere to vertical motion. The stability of the atmosphere is dependent on the vertical distribution of temperature with height. When the temperature decreases vertically at 10 degrees Celsius (°C) per 1,000 meters, the atmosphere is “neutral.” When the lapse rate (change in temperature with respect to height) is greater than 10°C per 1,000 meters, the atmosphere is “unstable.” When the lapse rate is less than 10°C per 1,000 meters, the atmosphere is “stable.” Stability categories range from “Extremely Unstable” (Class A), through Neutral (Class D), to “Stable” (Class F). Unstable conditions often occur during daytime hours when solar heating warms the lower atmospheric layers sufficiently. Under Class A stability conditions, large fluctuations in horizontal wind direction occur coupled with large vertical mixing depths. Under Class B stability conditions, wind direction fluctuations and the vertical mixing depth are less pronounced because of a decrease in the amount of solar heating. Under Class C stability conditions, solar heating is weak along with horizontal and vertical fluctuations because of a combination of thermal and mechanical turbulence. Under Class D stability conditions, vertical motions are primarily generated by mechanical turbulence. Under Class E and Class F stability conditions, air pollution emitted into the atmosphere travels downwind with poor dispersion. The dispersive power of the atmosphere decreases with progression through the categories from A to F.

With respect to the SJVAB, Classes D through F are predominant during the late fall and winter because of cool temperatures and entrapment of cold air near the surface. March and August are transition months with equally occurring percentages of Class F and Class A. During the spring months of April and May and the summer months of June and July, Class A is predominant. The fall months of September, October, and November have comparable percentages of Class A and Class F.

An inversion is a layer of warmer air over a layer of cooler air. Inversions influence the mixing depth of the atmosphere, which is the vertical depth available for diluting air pollution near the ground, thus significantly affecting air quality conditions. The SJVAB experiences both surface-based and elevated inversions. The shallow surface-based inversions are present in the morning but are often broken by daytime heating of the air layers near the ground. The deep elevated inversions occur less frequently than the surface-based inversions but generally result in more severe stagnation. The surface-based inversions occur more frequently in the fall, and the stronger elevated inversions usually occur during December and January.

AMBIENT AIR QUALITY

Air pollutant concentrations are measured at several monitoring stations in San Joaquin County. The Stockton–East Mariposa, –Hazelton, and –Wagner-Holt School and the Tracy-Patterson Pass air quality monitoring stations are the closest to the project site with sufficient data to meet EPA and/or ARB criteria for quality assurance. In general, the ambient air quality measurements from the stations are representative of the air quality in the vicinity of the proposed project site.

Table 4.3-1 summarizes the air quality data from 2000 to 2003 for monitoring stations located in the vicinity of the project site. Adequate data are not necessarily available from each station for all pollutants; therefore, data for each pollutant are provided for a subset of the four stations in the project vicinity. Table 4.3-1 shows that the state (1-hour) and federal (1-hour/8-hour) ozone standards were exceeded several times during the past 4 years. The suspended PM₁₀ national standard (24-hour average, 150 µg/m³) was not exceeded; however, the state standard (24-hour average, 50 µg/m³) was exceeded an average of eight times per year from 2000 to 2003. With respect to CO and NO₂, neither the state nor the national standard was exceeded from 2000 to 2003.

Table 4.3-1 Summary of Annual Air Quality Data				
	2000	2001	2002	2003
OZONE				
State standard: 1-hour average, 0.09 ppm				
National standard: 1-hour/8-hour average, 0.12/0.08 ppm				
Stockton–East Mariposa Air Quality Monitoring Station				
Maximum concentration (1-hour/8-hour average)	0.11/0.08	0.11/0.09	0.11/0.09	—
Number of days state standard exceeded	4	5	5	—

Table 4.3-1 Summary of Annual Air Quality Data				
	2000	2001	2002	2003
Number of days national 1-hour/8-hour standard exceeded	0/0	0/1	0/1	—
Stockton–Hazelton Air Quality Monitoring Station				
Maximum concentration (1-hour/8-hour average)	0.11/0.08	0.10/0.09	0.10/0.08	0.10/0.09
Number of days state standard exceeded	4	5	2	3
Number of days national 1-hour/8-hour standard exceeded	0/0	0/1	0/0	0/1
Tracy – 24371 Patterson Pass Road Monitoring Station				
Maximum concentration (1-hour/8-hour average)	0.12/0.09	0.11/0.09	0.11/0.10	0.10/0.09
Number of days state standard exceeded	7	4	11	5
Number of days national 1-hour/8-hour standard exceeded	0/3	0/1	0/3	0/2
CARBON MONOXIDE (CO)				
State standard: 1-hour/8-hour average, 20/9.1 ppm National standard: 1-hour/8-hour average, 35/9 ppm				
Stockton–Hazelton Air Quality Monitoring Station				
Maximum concentration (1-hour/8-hour average)	6.5/3.9	8.4/6.0	6.0/3.2	5.8/3.1
Number of days state standard exceeded (8-hour only)	0	0	0	0
Number of days national 1-hour/8-hour standard exceeded	0/0	0/0	0/0	0/0
NITROGEN DIOXIDE (NO₂)				
Stockton–Hazelton Air Quality Monitoring Station				
Maximum concentration (1-hour average)	0.099	0.084	0.076	0.088
Number of days state standard exceeded	0	0	0	0
Annual average (ppm)	0.021	0.019	0.021	0.018
Tracy – 24371 Patterson Pass Road Air Quality Monitoring Station				
Maximum concentration (1-hour average)	0.068	0.087	0.077	0.071
Number of days state standard exceeded	0	0	0	0
Annual average (ppm)	0.014	0.013	0.014	0.012
SUSPENDED PARTICULATE MATTER (PM₁₀)				
State standard: 24-hour average, 50µg/m ³ National standard: 24-hour average, 150µg/m ³				
Stockton–Hazelton Air Quality Monitoring Station				
Maximum concentration	91	140	87	39
Number of days state standard exceeded (measured/calculated ¹)	9/52	11/64	10/58	3/17

Table 4.3-1 Summary of Annual Air Quality Data				
	2000	2001	2002	2003
Number of days national standard exceeded (measured/calculated ¹)	0/0	0/0	0/0	0/0
Stockton–Wagner-Holt School Air Quality Monitoring Station				
Maximum concentration	104	119	80	50
Number of days state standard exceeded (measured/calculated ¹)	10/60	6/–	6/39	3/20
Number of days national standard exceeded (measured/calculated ¹)	0/0	0/0	0/0	0/0
SUSPENDED PARTICULATE MATTER (PM_{2.5})				
No separate state standard National standard: 24-hour average, 65 µg/m ³				
Stockton–Hazelton Air Quality Monitoring Station				
Maximum concentration (µg/m ³)	78.0	76.0	64.0	45.0
Number of days national standard exceeded (measured ²)	1	2	0	0
Notes: ppm = parts per million by volume µg/m ³ = micrograms per cubic meter – = not available ¹ Measured days are those days that an actual measurement was greater than the level of the state daily standard or the national daily standard. Measurements are typically collected every six days. Calculated days are the estimated number of days that a measurement would have been greater than the level of the standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year. ² The number of days a measurement was greater than the level of the national daily standard. Measurements are collected every day, every 3 days, or every 6 days, depending on the time of year and the site’s monitoring schedule. The number of days above the standards is not directly related to the number of violations of the standard for the year.				
Sources: California Air Resources Board 2004a				

ATTAINMENT STATUS

Under the CCAA, the ARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An “attainment” designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A “nonattainment” designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An “unclassified”

designation signifies that the data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The EPA designates areas for ozone, CO, and NO₂ as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For SO₂, areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified,” or “better than national standards.” However, the ARB terminology of attainment, nonattainment, and unclassified is more frequently used. The sub-categories for nonattainment status; serious, severe, and extreme; are also used by EPA. In 1991, new nonattainment designations were assigned to areas that had previously been classified as Group I, II, or III for PM₁₀ based on the likelihood that they would violate national PM₁₀ standards. All other areas are designated “unclassified.” The state and national attainment status designations pertaining to the SJVAB are summarized in Table 4.3-2. The SJVAB is currently designated as a nonattainment area with respect to the state and national PM₁₀ and 1-hour ozone standards. The SJVAB was recently designated nonattainment for the federal 8-hour ozone standard. The attainment designations with respect to PM_{2.5} have not yet been determined (SJVAPDC 2004).

Pollutant	National Designation	State Designation
Ozone, 1 hour	Nonattainment/Extreme	Nonattainment/Severe
Ozone, 8 hour	Designation to be determined; nonattainment recommended	No state standard
PM ₁₀	Nonattainment/Serious	Nonattainment
PM _{2.5}	Designation to be determined; nonattainment recommended	No State Standard
CO – San Joaquin	Unclassified/Attainment	Attainment
Nitrogen dioxide	Unclassified/Attainment	Attainment
Sulfur dioxide – San Joaquin	Unclassified	Attainment
Lead (particulate)	No designation	Attainment
Hydrogen sulfide	No federal standard	Unclassified
Sulfates	No federal standard	Attainment
Visibility-reducing particulates	No federal standard	Unclassified

Source: SJVAPCD 2004

Despite noteworthy air quality improvements over the past decade, the San Joaquin Valley failed to meet the previous federal ozone standard deadline and thus was downgraded from serious nonattainment to severe nonattainment designation by the EPA. The SJVAPCD is now required to submit a plan to the ARB that demonstrates that the valley will meet the ozone standards by 2005, which would involve reducing the total emissions inventory by an additional 30% or 300 tons per day. To avoid being faced with sanctions, the SJVAPCD was voluntarily redesignated from severe nonattainment to extreme nonattainment, the federal government’s worst air quality designation for ground-level ozone. An extreme nonattainment

designation is not a delay in implementing air pollution controls, but allows the valley the opportunity to benefit from improved pollution controls for industry, as well as mobile-source controls being implemented by other agencies, without incurring immediate sanctions (SJVAPCD 2004).

EXISTING TAC SOURCES

A records search was conducted to identify major stationary sources of Toxic Air Contaminants (TACs) near the project site. Based on a review of information on file with the ARB and EPA, no major stationary sources of TACs were found within of the vicinity of the project site (ARB 2004b, EPA 2004). Mobile-source emissions associated with heavy-duty diesel vehicles, including those traveling on area roadways and railroad engines operating along nearby railroad corridors, are considered sources of TACs within the project region.

EXISTING ODOR SOURCES

Potential sources of odors which could adversely affect receptors within the URSP area include the Lovelace Road Transfer Station, located approximately 2,800 feet north of the project site and agricultural activities on adjacent parcels. Diesel exhaust emissions, primarily from vehicles on area roadways and diesel-powered locomotive activities at Union Pacific Intermodal Facility, located approximately 2,800 feet west of the plan area, may also be considered occasional sources of objectionable odors.

SENSITIVE RECEPTORS

Commonly identified sensitive population groups with regard to air pollutants and odors are children, the elderly, and acutely ill and chronically ill persons. Commonly identified sensitive land uses are residences, schools, playgrounds, childcare centers, retirement homes or convalescent homes, hospitals, and clinics.

Sensitive land uses in the project area consist primarily of rural residential dwellings. Calvary Community Church and the Lions & Lambs Preschool are located at the northwest corner of Lathrop Road and Union Road near the southern boundary of the project area.

4.3.2 REGULATORY SETTING

Air quality at the URSP project site is regulated by several jurisdictions, including the EPA, ARB, SJVAPCD, San Joaquin County (County), and City of Manteca (City). State, regional, and local jurisdictions develop rules, regulations, policies, and/or plans to achieve the goals and directives imposed through legislation, which shall not supercede those developed by the EPA but may be more stringent.

NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS

Ambient air quality is described in terms of compliance with state and national standards. Ambient air quality standards indicate the air pollutant concentration considered safe for the

protection of public health and welfare. These standards are designed to protect people who are sensitive to respiratory distress, such as people with asthma, the elderly, children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. National Ambient Air Quality Standards (NAAQS) were originally established by the EPA in 1971 for six air pollution constituents. The NAAQS have been revised periodically since 1971. Each individual state or district has the authority to add other pollutants, to require more stringent compliance, or to include different exposure periods. California Ambient Air Quality Standards (CAAQS) and NAAQS are listed in Table 4.3-3.

California ¹		National ²	
Air Pollutant	Concentration	Primary ³	Secondary ⁴
Ozone	0.09 ppm, 1-hour average	0.12 ppm, 1-hour average 0.08 ppm, 8-hour average	0.12 ppm, 1-hour average 0.08 ppm, 8-hour average
Carbon Monoxide	9 ppm, 8-hour average 20 ppm, 1-hour average	9 ppm, 8-hour average 35 ppm, 1-hour average	9 ppm, 8-hour average 35 ppm, 1-hour average
Nitrogen Dioxide	0.25 ppm, 1-hour average	100 µg/m ³ annual	100 µg/m ³ annual
Sulfur Dioxide	0.04 ppm, 24-hour average 0.25 ppm, 1-hour average	0.03 ppm, annual average 0.14 ppm, 24-hour average	0.5 ppm, 3-hr average
Suspended Particulate Matter (PM ₁₀)	20 µg/m ³ annual geometric mean 50 µg/m ³ , 24-hour average	50 µg/m ³ annual arithmetic mean 150 µg/m ³ , 24-hour average	50 µg/m ³ annual arithmetic mean 150 µg/m ³ , 24-hour average
Suspended Particulate Matter (PM _{2.5})	12 µg/m ³ annual geometric mean	15 µg/m ³ annual arithmetic mean 65 µg/m ³ , 24-hour average	15 µg/m ³ annual arithmetic mean 65 µg/m ³ , 24-hour average
Lead	1.5 µg/m ³ , 30-day average	1.5 µg/m ³ calendar quarter	1.5 µg/m ³ calendar quarter
Sulfates	25 µg/m ³ , 24-hour average	--	--
Hydrogen Sulfide	0.03 ppm, 1-hour average	--	--
Vinyl Chloride	0.01 ppm, 24-hour average	--	--
Visibility Reducing Particles	In sufficient amount to produce an extinction coefficient of 0.23 per kilometer-visibility of ten miles or more	--	--

Table 4.3-3 Ambient Air Quality Standards			
California ¹		National ²	
	(0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70%.		
<p>¹ California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, suspended particulate matter (PM₁₀), and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.</p> <p>² National standards (other than ozone, PM₁₀, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when 99% of the daily concentrations, averaged over 3 years, are equal to or less than the standard. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standard.</p> <p>³ National Primary Standards: the levels of air quality necessary, with an adequate margin of safety, to protect public health.</p> <p>⁴ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.</p> <p>ppm = parts per million by volume µg/m³ = micrograms per cubic meter</p> <p>Source: California Air Resources Board 2003</p>			

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT REGULATIONS

The SJVAPCD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in the San Joaquin Valley Air Basin (SJVAB), which includes the URSP area. Responsibilities of the SJVAPCD include, but are not limited to, preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the federal Clean Air Act (CAA) and the California Clean Air Act (CCAA). In an attempt to achieve NAAQS and CAAQS and maintain air quality, the SJVAPCD has completed the following air quality attainment plans and reports: *1994 Ozone Attainment Demonstration Plan* (amended in 2001), *1997 PM₁₀ Attainment Demonstration Plan*, *1997-1999 PM₁₀ Progress Report*, *2000 Ozone Rate of Progress Report*, *2000 Annual Progress Report*, and the *2000 Triennial Plan* (SJVAPCD 2002).

CRITERIA AIR POLLUTANTS

The ARB and the EPA currently focus on five “criteria pollutants” as indicators of air quality: ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and particulate matter. A brief description of each criteria air pollutant, including adverse health effects and formation processes, is provided below.

Ozone

Ozone is a photochemical oxidant and the primary component of smog. Ozone is not directly emitted into the air, but is formed through complex chemical reactions between precursor emissions of organic compounds and oxides of nitrogen in the presence of sunlight. Both organic compounds and oxides of nitrogen are emitted by mobile (transportation) and stationary (industrial) sources. Ozone located in the upper atmosphere (stratosphere) acts in a beneficial manner by shielding the Earth from harmful ultraviolet radiation that is emitted by the sun. However, ozone located in the lower atmosphere (troposphere) is a major health and environmental concern. Because sunlight and heat serve as catalysts for the reactions between ozone precursors, peak ozone concentrations typically occur during summer in the northern hemisphere.

The adverse health effects associated with exposure to ozone pertain primarily to the respiratory system. Scientific evidence indicates that ambient levels of ozone affect not only sensitive receptors, such as people with asthma and children, but healthy adults as well. Exposure to ambient levels of ozone ranging from 0.10 to 0.40 part per million (ppm) for 1–2 hours has been found to significantly alter lung functions by increasing respiratory rates and pulmonary resistance, decreasing breath volumes, and impairing respiratory mechanics. Ambient levels of ozone above 0.12 ppm are linked to symptomatic responses such as throat dryness, chest tightness, shortness of breath, headache, and nausea. In addition to the above adverse health effects, evidence also exists relating ozone exposure to an increase in the permeability of respiratory epithelia, leading to an increase in responsiveness of the respiratory system to bronchoconstrictive challenges and the interference or inhibition of the immune system's ability to defend against infection.

Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, and poisonous gas produced by incomplete burning of carbon in fuels, principally from mobile sources of pollution (e.g., cars, trucks). It is estimated that up to 78% of nationwide CO emissions are from mobile sources. The other 22% consist primarily of CO emissions from forest fires, wood-burning stoves, incinerators, and industrial sources. Peak CO levels are often localized near areas with high concentrations of mobile sources and occur typically during calm conditions in the winter months.

Carbon monoxide enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, resulting in a drastic reduction in the amount of oxygen available to the cells. Adverse health effects associated with exposure to CO concentrations include dizziness, headaches, slow reflexes, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases.

Nitrogen Dioxide

Nitrogen dioxide (NO₂) is a brownish, highly reactive gas that is present in all urban environments. The major anthropogenic (human-made) sources of NO₂ are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices primarily emit nitric oxide (NO), which reacts oxidatively in the atmosphere to form NO₂ (EPA 2002). The combined emissions of NO and NO₂ are referred to as oxides of nitrogen (NO_x), which are reported as equivalent NO₂. Because NO₂ is formed and depleted by reactions associated with photochemical smog, the NO₂ concentration in a particular geographical area may not be representative of the local NO_x emission sources.

Inhalation is the most common route of exposure to NO₂. The severity of the adverse health effects depends primarily on the concentration inhaled rather than the duration of exposure. An individual may experience a variety of acute symptoms, including cough, difficulty with breathing, vomiting, headache, and eye irritation during or shortly after exposure. After a period of approximately 4–12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, hemoptysis, cyanosis, chest pain, and rapid heartbeat. Severe, symptomatic NO₂ intoxication after acute exposure has on occasion been linked with prolonged respiratory impairment with such symptoms as chronic bronchitis and decreased lung functions.

Sulfur Dioxide

Sulfur dioxide (SO₂) is produced by such stationary sources as coal and oil combustion, steel mills, refineries, pulp and paper mills, and nonferrous smelters. The major adverse health effects associated with SO₂ exposure pertain to the upper respiratory tract. Sulfur dioxide is a respiratory irritant, with bronchoconstriction occurring with inhalation of SO₂ at 5 ppm or more. On contact with the moist mucous membranes, SO₂ produces sulfurous acid, which is a direct irritant. Concentration rather than duration of the exposure is an important determinant of respiratory effects. Exposure to high concentrations of SO₂ may result in edema of the lungs and respiratory paralysis.

Particulate Matter

Respirable particulate matter of 10 micrometers or less in diameter is referred to as PM₁₀. (One micrometer is equal to one millionth of a meter.) PM₁₀ consists of particulates directly emitted into the air, such as fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, natural windblown dust, and particulates formed in the atmosphere by condensation and/or transformation of SO₂ and reactive organic gases. PM₁₀ includes a subgroup of finer particles called PM_{2.5}, which have an aerodynamic diameter of 2.5 micrometers or less.

The adverse health effects associated with PM₁₀ depend on the specific composition of the particulate matter. For example, health effects may be associated with metals, polycyclic

aromatic hydrocarbons, and other toxic substances carried by fine particulates. Generally, adverse health effects associated with PM₁₀ may result from both short- and long-term exposure to elevated PM₁₀ concentrations and may include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, alterations in the body's immune system, carcinogenesis, and premature death. PM_{2.5} poses an increased health risk because it can be deposited deep in the lung and can contain substances that are particularly harmful to human health. As a result, the EPA promulgated national PM_{2.5} standards in 1997; however, these standards have yet to be implemented.

TOXIC AIR CONTAMINANTS

Toxic air contaminants (TACs) are regulated through implementation of federal and state laws. Federal law uses the term “hazardous air pollutants” (HAPs) to refer to the same types of compounds considered as TACs under state law. Both terms encompass essentially the same compounds. For purposes of this report, the term “TACs” has been used when referring to these pollutants. It is important to note that TACs are not considered criteria pollutants in that the federal and California Clean Air Acts do not address them specifically through the setting of NAAQS or CAAQS. However, enforcement of the NAAQS and CAAQS for the control of criteria pollutants, such as ozone and PM, can result in reducing airborne emissions of TACs. For example, controls on volatile organic compound emissions to attain the ozone standard can significantly reduce emissions of TACs from stationary sources. The following is a summary of the major current federal and state regulations and programs for controlling TACs.

Federal HAP/TAC Program

Title III of the CAA requires the EPA to promulgate National Emissions Standards for Hazardous Air Pollutants (NESHAP) for certain categories of sources that emit one or more pollutants identified as HAPs/TACs. Emission standards may differ between “major sources” and “area sources” of TACs. Major sources are defined as stationary sources with potential to emit more than 10 tons per year [TPY] of any TAC or more than 25 TPY of any combination of TACs; all other sources are considered area sources. Promulgation of the emission standards involves two phases. In the first phase (1992–2000), the EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring Maximum Achievable Control Technology. For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), the EPA is required to promulgate health risk-based emissions standards where such standards are deemed necessary to address risks remaining after implementation of the technology-based NESHAP standards.

The 1990 amendments to the CAA required the EPA to promulgate vehicle or fuel standards containing reasonable requirements to control toxic emissions, applying at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1,3-butadiene. In addition, Section 219 of the CAA also required the use of reformulated gasolines in selected U.S. cities (those

with the most severe ozone nonattainment conditions) to further reduce mobile-source emissions, including toxics.

State and Local TAC Programs

The ARB works in partnership with the local air districts to enforce regulations that reduce TACs in the state. It has authority for motor vehicles, fuels, and consumer products. The ARB identifies the TACs, researches prevention or reduction methods, adopts standards for control, and enforces the standards. The local air districts have the authority over stationary or industrial type sources. SJVAPCD Rule 2010 requires permits for all source operations that may emit TACs. All projects that require air quality permits from the SJVAPCD are evaluated for TAC emissions (SJVAPCD 1998). The SJVAPCD limits emissions and public exposure to TACs through a number of programs. The SJVAPCD prioritizes TAC-emitting stationary sources based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. It requires a comprehensive health risk assessment for facilities that are put in the significant risk category under the Assembly Bill (AB) 2588 Program (Air Toxics “Hot Spot” Information and Assessment Act of 1987).

The ARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC in August 1998. Diesel PM is currently the ARB’s primary TAC of concern for mobile sources, in part because, of all controlled TACs, diesel PM emissions are estimated to be responsible for approximately 70% of the total ambient TAC risk (ARB 2000). In 2000, the ARB developed and approved the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* and the *Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*. The ARB is now implementing an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (ARB 2002) and is currently developing regulations designed to reduce diesel PM emissions from diesel-fueled engines and vehicles. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce diesel PM emissions. These regulations require substantial reductions in diesel PM emissions beginning with the 2004 model year. Additional more stringent standards will apply to engines starting in the 2007 model year. Off-road vehicles will come under more stringent regulation beginning with the 2005 model year. Each of these sets of regulations will serve to significantly reduce diesel PM emissions and long-term human health risks attributable to diesel-fueled vehicles and equipment.

The California State Legislature has also examined TAC hazards and has adopted several bills to control TACs. Implementation of state-adopted legislation pertaining to the control of TACs is the responsibility of the ARB and local air pollution control districts. The most important legislation applicable to the proposed project is summarized below.

The Tanner Toxics Act

The Tanner Toxics Act established the California toxic air contaminant control program (AB 1807, Health and Safety Code Section 39666 et seq.) to identify and control TACs. Under the

act, the ARB is required to identify a substance as a TAC based on the review of the scientific data and the recommendations by both the Office of Environmental and Health Hazard Assessment and the Scientific Review Panel. After designation, the ARB investigates appropriate measures to limit emissions of the TACs. These measures may include emission limitations, control technologies, operation and maintenance requirements, closed-system engineering, cost, or substitution of compounds. The ARB then prepares a report on the appropriate degree of regulation and adopts Air Toxics Control Measures. These control measures are the minimum regulations that must be imposed by each of the local air districts in the form of regulations. Districts must adopt rules that are at least as stringent as those of the state.

Air Toxics “Hot Spots” Information and Assessment Act

The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588) is a state law enacted in 1987. The law requires certain facilities to submit information regarding emissions of more than 550 TACs to their local air pollution control districts. The act addresses public concerns that emissions from individual facilities might cause local concentration of air toxics “hot spots” at a level where individuals may be exposed to an excess risk of adverse health effects. The program requires facilities to notify all exposed persons if it is determined that there is a significant health risk. AB 2588 was amended in 1993 by Senate Bill (SB) 1731, the Facility Toxic Air Contaminant Risk Reduction Audit and Plan. In accordance with SB 1731, local air districts are required to establish a program to reduce risks from existing facilities that are deemed to pose a significant health risk.

Toxic Emissions near Schools Program/Waters Bill

AB 3205 (Health and Safety Code Sections 42301.6–42301.9) addresses stationary sources of hazardous air pollutants near schools. It requires public notice to the parents or guardians of children enrolled in any school located within one-quarter mile of the source and to each address within a 1,000-foot radius of a TAC source. SB 352 (Education Code Section 17213, Public Resources Code Section 21151.8) expands previous requirements to review sources of TACs near school sites. SB 352 directs school districts to include in the school site analysis any emissions sources, including, but not limited to, freeways and other busy traffic corridors, large agricultural operations, and rail yards within one-quarter mile of a school site. SB 352 requires that any school site located within 500 feet of the edge of the closest travel lane of a freeway or other busy traffic corridor be reviewed for potential health risks.

ODORS

Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and the SJVAPCD. The SJVAPCD has determined some common types of facilities that have been known to produce odors, including wastewater treatment facilities, chemical manufacturing plants, painting/coating operations, feed lots/dairies, composting facilities, landfills, and transfer stations. Because offensive odors rarely cause any physical

harm and no requirements for their control are included in state or federal air quality regulations, the SJVAPCD has no rules or standards related to odor emissions other than its nuisance rule. Any actions related to odors are based on citizen complaints to local governments and the SJVAPCD. According to the SJVAPCD, significant odor problems occur when there is more than one confirmed complaint per year averaged over a 3-year period or when there are three unconfirmed complaints per year averaged over a 3-year period (SJVAPCD 1998).

Two situations increase the potential for odor problems. The first occurs when a new odor source is located near existing sensitive receptors. The second occurs when new sensitive receptors are developed near existing sources of odor. In the first situation, the SJVAPCD recommends operational changes, add-on controls, process changes, or buffer zones where feasible to address odor complaints. In the second situation, the potential conflict is considered significant if the project site is at least as close as any other site that has already experienced significant odor problems related to the odor source. For projects locating near a source of odors where there is no nearby development that may have filed complaints, and for odor sources locating near existing sensitive receptors, the SJVAPCD requires the determination of potential conflict to be based on the distance and frequency at which odor complaints from the public have occurred in the vicinity of a similar facility (SJVAPCD 1998).

SAN JOAQUIN COUNTY GENERAL PLAN 2010

The San Joaquin County General Plan 2010 (County General Plan) includes several policies specifically related to air quality in the “Air Quality” section of the Resources Element. These include the following:

Policy 1: San Joaquin County shall meet and maintain all State and national standards for air quality.

Policy 2: Motor vehicle emissions shall be minimized through land use and transportation strategies, as well as by promotion of alternative fuels.

Policy 3: Projects shall be designed to minimize concentrations of carbon monoxide (hot spots).

Policy 4: Air quality hazards from pesticides shall be minimized.

Policy 5: The elimination of chlorofluorocarbons shall be supported.

CITY OF MANTECA GENERAL PLAN

The City of Manteca General Plan (City General Plan) includes several policies specifically related to air quality. The following policies of the City General Plan would apply to the project:

Policy AQ-P-1: Cooperate with other agencies to develop a consistent and coordinated approach to reduction of air pollution and management of hazardous air pollutants.

Policy AQ-P-2: Develop a land use plan that will help to reduce the need for trips and will facilitate the common use of public transportation, walking, bicycles, and alternative fuel vehicles.

Policy AQ-P-3: Segregate and provide buffers between land uses that typically generate hazardous or obnoxious fumes and residential or other sensitive land uses.

Policy AQ-P-4: Develop and maintain street systems that provide efficient traffic flow and thereby minimize air pollution from automobile emissions.

Policy AQ-P-5: Develop and maintain circulation systems that provide alternatives to the automobile for transportation, including bicycle routes, pedestrian paths, bus transit, and carpooling.

Policy AQ-P-7: New construction will be managed to minimize fugitive dust and construction vehicle emissions.

Policy AQ-P-8: Wood-burning devices shall meet current standards for controlling particulate air pollution.

Policy AQ-P-9: Burning of any combustible material within the City will be controlled to minimize particulate air pollution.

Policy AQ-P-10: Encourage energy efficient building designs.

4.3.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

For the purpose of this analysis, the following applicable thresholds of significance, as identified in the SJVAPCD's *Guide for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 1998), and based on environmental checklist questions in Appendix G of the State CEQA Guidelines, are used to determine whether implementing the URSP project would result in a significant air quality impact:

- ▶ *short-term increases in regional criteria pollutants*—Construction impacts associated with the project would be considered significant if the feasible control measures for construction in compliance with Regulation VIII as listed in the SJVAPCD guidelines are not incorporated or implemented.
- ▶ *violation of standards*—Air quality impacts from any emissions source associated with the proposed project would be considered significant if an applicable air quality standard

would be violated, or if project emissions would contribute substantially to an existing or projected air quality violation.

- ▶ *increases in toxic air contaminants*—TAC impacts associated with the proposed project would be considered significant if the project would expose the public to substantial levels of TACs so that the probability of contracting cancer for the Maximally Exposed Individual would exceed 10 in 1 million and/or so that ground-level concentrations of non-carcinogenic TACs would result in a Hazard Index greater than 1 for the Maximally Exposed Individual.
- ▶ *increases in odorous emissions*—Odor impacts associated with the proposed project would be considered significant if the project has the potential to frequently expose members of the public to objectionable odors.
- ▶ *increases in local mobile-source CO concentrations*—Local mobile source impacts associated with the project would be considered significant if the project contributes to CO concentrations that exceed the CAAQS of 9.0 ppm for 8 hours or 20 ppm for 1 hour.
- ▶ *long-term increases in regional criteria pollutants*—Regional (operational) impacts associated with the proposed project would be considered significant if the project generates emissions of reactive organic gases (ROG) and NO_x that exceed 10 TPY.

IMPACT ANALYSIS

Impact 4.3-1

Increases in Regional Criteria Pollutants during Construction. *Construction associated with the URSP would result in the generation of NO_x, ROG, and PM₁₀ emissions. Sufficient emissions could be generated during project construction such that applicable air quality standards could be violated, or emissions would contribute substantially to an existing or projected air quality violation at nearby receptors. This would be a **significant** impact.*

The SJVAPCD does not require a quantitative analysis of air pollutant emissions generated by construction activities if mitigation measures recommended by the SJVAPCD (i.e., Regulation VIII) are implemented as part of the project. Although implementation of the SJVAPCD mitigation measures is not included as part of the URSP project description, it is assumed that the City of Manteca would require adherence to these measures, and they are recommended as a formal mitigation measure later in this chapter. Therefore, a qualitative rather than quantitative evaluation of construction emissions is provided below.

Construction emissions may potentially result in substantial increases in localized PM₁₀ concentrations; adverse health effects; and nuisance concerns, such as reduced visibility and soiling of exposed surfaces. With respect to the project, the construction and development of residential, commercial, public, and utility uses in the URSP area and related offsite utility areas could result in the generation of NO_x, ROG, and PM₁₀ emissions attributable to site grading and excavation, road paving, application of architectural coatings, motor vehicle

exhaust associated with construction equipment and worker trips, and movement of construction equipment, especially on unpaved surfaces.

Emissions of fugitive dust generated during construction may also result in the transmission of dust to nearby agricultural crops. The accumulation of dust on the leaves of nearby agricultural plants may result in reduced crop yields from decreased rates of plant photosynthesis. In addition, a repeated or long-term accumulation of dust on the leaves of plants may encourage the development or increased activity of spider mites and other pests or diseases. A report entitled *Evaluation of Potential Effects of the Carmel River Dam and Reservoir Project on Cachagua Valley Vineyards* (Ballanti and Kasimatis 1997), prepared for the Monterey Peninsula Water Management District, analyzed dust impacts on vineyards. The report found that increased spider mite activity is most noticeable within approximately 100 feet downwind of dust-generating activities.

Construction activities associated with the project would result in the generation of NO_x, ROG, and PM₁₀ emissions and potential adverse effects on nearby crops from emission of fugitive dust. Violations of air pollutant standards for PM₁₀ and ozone are regularly recorded at monitoring stations in the project region (see Table 4.3-1). If feasible control measures to minimize construction emissions are not implemented, sufficient emissions could be generated during project construction such that applicable air quality standards could be violated, or emissions would contribute substantially to an existing or projected air quality violations at nearby receptors. This would be a significant impact.

**Impact
4.3-2**

Exposure of Sensitive Receptors to Toxic Air Contaminants. *Commercial land uses proposed under the URSP would have the potential to emit toxic air contaminants. Although these facilities would be subject to stringent regulations, because the locations of these facilities in relation to sensitive receptors is not known at this time, there is a potential that sensitive receptors could be located in proximity to stationary- or mobile-source TAC emissions in excess of SJVAPCD significance thresholds. This would be a **potentially significant** impact.*

Commercial land uses proposed under the URSP may include facilities typically considered to be sources of TACs, such as dry cleaning establishments and gasoline stations. The URSP would also develop facilities that would accommodate sensitive receptors (i.e., residences). Pursuant to SJVAPCD Rule 2010, all sources having the potential to emit TACs are required to obtain permits from the SJVAPCD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including Rule 2201 (New and Modified Stationary Source Review Rule), Rule 4001 (New Source Performance Standards), and Rule 4002 (National Emissions Standards for Hazardous Air Pollutants). Given that compliance with applicable standards and regulations are required for the development and operation of facilities that may emit TACs, TAC emissions from stationary sources both on and off the project site are considered highly unlikely to result in significant impacts in the URSP area. However, the precise type and location of potential stationary TAC emissions sources in the URSP area are not known at this time. The location of stationary TAC sources relative to sensitive receptors also cannot be confirmed. Therefore, although stringent

permitting conditions will be applied to stationary TAC sources, there is a potential that elements of the public could be exposed to levels of TACs that would exceed SJVAPCD significance thresholds (i.e., the probability of contracting cancer for the Maximally Exposed Individual would exceed 10 in 1 million and/or ground-level concentrations of non-carcinogenic TACs would result in a Hazard Index greater than 1 for the Maximally Exposed Individual). Therefore, impacts associated with stationary source TAC emissions would be potentially significant.

As discussed previously, particulate exhaust emissions from diesel-fueled engines (diesel exhaust PM) were identified as a TAC by the ARB in 1998. Implementation of Phase 1 and full buildout of the URSP project would result in the generation of diesel exhaust PM emissions during construction from the use of off-road diesel equipment for site grading and excavation, paving, demolition, and other construction activities and during project operation from heavy-duty trucks used in commercial areas (e.g., delivery trucks).

Generation of diesel PM from construction projects typically occurs in a single area for a short period. Although construction associated with the URSP would occur over an extended period (6 years), activities would be spread over a large area. Use of diesel-powered construction equipment in any one area would be short term and episodic and would cease when construction is completed in that area. Therefore, diesel PM generated by project construction is not expected to create conditions where the probability is greater than 10 in 1 million of contracting cancer for the Maximally Exposed Individual, or generate ground-level concentrations of non-carcinogenic toxic air contaminants that exceed a Hazard Index greater than 1 for the Maximally Exposed Individual.

Operational activities that require the use of diesel-fueled vehicles for extended periods, such as commercial trucking facilities or delivery/distribution areas, may generate diesel PM emissions that could exceed the SJVAPCD's significance thresholds. Although the specific commercial uses that would be developed under the URSP have not been identified, commercial uses may require large delivery and shipping trucks that use diesel fuel. The diesel exhaust PM emissions generated by these uses would be produced primarily at single locations on a regular basis. Idling trucks, including transport refrigeration units, increase diesel PM levels at these locations. Occupants of nearby residences, particularly those located within the proposed commercial-mixed-use districts, may be exposed to diesel exhaust PM emissions on a reoccurring basis. This impact would be potentially significant because it is unknown at this time whether the concentration of diesel PM at any sensitive receptor locations might exceed the threshold for acceptable cancer risk for the Maximally Exposed Individual. It is also unclear what effect the ARB's new diesel engine emission standards and diesel PM regulations would have on the level of emissions from any one facility.

Impact
4.3-3

Increases in Odorous Emissions. *Implementation of the URSP may result in the exposure of sensitive receptors to significant odors. This would be a **potentially significant** impact.*

The occurrence and severity of odor impacts depends on numerous factors, including: the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

The project is not anticipated to result in the installation of any major odor emission sources that would result in a potentially significant impact to the occupants of the proposed onsite or offsite land uses. Although specific commercial uses have not yet been identified, uses considered to be minor sources of odors may be developed. Such sources typically include dry cleaning establishments, restaurants, and gasoline stations. Receptors located in the general vicinity of such sources may be exposed on a frequent basis to odors. Proposed residential uses located within and adjacent to the commercial-mixed-used land use designations would be of primary concern.

Major odor sources located in the vicinity of the plan area that could potentially affect proposed onsite receptors includes the Lovelace Road Solid Waste Transfer Station, which is located approximately 2,800 feet north of the plan area. The SJVAPCD has identified solid waste transfer stations as a common source of odor emissions and has determined that receptors located within approximately one mile of transfer stations could be subjected to significant concentrations of odors. In addition, the use of agricultural chemicals and fertilizers on nearby parcels may also generate odors that could be detectable for brief periods of time at proposed residential dwellings located within the URSP area.

Increases in odor complaints could potentially occur, primarily because of increased development within the URSP area, which is downwind of the existing solid waste transfer station and, to a lesser extent, with potential development of minor odor sources within the plan area (e.g., dry cleaning establishments, restaurants, gasoline stations). Consequently, this impact would be a potentially significant impact.

Impact
4.3-4

Increases in Local Mobile-Source CO Concentrations. *Implementation of the project would result in the generation of CO at nearby intersections from increased vehicular traffic on the local transportation network. However, the project would not contribute to CO concentrations that exceed the CAAQS of 9.0 ppm for 8 hours or 20 ppm for 1 hour. Therefore, the project's contribution to localized mobile- source CO concentrations at sensitive receptors would be **less than significant**.*

The primary mobile-source pollutant of localized concern is CO. Local mobile-source CO emissions near roadway intersections are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. Under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels with respect to local sensitive land uses, such as residential units, hospitals, schools, and childcare facilities.

Modeling of CO concentrations is typically recommended for areas located near signalized roadway intersections that are projected to operate at an unacceptable LOS (i.e., LOS E or F) during p.m. peak hours (Garza et al. 1997).

Based on the traffic analysis prepared for this project, the intersection of Lathrop Road and Union Road is projected to operate at LOS F, under existing-plus-project p.m. peak-hour conditions. Implementation of the proposed traffic mitigation measures for this intersection would improve service to LOS D. All remaining signalized intersections in the project vicinity are projected to operate at acceptable levels of service (i.e., LOS D, or better), under existing-plus-project p.m. peak-hour conditions. Under future-plus-project p.m. peak-hour conditions, the intersection of Lathrop Road and 5th Street is projected to operate at LOS E. All remaining signalized intersections in the project vicinity, including the intersection of Lathrop Road and Union Road, are projected to operate at acceptable levels of service (i.e., LOS D, or better), under future-plus-project p.m. peak-hour conditions.

Predicted 1-hour and 8-hour CO concentrations at signalized intersections anticipated to operate at unacceptable levels of service were estimated using the CALINE4 model. (Modeling results are provided in Appendix C.) CO concentrations were estimated for Lathrop Road and Union Road, under existing-plus-project p.m. peak-hour conditions, and for Lathrop Road and 5th Street, under future-plus-project p.m. peak-hour conditions. To be conservative, ambient concentrations used in the modeling are based on the highest concentrations recorded at the nearest monitoring station during the last three years of available data and worst-case meteorological conditions using composite emission factors obtained from the EMFAC2002 computer model. As indicated in Table 4.3-4, predicted maximum 1-hour and 8-hour CO concentrations in the vicinity of the modeled intersections would be below corresponding 1-hour and 8-hour CO significance thresholds of 20 ppm and 9 ppm, respectively. Therefore, local mobile-source CO impacts would be less than significant.

Intersection(s)	Predicted CO Concentrations (ppm) ¹	
	1 Hour	8 Hour
Existing-Plus-Project		
Lathrop Road and Union Road	10.0	7.1
Future-Plus-Project		
Lathrop Road and 5 th Street	9.6	6.8
Significance thresholds ²	20.0	9.0
¹ 1-hour and 8-hour CO concentrations were estimated using the CALINE4 model based on the assumptions outlined above, 2010 composite emission factors from EMFAC2002 and a persistence factor of 0.7 for predicted 8-hour concentrations. To be conservative, background CO concentrations of 8.4 ppm and 6.0 ppm (the highest background concentrations from the Stockton-Hazelton air quality monitoring station during the last three years of available data (2000 to 2003) were used for existing and future conditions. ² Based on the more stringent CAAQS. Source: Ambient Air Quality & Noise Consulting 2004		

**Impact
4.3-5**

Increases in Long-term Regional Emissions. *Implementation of the project would result in increases in long-term regional emissions, primarily associated with mobile sources that would exceed the SJVAPCD’s recommended significance thresholds of 10 TPY for ozone precursor pollutants ROG and NO_x. This would be a **significant** impact.*

Regional area- and mobile-source emissions of ROG, NO_x, and PM₁₀ associated with the proposed URSP project were estimated using the ARB-approved URBEMIS2002 computer program, which is designed to model emissions for land use development projects. Separate emission levels were estimated for Phase 1 and for full buildout of the URSP area, and these are summarized in Table 4.3-5. URBEMIS2002 allows land use selections that include project location specifics and trip generation rates along with a “double counting” option that is designed to minimize double counting of internal vehicle trips between residential and nonresidential land uses and a “pass-by trips” option that estimates vehicle-trip emissions based on the percentage of primary trips, diverted linked trips, and pass-by trips assumed for specific land uses. The default settings for the SJVAB contained in the model were used for this analysis, based on trip generation rates obtained from the transportation analysis prepared for this project (see Section 4.11, Transportation and Circulation). Modeling results are provided in Appendix C.

Sources	Emissions Generated (Tons/Year)		
	ROG	NO _x	PM ₁₀
Area sources	46.0	9.9	32.3
Mobile source	36.0	50.5	54.3
Total	81.9	60.4	86.6
SJVAPCD Thresholds (Tons/Year)	10	10	–

Area-source emissions associated with landscaping, natural gas, and consumer products were estimated based on default model settings. Area source emissions exclude fireplace emissions based on assumed compliance with SJVAPCD Rule 4901. Mobile-source emissions were estimated based on default model settings and trip generation rates obtained from the traffic analysis prepared for this project under buildout conditions.
Source: Ambient Air Quality & Noise Consulting 2004

The URSP includes a number of design features that would help to reduce increases in mobile source emissions attributable to the project, including a network of multiuse trails to connect residential areas to local destinations. Although such features help to reduce overall project-generated emissions, buildout of the URSP would result in estimated emissions of approximately 82 tons/year of ROG, 60 tons/year of NO_x, and approximately 87 tons/year of PM₁₀. Long-term regional emissions at buildout would exceed the SJVAPCD’s recommended significance thresholds of 10 tons/year for ROG and 10 tons/year for NO_x. In addition, because San Joaquin County is currently designated as a nonattainment area for PM₁₀ and PM_{2.5}, project-generated PM emissions could contribute to existing nonattainment conditions. Therefore, buildout of the URSP would result in a significant air quality impact.

4.3.4 MITIGATION MEASURES

No mitigation measures are required for the following less-than-significant impacts:

4.3-4: Increases in Local Mobile-Source CO Concentrations.

The following mitigation measures are provided for significant impacts:

Impact 4.3-1: Increases in Generated Regional Criteria Pollutants During Construction.

The SJVAPCD emphasizes implementation of effective and comprehensive control measures rather than requiring a detailed quantification of construction emissions. The SJVAPCD requires that all feasible control measures (dependent on the size of the construction area and the nature of the construction operations) shall be incorporated and implemented.

Based on available information, it appears that the application of standard construction mitigation measures for the control of fugitive dust (i.e., the application of water or soil stabilizers) are effective methods of reducing dust-related impacts on agricultural crops.

In accordance with SJVAPCD guidelines (SJVAPCD 1998), the following mitigation measures, which includes SJVAPCD Basic, Enhanced, and Additional Control Measures, shall be incorporated and implemented. .

It is recognized that SJVAPCD Regulation VIII, upon which the following control measures are based, has recently undergone revision and that these control measures are subject to future periodic revision. Therefore, the project applicant shall annually contact the SJVAPCD to identify the most recent fugitive dust control measures required to be implemented by the proposed project and implement them accordingly during project construction.

- ▶ All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.
- ▶ All onsite unpaved construction roads and offsite unpaved construction access roads shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant.
- ▶ All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- ▶ During demolition of buildings all exterior surfaces of the building shall be wetted.
- ▶ When materials are transported offsite, all material shall be covered, effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained.

- ▶ All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.)
- ▶ Following the addition of materials to, or the removal of materials from, the surfaces of outdoor storage piles, piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- ▶ Onsite vehicle speeds on unpaved roads shall be limited to 15 mph.
- ▶ Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from adjacent project areas with a slope greater than 1 percent.
- ▶ Wheel washers shall be installed for all exiting trucks and equipment, or wheels shall be washed to remove accumulated dirt prior to leaving the site.
- ▶ Excavation and grading activities shall be suspended when winds exceed 20 mph.
- ▶ The overall area subject to excavation and grading at any one time shall be limited to the fullest extent possible.
- ▶ Onsite equipment shall be maintained and properly tuned in accordance with manufacturers' specifications.
- ▶ When not in use, onsite equipment shall not be left idling.

In addition to the measures identified above, the following measures from Table 6-3 of the *Guide for Assessing and Mitigating Air Quality Impacts* shall be implemented:

- ▶ Install wind breaks at windward sides of construction areas. (This measure will be implemented if the City, in coordination the SJVAPCD, determines that the fugitive dust control measures described above are not sufficiently effective.)
- ▶ Comply with the NESHAPS during the renovation/demolition of any existing buildings on the project site with the potential to contain asbestos. Consult the SJVAPCD's *Asbestos-Compliance Assistance Bulletin*, dated December 1994, to ascertain whether individual structures on the project site are subject to NESHAPS.

The City, after consultation with the applicant, shall require all feasible additional measures to control construction emissions. Such measures may include, but are not limited to the following items from Table 6-4 of the *Guide for Assessing and Mitigating Air Quality Impacts* and other sources:

- ▶ Use alternative-fueled construction equipment, where reasonably available, such as equipment capable of using biodiesel or emulsified fuel.
- ▶ Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use at any one time.
- ▶ Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via a portable generator set).
- ▶ Curtail construction during periods of high ambient pollutant concentration; this may include ceasing of construction activity during the peak hour of vehicular traffic on adjacent roadways (or ceasing/reducing heavy-duty equipment usage on Spare the Air Days).
- ▶ Before construction contracts are issued, the project applicant would perform a review of new technology, as it relates to heavy-duty equipment, to determine what (if any) advances in emissions reduction are available for use and are economically feasible. Construction contracts/bid specifications shall require contractors to utilize the available and economically feasible technology on an established percentage of the equipment fleet. It is anticipated that in the near future both NO_x and PM₁₀ control equipment will be available. The SJVAPCD shall be consulted with on this process.

Implementation of Mitigation Measure 4.3-1 would substantially lessen impacts resulting from emissions associated with construction activities. All actions required by the SJVAPCD shall be implemented, which would be considered the extent of available feasible mitigation measures. Under most circumstances this would be sufficient to reduce impacts related to construction emissions to less than significant levels. However, the SJVAB is currently in nonattainment for PM₁₀ (serious nonattainment for federal standards) and ozone (severe nonattainment for state and extreme nonattainment for federal standards). Therefore, even with implementation of the mitigation measures described above, construction emissions associated with a project the size of the URSP (approximately 553 acres) could be sufficient to result in violations of applicable air quality standards, or could contribute substantially to an existing or projected air quality violation. Impact 4.3-1 would remain a significant and unavoidable impact.

Impact 4.3-2: Exposure of Sensitive Receptors to Toxic Air Contaminants.

As indicated in the discussion of Impact 4.3-2, implementation of the proposed project would result in potentially significant increases in stationary-source and mobile-source TACs associated with Commercial land uses. The SJVAPCD shall impose various permitting conditions for stationary TAC sources. These conditions reflect the stringent application of air quality laws and substantially lessen the severity of potential impacts. However, as discussed above, even with implementation of permit conditions there is a potential that elements of the public could be exposed to levels of TACs that would exceed SJVAPCD significance thresholds. The only available mitigation to ensure no exposure of sensitive receptors to significant levels of TACs would be to completely separate emission sources from all sensitive receptor.

However, many stationary TAC sources (gas stations, dry cleaners, auto repair facilities) are typically integrated with land uses containing sensitive receptors. Restricting the locations of all TAC generating facilities to specific areas would not be practical or economically feasible. Thus, implementing the project would result in a significant and unavoidable adverse impact with respect to stationary-source TACs.

Mobile-source TACs are a relatively new concern for the ARB, so specific guidelines and practices regarding assessing impacts and providing mitigation are not available. It is also unclear what effects the ARB's new diesel engine emission standards and diesel particulate matter regulations would have on the level of impact and the necessity for, or type of, mitigation. Therefore, the specific conditions of mobile-source TAC impacts cannot be determined at this time. The only available mitigation—completely separating emission sources (diesel vehicles) from all sensitive receptor—is not feasible. Therefore, no feasible mitigation is available for Impact 4.3-2 to reduce the impact to a less-than-significant level. Thus, implementing the proposed project would result in a significant and unavoidable adverse impact with respect to mobile-source TACs. The project applicant shall coordinate with the SJVAPCD as the project proceeds to assess situations in which toxic risk from diesel PM may occur and to review methodologies that may become available to estimate the risk.

No other feasible mitigation is available at this time to reduce this impact to a less-than-significant level. Therefore, the exposure of sensitive receptors to toxic air contaminants would be a significant and unavoidable impact.

Impact 4.3-3: Increases in Odorous Emissions.

As indicated in the discussion of Impact 4.3-3, implementation of the proposed project would result in exposure of onsite receptors to nearby existing odor sources and potential odor sources associated with development within the commercial mixed use districts. Compliance with SJVAPCD permit and nuisance rules related to odors would help to limit exposure of receptors to offensive odors. However, as discussed above, increases in odor complaints could potentially occur, due primarily to increased development downwind of the existing solid waste transfer station and, to a lesser extent, with potential development of minor odor sources within the plan area (e.g., dry cleaning establishments, restaurants, gasoline stations).

No other feasible mitigation is available at this time to reduce potential odor impacts to a less-than-significant level. Therefore, potential exposure of sensitive receptors to odorous emissions would be a significant and unavoidable.

Impact 4.3-5: Increases in Long-term Regional Emissions.

The City, after consultation with the applicant, shall require that all feasible emission control measures be incorporated into project design and operation. Such measures may include, but are not limited to, the following items recommended in the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD 1998) and other sources. It should be noted that many of these measures are already included in the proposed project design (as indicated in

parenthetical notes below); however, they are repeated here to allow a complete listing of the SJVAPCD guidelines.

- ▶ Provide transit enhancing infrastructure that includes transit shelters, benches, street lightening, route signs and displays, and/or bus turnouts/bulbs (already incorporated into project design).
- ▶ Provide park and ride lots.
- ▶ Provide pedestrian enhancing infrastructure that includes sidewalks and pedestrian paths, direct pedestrian connections, street trees to shade sidewalks, pedestrian safety designs/infrastructure, street furniture and artwork, street lightening, and/or pedestrian signalization and signs (already incorporated into the project design).
- ▶ Provide bicycle enhancing infrastructure that includes bikeways/paths connecting to a bikeway system, secure bicycle parking, and/or employee lockers and showers (bicycle lanes and trails already incorporated into the project design).
- ▶ Use solar, low-emissions, central, or tankless water heaters (residential and commercial), increase wall and attic insulation beyond Title 24 requirements (residential and commercial), orient buildings to take advantage of solar heating and natural cooling and use passive solar designs (residential, commercial, and industrial), replace wood-burning stoves and fireplaces with gas-fired fireplaces or inserts.
- ▶ Deciduous trees should be planted on the south-facing and west-facing sides of buildings.
- ▶ Natural gas lines and electrical outlets should be installed in patio areas to encourage the use of gas and/or electric barbecues.
- ▶ Businesses or individuals shall be allowed, through the zoning and building permit process, the option of installing electric/natural gas fuel hookups.
- ▶ If a gasoline service station is developed as part of the proposed project, it is encouraged that natural gas fueling be incorporated as part of the station.
- ▶ The CMU developer shall develop and implement a program to encourage employers to promote the use of low-emission vehicles, thus providing emission reductions. The program may include financial incentives, preferred parking, or other benefits for employees and businesses that use low-emission vehicles.
- ▶ The City shall encourage the project applicant to develop/participate in a program to provide, or subsidize the purchase cost of electric lawnmowers and electric edgers for project homeowners.

With implementation of Mitigation Measure 3.3-e, significant impacts relating to long-term regional emissions would be substantially lessened, but not mitigated to less-than-significant levels (i.e., mitigated to levels below the SJVAPCD's recommended significant threshold of 10 Tons/Year for ROG and 10 Tons/Year for NO_x [Table 4.3-5]). No other feasible mitigation is

available to reduces this impact to a less-than-significant level. Thus, increases in long-term regional emissions attributable to the project would be considered a significant and unavoidable impact.

4.3.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measure 4.3-1 would reduce the level of the project's construction-generated regional criteria pollutants. However, due to the size of the URSP project, construction-related air pollutants may still result in violations of applicable air quality standards or substantially contribute to an existing or projected air quality violation. Since no feasible mitigation measures are available to reduce this impact to less-than-significant level, this impact would be considered significant and unavoidable.

Implementation of Mitigation Measure 4.3-2 would reduce the level of exposure of sensitive receptors to project-generated TAC sources. However, since no feasible mitigation measures exist to reduce this impact to a less-than-significant level, this impact would be considered significant and unavoidable.

Implementation of Mitigation Measure 4.3-3 would reduce the level of exposure of onsite receptors to odor sources. However, since no feasible mitigation measures exist to reduce this impact to a less-than-significant level, this impact would be considered significant and unavoidable.

Implementation of Mitigation Measure 4.3-5 would reduce the project's contribution to long-term regional air emissions. However, since no feasible mitigation measures exist to reduce this impact to a less-than-significant level, this impact would be considered significant and unavoidable.

4.4 NOISE

This section includes a summary of applicable noise regulations and a description of ambient noise conditions in the URSP project area. It also includes an analysis of noise impacts associated with implementation of the URSP in terms of (1) short-term construction noise, (2) long-term operational stationary-source noise, (3) long-term operational mobile-source noise, and (4) compatibility of proposed land uses with onsite noise levels. This section also recommends mitigation measures, as necessary, to reduce potentially significant noise impacts. Noise modeling data are available in Appendix D of this Draft EIR.

4.4.1 ENVIRONMENTAL SETTING

ACOUSTIC FUNDAMENTALS

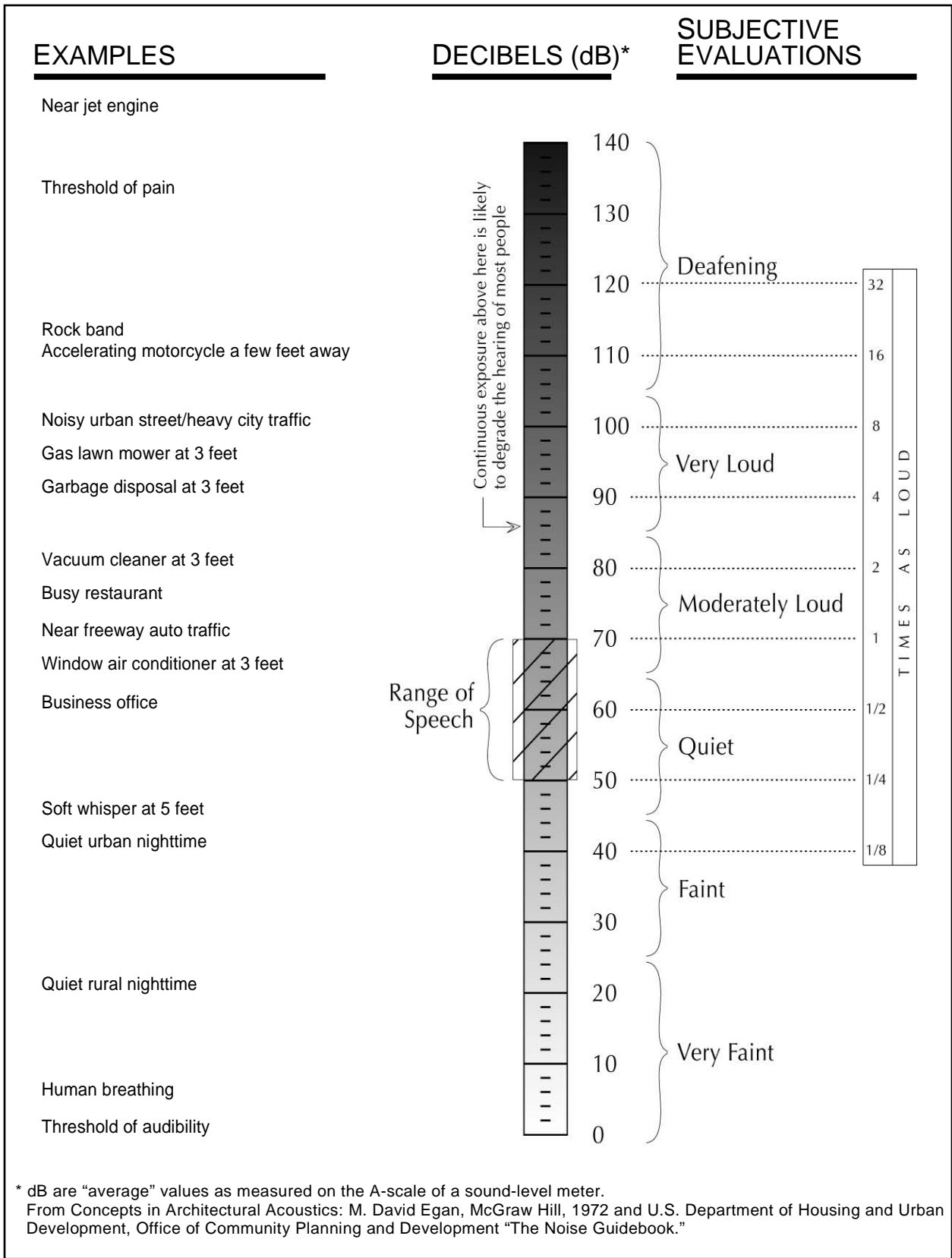
Noise is often defined as unwanted sound. Sound is a mechanical form of radiant energy transmitted by pressure waves in the air. It is characterized by two parameters: amplitude (loudness) and frequency (tone).

Amplitude

Amplitude is the difference between ambient air pressure and the peak pressure of the sound wave. It is measured in decibels (dB) on a logarithmic scale. For example, a 10-dB sound is 10 times the pressure difference of a 1-dB sound; a 20-dB sound is 100 times the pressure difference of a 1-dB sound. Another feature of the decibel scale is the way in which sound amplitudes from multiple sources add together. A 65-dB source of sound, when joined by another identical 65-dB source, results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Amplitude is interpreted by the ear as corresponding to loudness. Laboratory measurements correlate a 10-dB increase in amplitude with a perceived doubling of loudness and establish a 3-dB change in amplitude as the minimum audible difference perceptible to the average person.

Frequency

Frequency is the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sounds of different frequencies. Sound waves below 16 Hz or above 20,000 Hz cannot be heard at all, and the ear is more sensitive to sound in the higher portion of the audible range than in the lower. To approximate human sensitivity to sound, environmental sound is usually measured in A-weighted decibels (dBA). On this scale, the normal range of human hearing extends from approximately 10 dBA to approximately 140 dBA. Listed in Exhibit 4.4-1 are several examples of the noise levels associated with common noise sources.



* dB are "average" values as measured on the A-scale of a sound-level meter.
 From Concepts in Architectural Acoustics: M. David Egan, McGraw Hill, 1972 and U.S. Department of Housing and Urban Development, Office of Community Planning and Development "The Noise Guidebook."

Source: EDAW 2004

Typical Noise Levels

EXHIBIT 4.4-1

NOISE DESCRIPTORS

The intensity of environmental noise fluctuates over time, and several descriptors of time-averaged noise levels are used. The three most commonly used descriptors are L_{eq} , L_{dn} , and CNEL. The energy-equivalent noise level, L_{eq} , is a measure of the average energy content (intensity) of noise over any given period. Many communities use 24-hour descriptors of noise levels to regulate noise. The day-night average noise level, L_{dn} , is the 24-hour average of the noise intensity, with a 10-dBA “penalty” added for nighttime noise (10 p.m. to 7 a.m.) to account for the greater sensitivity to noise during this period. CNEL, the community equivalent noise level, is similar to L_{dn} but adds an additional 5-dBA penalty for evening noise (7 p.m. to 10 p.m.). Noise analyses often depend on measurements of L_{max} , the maximum instantaneous noise level during a specific period of time (sometimes referred to as the “peak noise level”), and L_{min} , the minimum instantaneous noise level during a specific period.

Another descriptor that is commonly discussed is the single-event noise level (SEL). The SEL describes a receiver’s cumulative noise exposure from a single noise event, which is defined as an acoustical event of short duration (0.5 second), such as a backup beeper, the sound of an airplane traveling overhead, or a train whistle, and involves a change in sound pressure above a defined reference value (usually approximately 40 dBA).

CHARACTERISTICS OF SOUND PROPAGATION AND ATTENUATION

Noise can be generated by a wide variety of sources, including mobile sources, such as automobiles, trucks, and airplanes, and stationary sources, such as machinery and industrial operations. Noise generated by mobile sources typically attenuates (is muffled or reduced) at a rate of 3.0–4.5 dBA per doubling of distance, depending on the ground surface and the number or type of objects between the noise source and the receiver. Hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of approximately 4.5 dBA per doubling of distance. Noise generated by stationary sources typically attenuates at a rate of 6.0–7.5 dBA per doubling of distance.

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the “line of sight” between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage also can reduce noise but are less effective than solid barriers.

HUMAN RESPONSE TO NOISE

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech,

recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels.

Because construction activities typically are short term, the associated effects of construction-generated noise typically are limited to annoyance and interference with speech. In an exterior noise environment, noise levels in excess of 60 dBA are generally considered to have an appreciable degree of speech interference. The level at which speech interference occurs is based on an average sentence comprehension rate of approximately 98% at 5 meters. Greater speaker-listener distances would be possible indoors at the same level of vocal effort and speech intelligibility because sound pressure levels diminish more slowly than predicted by the inverse square law, which is typically used in the exterior environment (EPA 1971).

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted: the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers. Regarding increases in A-weighted noise levels, knowledge of the following relationships (EPA 1971) will be helpful in understanding this analysis:

- ▶ Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- ▶ Outside of the laboratory, a 3-dB change is considered a just-perceivable difference.
- ▶ A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- ▶ A 10-dB change is subjectively heard as approximately a doubling in loudness and would almost certainly cause an adverse change in community response.

EXISTING NOISE ENVIRONMENT

Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. Schools, churches, hotels,

libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

Noise-sensitive land uses in the project area consist primarily of rural residential dwellings. Calvary Community Church and the Lions & Lambs Preschool are located at the northwest corner of Lathrop Road and Union Road near the southern boundary of the project area.

Ambient Noise Survey

An ambient noise survey was conducted on September 30, 2004, to document the existing noise environment at various locations within the URSP area. The daytime A-weighted sound levels (i.e., weighted to represent the frequency range of human hearing) measured during the survey are summarized in Table 4.4-1. Based on the measurements conducted, average daytime noise levels (in dBA L_{eq}) within the URSP area generally range from the mid- to upper-60s, dependent primarily on distance from nearby roadways and shielding from noise by nearby structures.

Table 4.4-1 Daytime Ambient Noise Levels				
Location		Primary Noise Source	Date/Time	A-Weighted Sound Level (dBA L_{eq})
1	Calvary Community Church, Lions & Lambs Preschool; Lathrop Road East of Union Road	Vehicle Traffic	6:45–7:00 am	69.3
2	Union Road North of Lathrop Road	Vehicle Traffic	6:45–7:00 am	66.2
3	14432 Airport Way; Airport Way North of Lathrop Road	Vehicle Traffic	6:45–7:00 am	69.0
4	Lovelace Road; Lovelace Rd Material Recovery Facility	Vehicle Traffic; MRF Tractor	6:45–7:00 am	63.8
Measurements were conducted on September 30, 2004 using a Larson Davis 820 sound level meter placed 4.5 feet above ground surface and at a distance of approximately 25 feet from the centerline of the near travel lane. Source: Ambient Air Quality & Noise Consulting 2004				

Existing Noise Sources

The existing noise environment in and surrounding the proposed URSP project area is influenced primarily by surface transportation noise emanating from vehicular traffic on area roadways. Additional noise sources, including planes flying overhead, also contribute to the existing background noise levels. The project site is not located within the 60 dBA CNEL noise contour zones of any nearby railroad corridors, public airports, or private airstrips (San Joaquin County General Plan 1992).

Predicted traffic noise levels were calculated using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model (FHWA-RD-77-108), based on traffic data obtained from the traffic analysis prepared for this project. Additional input data included day/night

percentages of automobiles, medium-duty trucks, and heavy-duty trucks; vehicle speeds; ground attenuation factors; and roadway widths. Existing traffic noise levels for area roadway segments most affected by implementation of the proposed specific plan are provided in Table 4.4-2. Actual noise levels will vary from day to day, depending on various factors, including local traffic volumes, shielding from existing structures, variations in attenuation rates attributable to changes in surface parameters, and meteorological conditions.

Table 4.4-2 Predicted Existing Traffic Noise Levels	
Roadway Segment	Predicted Noise Level (dBA CNEL/Ldn) at 50 Feet From Near Travel Lane Centerline
Lathrop Road East of Union Road	64.03
Lathrop Road West of Union Road	63.33
Lathrop Road East of Airport Way	63.26
Airport Way North of Lathrop Road	64.77
Union Road North of Lathrop Road	61.63
Lovelace Road West of Union Road	58.44
Traffic noise levels were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) based on traffic data obtained from the traffic analysis prepared for this project. Modeling assumes no natural or human-made shielding (e.g., vegetation, berms, walls, buildings). Source: Ambient Air Quality & Noise Consulting 2004	

4.4.2 REGULATORY BACKGROUND

STATE OF CALIFORNIA

Title 24 of the California Code of Regulations establishes standards governing interior noise levels that apply to all new multifamily residential units in California. These standards require that acoustical studies be performed before construction begins at building locations where the existing day-night average noise level (Ldn) exceeds 60 A-weighted decibels (dBA). (See Section 4.4.1, Environmental Setting, for explanations of Ldn, dBA, and other noise fundamentals.) Such acoustical studies are required to establish mitigation measures that will limit maximum Ldn to 45 dBA in any inhabitable room. Although there are no generally applicable interior noise standards pertinent to all uses, many communities in California have adopted an Ldn of 45 dBA as an upper limit on interior noise in all residential units.

SAN JOAQUIN COUNTY GENERAL PLAN 2010

The Noise Element of the San Joaquin County General Plan 2010 (County General Plan) establishes specific policies to ensure an acceptable noise environment for each land use. Applicable policies include the following:

Policy 1. The following exterior noise levels shall be considered acceptable:

- (a) 65 dBA Ldn or less for residential development.
- (b) 60 dBA Ldn or less for schools, group care facilities, and hospitals.

Policy 4. Development shall be planned and designed to minimize noise impacts on neighboring noise sensitive areas and to minimize noise interference from outside noise sources.

Policy 6. The county shall seek to alleviate existing community noise problems.

Implementation Measure 8 – Setbacks. Setbacks should be established along the major noise sources that would assure that noise-sensitive land uses are outside the 60 Ldn contour.

The noise standards for residential land uses in the County General Plan Noise Element are the same as the noise limits of the development title, which are discussed in more detail below.

SAN JOAQUIN COUNTY DEVELOPMENT TITLE

Chapter 9 of the County Development Title includes many provisions related to noise. Section 1025.9 establishes maximum allowable noise exposure levels for transportation and stationary sources, as shown in Table 4.4-3.

Section 1025.9 also includes the following provisions that are potentially relevant to this project:

- (a) Transportation Noise Sources
 - (1) Excluding proposed noise sensitive land uses on infill lots, proposed noise sensitive land uses that will be affected by existing or planned transportation noise sources shall be required to mitigate the noise levels from these transportation noise sources so that the resulting noise levels on said proposed noise sensitive land uses do not exceed the standards specified in Table 4.4-3, Part I.
 - (2) Private development projects that include the development of new transportation facilities or the expansion of existing transportation facilities shall be required to mitigate the noise levels from these transportation facilities so that the resulting noise levels on noise sensitive land uses within and adjacent to said development projects do not exceed the standards specified in Table 4.4-3, Part I.

**Table 4.4-3
San Joaquin County
Standards for Maximum Allowable Noise Exposure**

Part I: Transportation Noise Sources		
Noise Sensitive Land Use (Use Types)	Outdoor Activity Areas ¹ (dBA Ldn)	Interior Spaces (dBA Ldn)
Residential	65	45
Administrative Office	–	45
Child Care Services, Child Care Centers	–	45
Community Assembly	65	45
Cultural and Library Services	–	45
Educational Services, General	–	45
Funeral and Interment Services, Undertaking	65	45
Lodging Services	65	45
Medical Services	65	45
Professional Services	–	45
Public Services (excluding Hospitals)	–	45
Hospitals	65	45
Recreation, Indoor Spectator	–	45
Part II: Stationary Noise Sources		
Sound Measurement	Outdoor Activity Areas	
	Daytime ¹ (7 a.m. to 10 p.m.)	Nighttime ² (10 p.m. to 7 a.m.)
Hourly Equivalent Sound Level (L _{eq}), dBA	50	45
Maximum Sound Level (L _{max}), dBA	70	65
¹ Where the location of outdoor activity areas is unknown or is not applicable, the noise standard shall be applied at the property line of the receiving land use. When determining the effectiveness of noise mitigation measures, the standards shall be applied on the receiving side of noise barriers or to the property line. ² Each of the noise level standards specified shall be reduced by 5 dBA for impulsive noise, single tone noise, or noise consisting primarily of speech or music. Source: San Joaquin County Development Title, Chapter 9-1025.9 Noise		

(b) Stationary Noise Sources.

- (1) Excluding proposed noise sensitive land uses on infill lots, proposed noise sensitive land uses that will be impacted by stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so that the resulting noise levels on said proposed noise sensitive land uses do not exceed the standards specified in Table 4.4-3, Part II.
- (2) Proposed projects that will create new stationary noise sources or expand existing stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so as not to exceed the noise level standards specified in Table 4.4-3, Part II.

- (c) Exemptions. The following shall be exempt from the provisions of 9-1025.9 Noise.
- (1) Activities conducted in public parks, public playgrounds and public or private school grounds, including but not limited to school athletic and school entertainment events;
 - (3) Noise sources associated with construction, provided such activities do not take place before 6:00 a.m. or after 9:00 p.m. on any day;
 - (4) Noise sources associated with the maintenance of residential property located in a residential zone, provided such activities shall take place between the hours of 8:00 a.m. and 9:00 p.m. on any day;
 - (5) Noise sources emanating from any agricultural operation, including activities associated with the processing or transportation of crops when such activities are conducted on agriculturally zoned lands;
 - (6) Noise sources associated with residential air conditioning equipment, provided such equipment is in good repair.
- (d) Acoustical Study. The Review Authority [of San Joaquin County] shall require the preparation of an acoustical study in instances where it has determined that a project may expose existing or proposed noise sensitive land uses to noise levels exceeding the noise standards specified in Table 4.4-3. This determination shall be based on the existing or future sixty-five (65) dBA Ldn noise contour, the proximity of new noise sensitive land uses to known noise sources, or the knowledge that a potential for adverse noise impacts exists.
- (2) (B) For traffic noise studies, the computer models, SOUND32 or other proprietary models based on the 1978 “Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108)” shall be used.

Section 1022.5 concerns noise attenuation walls. Walls, fences, berms, and/or landscaping for the purpose of noise attenuation may be required in any zone when adjacent to a high noise generator, such as a major roadway or railroad. Noise attenuation requirements shall be developed in response to the noise level and source affecting specific property. Where noise attenuation walls are required, height and yard restrictions for walls may be waived by the Community Development Director as required for effective noise reduction.

CITY OF MANTECA GENERAL PLAN

The Noise Element of the City of Manteca General Plan (City General Plan) identifies goals, standards, and policies designed to ensure that City residents are not subjected to noise beyond acceptable levels. A general objective of the Noise Element is to protect existing noise-sensitive development (e.g., hospitals, schools, churches, and residences) from new uses that would generate noise levels incompatible with those uses and, conversely, discourage noise-

sensitive uses from locating near sources of high noise levels. The Noise Element establishes noise criteria for determining land use compatibility for new land uses affected by transportation noise sources. The noise element also establishes maximum allowable noise performance standards for stationary noise sources. The City's General Plan noise performance standards are summarized in Table 4.4-4.

Table 4.4-4 City of Manteca Maximum Allowable Noise Exposure and Performance Standards			
Mobile Noise Sources			
Land Use ⁽⁴⁾	Outdoor Activity Areas ⁽¹⁾ (dBA CNEL/L_{dn})	Interior Spaces (dBA)	
		CNEL/L_{dn}	L_{eq} ⁽³⁾
Residential	60 ⁽²⁾	45	
Transient Lodging	60 ⁽²⁾	45	
Hospitals, Nursing Homes	60 ⁽²⁾	45	
Theaters, Auditoriums, Music Halls			35
Churches, Music Halls	60 ⁽²⁾		40
Office Buildings	65		45
Schools, Libraries, Museums			45
Playgrounds, Neighborhood Parks	70		
Stationary Noise Sources ^(5,6)			
Noise Level Descriptor (dBA)	Outdoor Activity Areas		
	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)	
Hourly Equivalent Sound Level (L _{eq})	50	45	
Maximum Sound Level (L _{max})	70	65	
<p>1 Outdoor activity areas for residential development are considered to be backyard patios or decks of single family dwellings, and the patios, balconies or common areas where people generally congregate for multi-family developments. Outdoor activity areas for non-congregate, including pedestrian plazas, seating areas, and outside lunch facilities. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.</p> <p>2 In areas where it is not possible to reduce exterior noise levels to 60 dB L_{dn} or below using a practical application of the best noise-reduction technology, an exterior noise level of up to 65 L_{dn} will be allowed.</p> <p>3 Determined for a typical worst-case hour during periods of use.</p> <p>4 Where a proposed use is not specifically listed on the table, the use shall comply with the noise exposure standards for the nearest similar use as determined by the City.</p> <p>5 Each of the noise level standards specified above shall be reduced by 5 dBA for simple noise tones, noises consisting primarily of speech or music, or recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints.</p> <p>6 No standards have been included for interior noise levels. Standard construction practices should, with the exterior noise levels identified, result in acceptable interior noise levels.</p>			
Source: City of Manteca General Plan, Noise Element Table 9-1 and Table 9-2, June 2003			

Several goals, policies, and implementation measures contained in the City General Plan Noise Element specifically address noise issues associated with proposed development projects.

Goal N-1: Protect the residents of Manteca from the harmful and annoying effects of exposure to excessive noise.

Goal N-2: Protect the quality of life in the community and the tourism economy from noise generated by incompatible land uses.

Goal N-4: Protect public health and welfare by eliminating existing noise problems where feasible, by establishing standards for acceptable indoor and outdoor noise, and by preventing significant increases in noise levels.

Goal N-5: Incorporate noise considerations into land use planning decisions, and guide the location and design of transportation facilities to minimize the effects of noise on adjacent land uses.

Policy N-P-1: Areas within Manteca exposed to existing or projected exterior noise levels from mobile noise sources exceeding the performance standards in Table 4.4-4 shall be designated as noise-impacted areas.

Policy N-P-2: New development or residential or other noise-sensitive land uses will not be permitted in noise-impacted areas unless effective mitigation measures are incorporated into the project design to satisfy the performance standards in Table 4.4-4.

Policy N-P-3: The City may permit the development of new noise-sensitive uses only where the noise level due to fixed (non-transportation) noise sources satisfies the noise level standards of Table 4.4-4. Noise mitigation may be required to meet Table 4.4-4 performance standards.

Policy N-P-4: The City shall require stationary noise sources proposed adjacent to noise sensitive uses to be mitigated so as to not exceed the noise level performance standards in Table 4.4-4.

Policy N-P-5: In accord with Table 4.4-4 standards, the City shall regulate construction-related noise impacts on adjacent uses.

Policy N-P-6: Where the development of residential or other noise-sensitive land use is proposed for a noise-impacted area, an acoustical analysis is required as part of the environmental review process so that noise mitigation may be considered in the project design. The acoustical analysis shall:

- (a) Be the responsibility of the applicant.
- (b) Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.

- (c) Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
- (d) Estimate existing and projected (20 years) noise levels in terms of the standards of Table 4.4-4, and compare those levels to the adopted policies of the Noise Element.
- (e) Recommend appropriate mitigation measures to achieve compliance with the adopted policies and standards of the Noise Element.
- (f) Estimate noise exposure after the prescribed mitigation measures have been implemented.
- (g) Describe a post project assessment program that could be used to monitor the effectiveness of the proposed mitigation measures.

Policy N-P-7: Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with noise performance levels of Table 4.4-4.

Policy N-P-8: The City shall enforce the Sound Transmission Standards of the California Building Code concerning the construction of new multiple occupancy dwellings such as hotels, apartments, and condominiums.

Policy N-P-9: New equipment and vehicles purchased by the City shall comply with noise level performance standards consistent with the best available noise reduction technology.

Policy N-P-11: For residential development backing onto a freeway or railroad right-of-way, the developer shall be required to build a sound barrier wall, and provide for other appropriate mitigation measures, to satisfy the performance standards in Table 4.4-4.

Policy N-P-12: The City shall require new roadways to be mitigated so as to not exceed the noise levels specified in Table 4.4-4. Widening or other improvement projects of existing roadways shall be mitigated to the most practical extent.

Implementation Measure N-I-1: New development in residential areas with an actual or projected exterior noise level of greater than 60 dB Ldn will be conditioned to use mitigation measures to reduce exterior noise levels to less than or equal to 60 dB Ldn.

Implementation Measure N-I-3: In making a determination of impact under the California Environmental Quality Act (CEQA), a substantial increase will occur if ambient noise levels are increased by 10 dB or more. An increase from 5-10 dB may be substantial. Factors to be considered in determining the significance of increases from 5-10 dB include:

- (h) The resulting noise levels;
- (i) The duration and frequency of the noise;

- (j) The number of people affected;
- (k) The land use designation of the affected receptor sites;
- (l) Public reactions or controversy as demonstrated at workshops or hearings, or by correspondence;
- (m) Prior CEQA determinations by other agencies specific to the project

Implementation Measure N-I-4: Control noise at the source through use of insulation, berms, building design and orientation, buffer space, staggered operating hours and other techniques. Use noise barriers to attenuate noise to acceptable levels.

Implementation Measure N-I-6: Require an acoustical analysis where:

- (n) Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels exceeding the levels specified in Table 4.4-4
- (o) Proposed transportation projects are likely to produce noise levels exceeding the levels specified in Table 4.4-4 at existing or planned noise sensitive areas

Implementation Measure N-I-7: Require that all acoustical analyses utilize a consistent format and be prepared in accordance with Policy N-P-6.

Implementation Measure N-I-8: Work in compliance with Caltrans and the Union Pacific Railroad to maintain noise level standards for both new and existing projects in compliance with Table 4.4-4.

CITY OF MANTECA ZONING ORDINANCE

The City's zoning ordinance specifies maximum allowable sound pressure levels for various land uses. Normal household appliances and equipment operated between the hours of seven a.m. to seven p.m. are exempt from these standards. The maximum sound pressure levels radiated by any use or facility shall not exceed the computed noise level values specified in Table 4.4-5, after applying corrections.

**Table 4.4-5
City of Manteca
Zoning Ordinance Noise Performance Standards**

Receiving Land Use Category	Time Period	Maximum Exterior Noise Level (dBA)
Single and Limited Multiple Family	10 p.m. to 7 a.m.	50
	7 a.m. to 10 p.m.	60
Multifamily residential, Public Institutional and Neighborhood Commercial	10 p.m. to 7 a.m.	55
	7 a.m. to 10 p.m.	60
Medium and Heavy Commercial	10 p.m. to 7 a.m.	60
	7 a.m. to 10 p.m.	65
Light industrial	Anytime	70
Heavy industrial	Anytime	75
Notes: The following corrections are applicable (apply only one correction): Daytime Operation Only (7am – 7 pm): +5 decibels Noise Source Operates Less Than: 20% of any one-hour period: +5 decibels 5% of any one-hour period: +10 decibels 1% of any one-hour period: +15 decibels Noise of Impulsive Character (hammering, etc.): -5 decibels Noise Rising or Falling in Pitch or Volume (hum, screech, etc.): -5 decibels Source: City of Manteca. Title 17, Zoning Ordinance. Chapter 17.13, Section 17.13.040.		

4.4.3 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

For purposes of this analysis, the following applicable thresholds of significance were used to determine whether implementing the project would result in a significant noise impact:

- ▶ Short-term construction noise impacts—Construction noise impacts would be considered significant if construction noise levels would exceed the San Joaquin County (Table 4.4-3) or the City of Manteca (Tables 4.4-4 and 4.4-5) noise criteria or result in increased levels of annoyance or sleep disruption during noise-sensitive periods of the day. For purposes of this analysis, noise-sensitive periods of the day are considered to be between the hours of 7 p.m. and 7 a.m.
- ▶ Long-term operational stationary source noise impacts—Long-term stationary-source noise impacts would be considered significant if the URSP project would result in noise levels that would exceed applicable noise criteria of San Joaquin County (Table 4.4-3) or the City of Manteca (Tables 4.4-4 and 4.4-5).
- ▶ Long-term increases in traffic noise—Long-term increases in traffic noise would be considered significant if implementation of the URSP project would result in a substantial increase in noise levels of 5 dBA CNEL, or greater.

- ▶ Land use compatibility with projected noise levels—Development of the URSP land uses would have a significant impact if predicted noise levels at onsite receptors would exceed applicable noise criteria of San Joaquin County (Table 4.4-3) or the City of Manteca (Tables 4.4-4 and 4.4-5).

The plan area is not located within the 60 dBA CNEL noise contour zones of any nearby airports or railways (City of Manteca General Plan 2003; San Joaquin County General Plan 1992). Consequently, the impacts of aircraft or railroad noise in the plan area do not need to be addressed.

IMPACT ANALYSIS

Impact
4.4-1

Increases in Short-term Construction-generated Noise. *Depending on the construction activities being performed, as well as the duration and hours during which activities occur, construction-generated noise levels at nearby residences could result in increased levels of annoyance and sleep disruption for occupants of nearby residences. This would be a **significant** impact.*

Construction noise in any one particular area would be temporary and would include noise from activities such as site preparation, truck hauling of material, pouring of concrete, and use of power hand tools. Construction noise typically occurs intermittently and varies depending on the nature of the construction activities being performed. Noise generated by construction equipment, including excavation equipment, material handlers, and portable generators, can reach high levels for brief periods.

When noise levels generated by construction operations are being evaluated, activities occurring during the more noise-sensitive evening and nighttime hours are of increased concern. Because exterior ambient noise levels typically decrease during the late evening and nighttime hours as community activities (e.g., industrial activities, vehicle traffic) decrease, construction activities performed during these more noise-sensitive periods of the day can result in increased annoyance and potential sleep disruption for occupants of nearby residential dwellings.

The U.S. Environmental Protection Agency (EPA) has found that the average noise levels associated with construction activities typically range from approximately 76 dBA to 84 dBA L_{eq} , with intermittent individual equipment noise levels ranging from approximately 75 dBA to more than 88 dBA for brief periods. Table 4.4-6 lists typical uncontrolled noise levels generated by individual pieces of construction equipment at a distance of 50 feet.

**Table 4.4-6
Noise Levels Generated by Typical Construction Equipment**

Type of Equipment	Range of Sound Levels (dBA at 50 feet)	Suggested Sound Levels for Analysis (dBA at 50 feet)
Pile driver	81–96	93
Rock drill	83–99	96
Jack hammer	75–85	82
Pneumatic tools	78–88	85
Pumps	68–80	77
Dozer	85–90	88
Tractor	77–82	80
Front-end loader	86–90	88
Hydraulic backhoe	81–90	86
Hydraulic excavator	81–90	86
Grader	79–89	86
Air compressor	76–86	86
Truck	81–87	86

Sources: EPA 1971, BBN Layman Miller 1987

Noise from localized point sources (such as construction sites) typically decreases by approximately 6 dBA with each doubling of distance from source to receptor. Given this noise attenuation rate and assuming no noise shielding from either natural or human-made features (e.g., trees, buildings, fences), outdoor receptors within approximately 1,600 feet of construction sites could experience maximum instantaneous noise levels of greater than 60 dBA when onsite construction-related noise levels exceed approximately 90 dBA at the project site boundary. During project development, construction could result in increased levels of annoyance and sleep disruption for occupants of existing residential dwellings or new dwellings constructed nearby as part of the project. Depending on the activities being performed, as well as the duration and hours during which activities occur, construction-generated noise levels at nearby existing or project-related residences could violate applicable City and County noise standards. In addition, activities occurring during the evening and nighttime hours, when people are more sensitive to noise, could result in increased levels of annoyance and sleep disruption to occupants of nearby residences. As a result, noise-generating construction activities would be considered to have a significant impact.

**Impact
4.4-2**

Stationary-Source Noise Generated by Onsite Land Uses. *Increases in stationary-source noise associated with proposed project land uses could potentially exceed the City’s maximum allowable noise standards. This would be a **significant** impact.*

The proposed URSP land use plan features a mix of various land uses, including residential, commercial, and recreational uses, as well as various public utilities. The noise levels typically associated with these land uses and associated noise impacts are discussed separately below.

Residential Land Uses

Noise from proposed residential dwellings would expose other nearby residences (both existing and project related) to minor increases in ambient noise levels. Noise typically associated with such development includes lawn and garden equipment, voices, and amplified music. Activities associated with these land uses would result in only minor increases in ambient noise levels, primarily during the day and evening hours and less frequently at night, as perceived at the closest residential receptors. Noise levels generated by stationary sources, primarily residential central air conditioning units, typically average approximately 60 dBA at 3 feet from the source (EPA 1971). Manteca Municipal Code, Title 17, Section 17.09.050.C requires that air conditioning units be sited more than 15 feet from the main building on adjacent lots. However, noise levels associated with air conditioning units located in residential side yard areas could potentially exceed the exterior daytime and nighttime noise standards of 50 dBA and 45 dBA, respectively, at neighboring residences (Table 4.4-4). As a result, increased noise levels associated with proposed residential land uses would result in a potentially significant noise impact.

Commercial Uses

As discussed in Chapter 3, Project Description, the URSP includes plans for the development of commercial land uses on a total of up to 38.94 acres. However, the specific types of commercial uses to be developed in these areas have not yet been determined. Potential sources of noise associated with these types of land uses can vary substantially. Noise associated with such uses can include occasional parking lot-related noise (e.g., opening and closing of vehicle doors, people talking), loading dock operations (e.g., use of forklifts, hydraulic lifts), trash compactors, and air compressors. Noise from such equipment can reach intermittent levels of approximately 90 dBA at 50 feet from the source (EPA 1971). Early morning truck deliveries also may be a source of elevated noise levels at nearby receptors.

Operational noise levels associated with the proposed commercial land uses could potentially exceed the City's maximum allowable exterior noise standards at nearby existing and future noise-sensitive receptors. In addition, increases in single-event noise levels, such as backup alarms from material delivery trucks, occurring during evening and nighttime hours, could result in increased levels of disturbance and sleep disruption to occupants of nearby residential dwellings. Increased noise levels associated with proposed commercial land uses would be potentially significant.

Recreational Uses

The proposed URSP includes development of various recreational uses, including parks, trails, and recreational facilities. Noise typically associated with parks and trails and associated vehicle parking areas include the voices of adults and children and the occasional opening and closing of vehicle doors. Noise generated by such sources are often intermittent and do not typically result in substantial increases in daytime ambient noise levels that would be anticipated to exceed the County's land use compatibility standards at nearby receptors.

However, recreational uses involving use of amplified sound systems or activities occurring during the more noise-sensitive evening, nighttime, and early morning hours may result in substantial increases in ambient noise levels at nearby existing or proposed residences, resulting in potential increases in annoyance and sleep disruption. Increased noise levels associated with proposed recreational land uses would be potentially significant.

Public Utilities

The project includes extension of sewer, drainage, water, and electrical facilities to the specific plan area. Sanitary sewer facilities would consist of a network of gravity-flow sewer lines. Construction of gravity-feed sewer and drainage facilities are not anticipated to include the placement of any stationary noise sources (i.e., booster pump stations). Electrical service would be provided via existing transmission lines and, likewise, would not be anticipated to require the placement of any major stationary noise sources, such as electrical substations.

Water service to the plan area is anticipated to be provided by the South County Surface Water Supply Project (SCSWSP). In the absence of this water supply, and in the event that this water supply project is stalled, the project would require development of two new water wells: one within the specific plan area and one adjacent to the SCSWSP water tank on Lathrop Road (exhibit 3-7). Pumps used for water conveyance systems typically generate noise levels ranging from approximately 70 to 80 dBA at 3 feet. The City typically encloses within a building and sites water wells a minimum of 100 feet from nearby residences. Generators for the wells are typically housed outside the well building. Acoustical noise analysis performed by the City indicates that generators that are located more than 60 feet from nearby residences do not result in noise levels that exceed city noise standards. Depending on the final location of water well facilities (i.e., if within 60 feet of nearby residences), site design, and pump specifications, operational noise levels of the proposed wells could potentially exceed City noise standards at nearby receptors. Operational noise levels associated with the proposed water well facilities would be potentially significant.

Summary of Stationary-Source Noise

Stationary-source noise levels associated with several proposed land uses would result in noise levels that could exceed County or City noise standards at nearby residences. In addition, increases in single-event noise levels, such as backup alarms from material delivery trucks at commercial land uses or amplified sound systems associated with recreational facilities, could result in increased levels of disturbance and sleep disruption for occupants of nearby residential dwellings, particularly during evening, nighttime, and early morning hours. Increase in stationary source noise attributable to the project would be potentially significant.

Impact
4.4-3

Increases in Existing Traffic Noise Levels. *Implementation of the proposed specific plan would contribute to an increase in traffic noise levels in excess of adopted noise standards. This is would be a **significant** impact.*

The FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) was used to calculate traffic noise levels along affected roadways for existing and existing-plus-project conditions, based on data obtained from the traffic analysis prepared for this project. Input data used in the model included average daily traffic levels for nearby area roadways, fleet mixes (percentages of automobiles, medium-duty trucks, and heavy-duty trucks during daytime, evening, and nighttime hours), vehicle speeds, ground attenuation factors, and roadway widths. The project’s contribution to the existing traffic noise levels along area roadways was determined by comparing predicted traffic noise levels for existing and existing-plus-project conditions. Table 4.4-7 summarizes the predicted noise levels for existing and existing-plus-project conditions and resultant increases in traffic noise levels attributable to the project for roadway segments located in the vicinity of the project site.

Roadway Segments	Predicted Noise Level (dBA CNEL/L _{dn}) at 50 Feet From Near Travel Lane Centerline ⁽¹⁾		
	Existing	Existing Plus Project	Predicted Increase
Lathrop Road East of Union Road	64.03	65.36	1.33
Lathrop Road West of Union Road	63.33	65.22	1.89
Lathrop Road East of Airport Way	63.26	65.14	1.88
Airport Way North of Lathrop Road	64.77	65.58	0.81
Union Road North of Lathrop Road	61.63	65.76	4.13
Lovelace Road West of Union Road	58.44	60.26	2.02

¹ Traffic noise levels were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) based on traffic information (e.g., average daily traffic, vehicle speeds, roadway width) obtained from the data prepared for this project. Modeling assumes no natural or human-made shielding (e.g., vegetation, berms, walls, buildings).
Source: Ambient Air Quality & Noise Consulting 2004

As depicted in Table 4.4-7, residential dwellings located along Union Road, north of Lathrop Road, would experience the largest increase in traffic noise levels. Implementation of the project would not be anticipated to result in a perceptible increase in traffic noise levels along the other modeled area roadways. However, based on the modeling conducted, predicted existing traffic noise levels at some nearby existing residences, particularly those located along Airport Way, north of Lathrop Road, may currently approach or exceed applicable County and City noise criteria for land use compatibility of 65 and 60 dBA CNEL, respectively (refer to Table 4.4-3 and 4.4-4). Actual noise levels would vary from day to day, depending on factors such as local traffic volumes, shielding from existing structures, variations in attenuation rates resulting from changes in surface parameters, and meteorological conditions. Although implementation of the URSP would not result in a substantial increase of roadside noise levels

(i.e., greater than 5.0 dBA), and the project includes noise alternating features, including sound walls, fences, and residential insulation, the project could contribute to predicted overall traffic noise levels at outdoor activity areas and within interior spaces of some nearby existing residences in excess of adopted noise criteria for land use compatibility. As a result, increases in traffic noise would be a potentially significant impact.

Impact
4.4-4

Compatibility of Proposed Land Uses with Projected Onsite Noise Levels.

*Predicted noise levels at some noise-sensitive receptors associated with the project would exceed the County’s “normally acceptable” land use compatibility noise standards. As a result, this would be a **significant** impact.*

As previously discussed, noise levels within the plan area are influenced primarily by traffic noise associated with vehicle traffic on area roadways, although noise generated by other sources, such as agricultural operations, may also play a role.

For determination of land use compatibility, predicted traffic noise contours (in dBA CNEL) for area roadways were modeled for future-plus-project conditions (Table 4.4-8.) The predicted noise contour distances do not take into account shielding or reflection of noise from existing structures. As a result, the noise contour distances should be considered to represent bands of similar noise exposure, rather than absolute distances of demarcation. Actual noise levels would vary from day to day, depending on factors such as local traffic volumes, shielding from existing structures, variations in attenuation rates resulting from changes in surface parameters, and meteorological conditions. The compatibility of the proposed land uses in comparison to predicted traffic noise levels and potential agricultural noise sources is discussed separately below.

Table 4.4-8 Predicted Traffic Noise Contours Future Plus Project Conditions				
Roadway Segments	Distance (feet) From Roadway Centerline to Noise Contour (dBA)			
	55 CNEL	60 CNEL	65 CNEL	70 CNEL
Lathrop Road East of Union Road	436	203	95	0
Lathrop Road West of Union Road	410	191	89	0
Lathrop Road East of Airport Way	304	141	67	0
Airport Way North of Lathrop Road	870	404	188	87
Union Road North of Lathrop Road	330	153	71	0
Lovelace Road West of Union Road	156	73	0	0
Traffic noise levels were modeled using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) based on traffic information (e.g., average daily traffic, vehicle speeds, roadway width) obtained from the data prepared for this project. Modeling assumes no natural or human-made shielding (e.g., vegetation, berms, walls, buildings). Contour distances of “0” are within roadway right-of-way. Source: Ambient Air Quality & Noise Consulting 2004				

Based on the modeling conducted, the 60- and 65-dBA CNEL traffic noise contours would extend into the specific plan area. Along the southern portion of the plan area, the 60 dBA

CNEL contour is predicted to extend to a maximum distance of approximately 203 feet from the centerline of Lathrop Road. The predicted 60-dBA CNEL noise contour would extend onto the eastern and western portions of the plan area at distances of approximately 153 feet and 404 feet from the centerline of Union Road and Airport Way, respectively. Consequently, predicted future traffic noise levels at proposed onsite residential dwellings, including residential dwellings located within the proposed Commercial Mixed Use district located along Lathrop Road, could potentially exceed the more restrictive City noise criteria for land use compatibility of 60 dBA CNEL (Table 4.4-2).

As previously discussed, the plan area is not located in the 60-dBA noise contour of any nearby public airports or private airstrips; exposure to aircraft noise typically occurs for only short periods and, as a result, aircraft noise does not contribute substantially to average daily noise levels in the area. Agricultural activities near the northern boundaries of the URSP area, and within the URSP area as development proceeds, include the use of various types of heavy equipment. The operation of heavy agricultural equipment can generate noise levels of approximately 85-dBA L_{eq} at 50 feet (EPA 1971). Depending on the duration and time of day when these activities occur and distance from the source, agricultural activities could result in or contribute to noise levels at nearby noise-sensitive receptors in excess of the County's 65 dBA CNEL exterior noise standard for land use compatibility.

Because predicted onsite noise levels could potentially exceed the County's noise criteria for land use compatibility at proposed residential land uses, this impact would be potentially significant.

4.4.4 MITIGATION MEASURES

The following mitigation measures are provided for significant impacts:

Impact 4.4-1: Increases in Short-term Construction-generated Noise.

- (a) Construction activities shall be limited to the least noise-sensitive daytime hours of 7 a.m. to 7 p.m. Construction activities shall not be allowed on Sundays and legal holidays. These limitations shall be specified in all construction contracts and specifications entered into by the applicant and/or its successors in interest.
- (b) In addition, all construction vehicles or equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and acoustical shields or shrouds, in accordance with manufacturers' recommendations. Construction equipment and truck routes shall be arranged to minimize travel adjacent to occupied residences. Stationary construction equipment and staging areas shall be located as far as possible from sensitive receptors.

Impact 4.4-2: Stationary-Source Noise Generated by Onsite Land Uses.

- (a) When tentative subdivision maps and commercial uses are proposed, site-specific acoustical analyses shall be conducted to determine predicted noise impacts attributable to the

proposed project taking into account site-specific conditions (e.g., site design, location of structures, building characteristics). The acoustical analysis shall evaluate stationary and mobile source noise attributable to the proposed use and impacts to nearby noise-sensitive land uses, in accordance with adopted City of Manteca noise standards. Feasible measures shall be identified to reduce project-related noise impacts. Mitigation measures may include, but are not limited to, the following:

- ▶ Use of increased noise-attenuation measures in building construction (e.g., dual-pane, sound-rated windows; mechanical air systems; exterior wall insulation, etc.);
- ▶ Locating mechanical equipment (e.g., air conditioning and ventilation systems, pump stations, etc.) at the farthest distance from and/or be shielded from nearby existing and proposed noise-sensitive land uses;
- ▶ Limit noise-generating operational activities associated with the proposed commercial land uses, including truck deliveries and the loading and unloading of materials.

(b) The following measures shall apply to noise-generating activities associated with proposed recreational land uses, including neighborhood and community parks, trails, and open space areas:

- ▶ Onsite landscape maintenance equipment shall be equipped with properly operating exhaust mufflers and engine shrouds, in accordance with manufacturers' specifications.
- ▶ The operation of onsite landscape maintenance equipment shall be limited to the least noise-sensitive daytime hours of 7 a.m. to 7 p.m.
- ▶ Outdoor use of amplified sound systems shall be limited to the least noise-sensitive daytime hours of 7 a.m. to 7 p.m.
- ▶ Use of on-site outdoor recreational facilities shall conform to City regulations.

Impact 4.4-3: Increases in Existing Traffic Noise Levels.

Implement Mitigation Measure 4.4-2(a).

Impact 4.4-4: Compatibility of the Proposed Land Uses with Projected Onsite Noise Levels.

Implement Mitigation Measure 4.4-2(a-b).

4.4.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Implementation of Mitigation Measure 4.4-1 would limit construction activities to the less noise-sensitive periods of the day. With implementation of this measure, increases in levels of annoyance and potential sleep disruption to occupants of nearby residences would be less than significant.

Implementation of Mitigation Measure 4.4-2(a, b), along with compliance with the County's General Plan noise policies, would reduce stationary-source noise impacts. However, noise levels at some offsite noise-sensitive land uses could potentially exceed local noise criteria, even with implementation of all feasible mitigation measures. Single-event noise levels at residential uses located adjacent to or within areas designated for commercial mixed-use would be of particular concern, because of intermittent noise typically associated with truck deliveries and the loading/unloading of materials. This impact would be considered significant and unavoidable.

Measures for mitigating traffic noise at existing offsite receptors typically include construction of sound walls/barriers, relocation or demolition of adversely affected residences, as well as implementation of sound insulation measures, including retrofit of existing windows and doors and increased insulation in wall cavities. Construction of a sound wall along some roadways, such as Union Road and Airport Road, may block access to existing dwellings and, consequently, may not be feasible mitigation. Usually, construction of sound walls is the most practical and cost-effective way to reduce traffic noise levels where such walls are feasible. Implementation of other noise-reduction methods (i.e., relocation or retrofit of structures) would be dependent on predicted noise levels and site-specific conditions (e.g., setback distances, location of outdoor activity areas, building construction characteristics, intervening terrain/structures). Implementation of Mitigation Measure 4.4-2(a) would reduce traffic noise impacts at existing offsite noise-sensitive receptors, but not necessarily to a less-than-significant level for all adversely affected offsite receptors. This impact would be considered significant and unavoidable.

Implementation of Mitigation Measure 4.4-2 would help to ensure compliance with Title 24 of the California Code of Regulations, which requires the preparation of an acoustical analysis for multifamily residences to achieve an interior noise level of 45-dBA CNEL/ Ldn. However, although implementation of Mitigation Measure 4.4-2 would be effective in reducing average daily interior noise levels of single- and multiple family residences, noise levels within outdoor activity areas of some proposed residences could still exceed adopted noise standards. In addition, single-event noise levels at some receptors could still occur, resulting in increased levels of annoyance and sleep disruption. Residences proposed for construction along major roadways, as well as those located adjacent to or within areas designated for commercial mixed-use would be of particular concern, due to intermittent noise typically associated with commercial truck deliveries and the loading/unloading of materials.

Although, as previously discussed, agricultural activities on adjacent parcels may contribute to onsite noise levels, agricultural activities occurring within San Joaquin County are protected by the County's Right-To-Farm ordinance. Mitigation measures already included to reduce onsite exterior and interior noise levels, which may include application of increased building attenuation measures or sound barriers, may also help to reduce noise levels from nearby agricultural sources. However, additional mitigation measures are not available to directly reduce potential noise impacts associated with nearby agricultural operations. This impact would be considered significant and unavoidable.

4.5 BIOLOGICAL RESOURCES

This section addresses biological resources present in the project area and evaluates impacts to these resources that would result from implementation of the project. The biological analysis is based on information provided in a biological constraints analysis prepared by Monk & Associates, under contract to Union Ranch Partners, LLC. EDAW biologists independently reviewed the Monk & Associates report for CEQA applicability and technical adequacy and completeness before summarizing the information and incorporating it into this Draft EIR. A copy of the technical report by Monk & Associates is provided in Appendix E. EDAW biologists also reviewed other relevant information including the Draft Environmental Impact Report (DEIR) for the Central Lathrop Specific Plan (EDAW 2004) and aerial photographs of the project site. EDAW also conducted searches of the California Natural Diversity Database (CNDDDB 2004) and California Native Plant Society database (CNPS 2004) for specific information on documented observations of special-status species in the Manteca and Lathrop 7.5-minute U.S. Geological Survey (USGS) quadrangles. A reconnaissance-level field survey was conducted by EDAW biologists on September 21, 2004. The purpose of the survey was to assess the potential for presence of sensitive biological resources and to note common plant and wildlife species on the site, as well as to verify the results of the Monk & Associates Report.

4.5.1 ENVIRONMENTAL SETTING

COMMON BIOLOGICAL RESOURCES

The majority of the 553-acre project site is currently used for agricultural purposes and is characterized by almond orchards, alfalfa, pasture, fallow fields and disced fields that were previously planted with corn. Two irrigation ditches traverse the project site. A small water storage basin is also present on the project site. Habitat types present on the project site are briefly described below and the location and extent of each habitat type is depicted in Exhibit 4.5-1a and 4.5-1b. Adjacent land uses include agricultural field crops, orchards, and residential development. In addition, there is an irrigation control ditch immediately to the east of the project site. The irrigation control ditch is lined with several large nonnative trees consisting of black locust (*Robinia pseudoacacia*) and weeping willow (*Salix babylonica*).

Croplands

During the September site visit, approximately 467 acres of the project site were under cultivation as cropland. This cropland includes approximately 428 acres of almond orchard and 39 acres of alfalfa. The orchards are characterized by rows of almond trees (*Prunus dulcis*) with no understory vegetation. The alfalfa crops are characterized by a dense monoculture of alfalfa (*Medicago sativa*). The cropland on the project site also includes 39 acres of field that were disced or fallow at the time of the survey. The disced fields were previously planted with corn but were unvegetated at the time of the survey. The fallow fields were characterized by weedy (ruderal) vegetation including Bermuda grass (*Cynodon dactylon*), Johnsongrass (*Sorghum halepense*), white sweet clover (*Melilotus alba*), hedge mustard (*Sisymbrium officinale*), Spanish lotus (*Lotus purshianus*), turkey mullein (*Eremocarpus setigerus*), and common knotweed

(*Polygonum arenastrum*). Four acres of the project site were being used as irrigated cattle pasture. Plant species in the pasture included Bermuda grass, alfalfa, meadow fescue (*Festuca pratensis*), and white sweet clover.

Common wildlife species observed or expected to occur within agricultural croplands include rodents such as Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), and California meadow vole (*Microtus californicus*). These small mammals are prey for a variety of raptor species known to occur in the area, including American kestrel (*Falco sparverius*), northern harrier (*Circus cyaneus*) and red-tailed hawk (*Buteo jamaicensis*). A variety of other birds were observed or are expected to forage on project site agricultural croplands, including western kingbird (*Tyrannus verticalis*), barn swallow (*Hirundo rustica*), European starling (*Sturnus vulgaris*), western meadowlark (*Sturnella neglecta*), turkey vulture (*Cathartes aura*), and Brewer's blackbird (*Euphagus cyanocephalus*). Additionally, three special-status raptors are expected to occur on the project site and use the croplands for foraging habitat: Swainson's hawk (*Buteo swainsonii*), western burrowing owl (*Athene cunicularia hypugaea*) and white-tailed kite (*Elanus leucurus*).

Orchards on the project site support several species of birds including American crow (*Corvus branchyrhychos*), yellow-billed magpie (*Pica nuttalli*), mourning dove (*Zenaida macroura*), western scrub-jay (*Aphelocoma californica*), lesser goldfinch (*Carduelis psaltria*), bush-tit (*Psaltriparus minimus*), and house finch (*Carpodacus mexicanus*). Other wildlife species known or expected to occur in the orchard areas include Botta's pocket gopher, California meadow vole, striped skunk (*Mephitis mephitis*), black-tailed hare (*Lepus californicus*), California ground squirrel (*Spermophilus beechyi*), Virginia opossum (*Didelphis virginiana*), gopher snake (*Pituophis melanoleucus*), and western fence lizard (*Sceloporus occidentalis*).

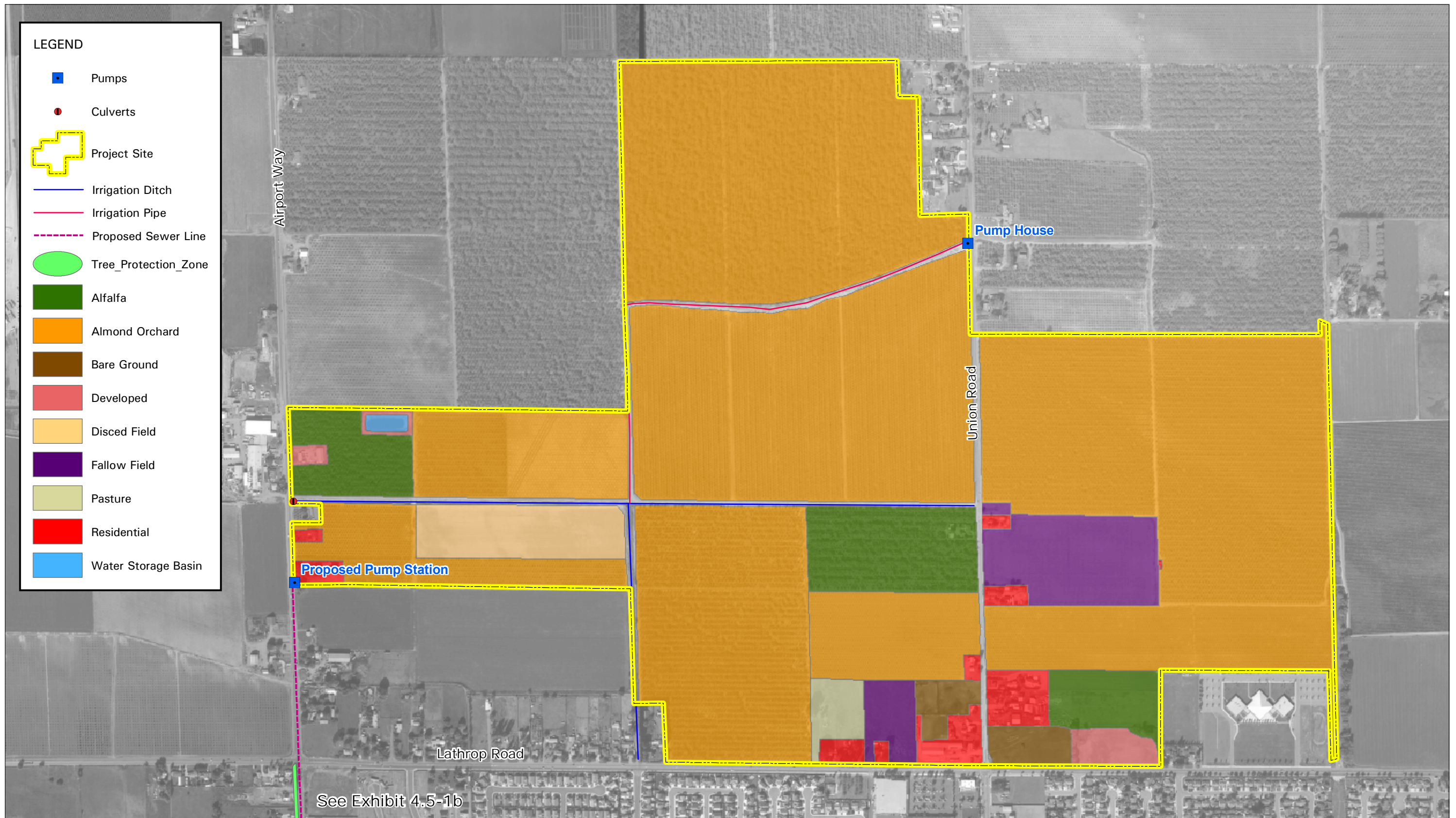
Water Storage Basin

A water storage basin occupying approximately 0.9 acres is located in the western portion of the project site. The water storage basin is characterized by open water habitat and sparse cover of weedy grasses and forbs atop the berms surrounding the basin. This water storage basin was excavated in uplands and has no connection to any other hydrological features (i.e., it is isolated). The storage basin does not support hydrophytic vegetation.

The berm surrounding the water storage basin is composed of dirt and supports Botta's pocket gopher and California ground squirrel burrows. These burrows provide potential habitat for western burrowing owl.

Irrigation Ditches

Two irrigation ditches totaling approximately 1.3 acres are present on the project site (Exhibit 4.5-1a and b). The two ditches circulate pumped irrigation water that is piped underground into the ditches via San Joaquin Irrigation District pipelines. One ditch traverses the project site in an east to west direction from Union Road to Airport Way. The second ditch runs north from Lathrop Road and converges with the east-west irrigation ditch in the southeastern portion of the project site. The width of the ditches at the ordinary high water mark (OHWM)



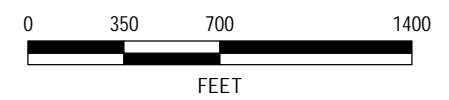
Source: City of Manteca 2001, EDAW 2004

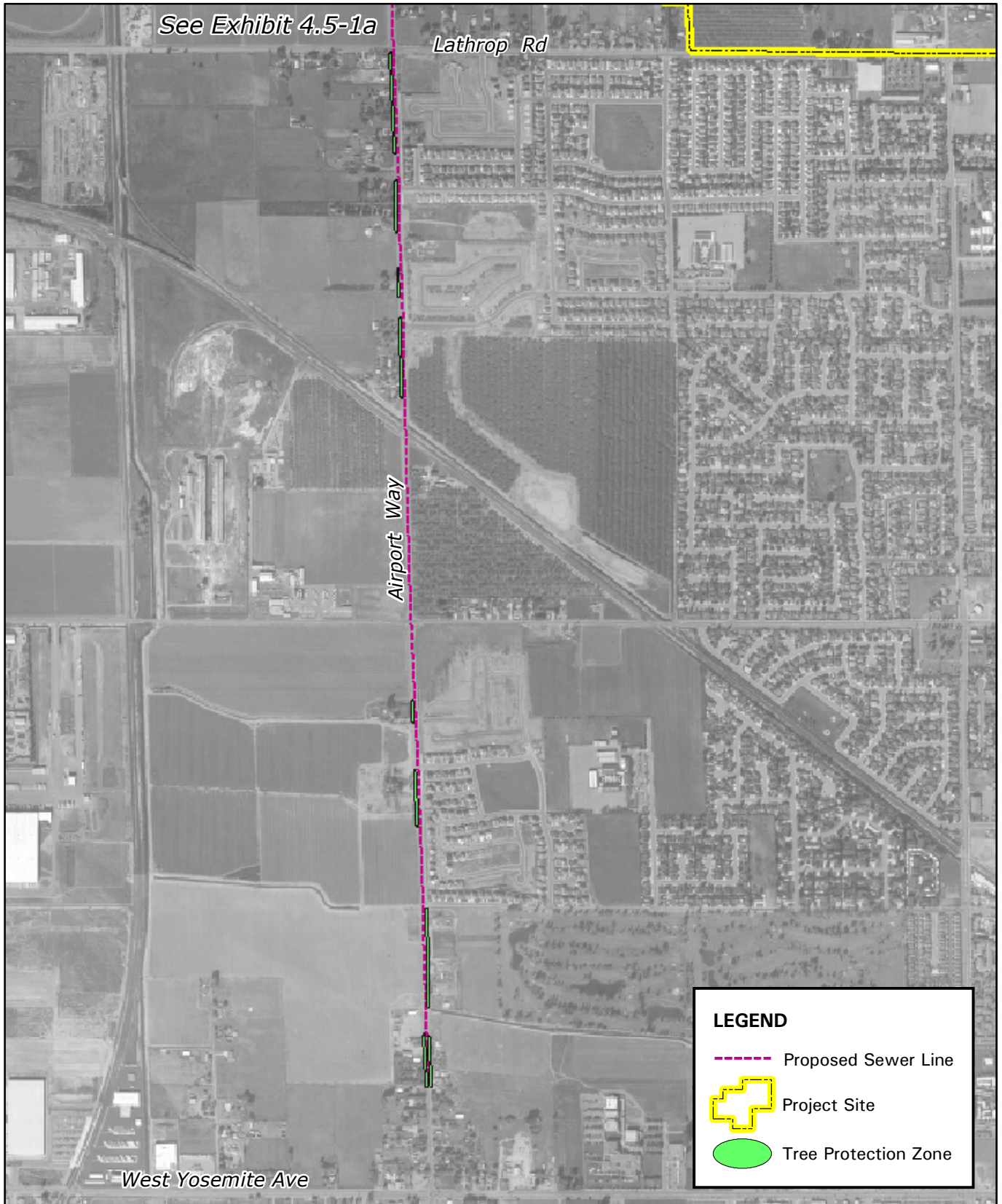
Habitats Within the Project Area

Union Ranch Specific Plan Draft EIR

X 4T040.01 11/04

EXHIBIT 4.5-1a



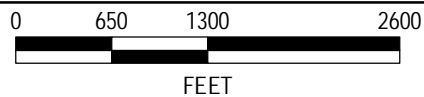


Sources: City of Manteca 2001, EDAW 2004

Proposed Sewer Pipeline

EXHIBIT 4.5-1b

Union Ranch Specific Plan Draft EIR
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ranges from approximately 3 to 10 feet and averages 8 feet. Both ditches contained flowing water at the time of the survey with an average water depth of approximately 2 feet. Freshwater marsh habitat occurs within the OHWM of both irrigation ditches, and is dominated by hydrophytic grass species including knotgrass (*Paspalum distichum*), barnyard grass (*Echinochloa crus-galli*), bearded sprangletop (*Leptochloa fascicularis*), yellow bristlegrass (*Setaria pumila*), and goosegrass (*Eleusine indica*). Other characteristic species include tall flatsedge (*Cyperus eragrostis*), hairy willowherb (*Epilobium ciliatum*), and lady's thumb (*Polygonum persicaria*).

Wildlife species that are expected to occur in the ditches include bird species such as great egret (*Ardea alba*), great blue heron (*Ardea herodias*), song sparrow (*Melospiza melodia*), and barn swallow (*Hirundo rustica*); amphibians such as bullfrog (*Rana catesbeiana*) and Pacific chorus frog (*Pseudacris regilla*); and invertebrates such as red swamp crayfish (*Procambarus clarkii*).

Residential/Landscaped Areas

A variety of ornamental tree species including tree-of-heaven (*Ailanthus altissima*), black locust, southern magnolia (*Magnolia grandiflora*) and Lombard poplar (*Populus nigra*) are present around the rural residential areas within the project site. A few hybridized walnut trees were also observed around the residential properties. Other mature trees including some native oaks and Fremont cottonwoods are present along Airport Way in the vicinity of the proposed sewer line route (Exhibit 4.5-1b).

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources include special-status species and sensitive natural habitats as identified by California Department of Fish and Game (DFG), CNPS, and U.S. Fish and Wildlife Service (USFWS). Sensitive biological resources for this project also include those afforded protection under the City of Manteca's General Plan or by San Joaquin County.

Special-Status Species

Special-status species include plants and animals in the following categories:

- ▶ species listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA);
- ▶ species considered as candidates for listing as threatened or endangered under ESA or CESA;
- ▶ wildlife species identified by DFG as California Species of Special Concern;
- ▶ animals fully protected in California under the California Fish and Game Code;
- ▶ plants listed as Endangered or Rare under the California Native Plant Protection Act; and,

- ▶ plants on CNPS List 1B (plants rare, threatened, or endangered in California and elsewhere) or List 2 (plants rare, threatened, or endangered in California but more common elsewhere). The CNPS lists are used by both DFG and USFWS in their consideration of formal species protection under ESA or CESA.

Recent and historical reports of special-status species in the vicinity of the project site were identified through a search of the CNDDDB and the CNPS Inventory (CNPS 2001). The CNDDDB is a statewide inventory managed by DFG, which is continually updated with the locations and condition of the state’s rare and declining species and habitats. Although the CNDDDB is a reliable tool for site-specific information on sensitive biological resources, it should be noted that it contains only those records that have been submitted to DFG and is not always up to date or comprehensive.

A CNDDDB and CNPS database search was conducted for the Manteca and Lathrop 7.5-minute USGS quadrangles. Table 4.5-1 lists the special-status species potentially occurring on the project site. Based on review of the CNDDDB search, information in the Monk and Associates report and the reconnaissance-level survey conducted by EDAW, it was determined that potential habitat occurs on the project site for western burrowing owl (*Athene cunicularia*), Swainson’s hawk (*Buteo swainsonii*), slough thistle (*Cirsium crassicaule*), rose-mallow (*Hibiscus lasiocarpus*), Delta tule-pea (*Lathyrus jepsonii* var. *jepsonii*), Sanford’s arrowhead (*Sagittaria sanfordii*), and Wright’s trichocoronis (*Trichocoronis wrightii* var. *wrightii*). None of these species have been documented on the project site. However, Swainson’s hawks have been observed flying over the site (Monk & Associates 2003).

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence
	USFWS	DFG	CNPS		
Plants					
Slough thistle <i>Cirsium crassicaule</i>	--	--	1B	Freshwater marshes, sloughs, and slow-moving water; blooms May-August	Could occur; potentially suitable habitat present in irrigation ditches
Rose-mallow <i>Hibiscus lasiocarpus</i>	--	--	2	Freshwater marshes and swamps; blooms June-September	Could occur; potentially suitable habitat present in irrigation ditches
Delta tule pea <i>Lathyrus jepsonii</i> var. <i>jepsonii</i>	--	--	1B	Brackish and freshwater marshes; blooms May-September	Could occur; potentially suitable habitat present in irrigation ditches
Sanford’s arrowhead <i>Sagittaria sanfordii</i>	--	--	1B	Shallow freshwater marshes and swamps; blooms May-October	Could occur; potentially suitable habitat present in irrigation ditches

**Table 4.5-1
Special-Status Species Potentially Occurring on the URSP Project Site**

Species	Status ¹			Habitat and Blooming Period	Potential for Occurrence
	USFWS	DFG	CNPS		
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	--	--	2	Meadows, seeps, marshes, swamps, riparian scrub, and vernal pools; blooms May-September	Could occur; potentially suitable habitat present in irrigation ditches
Birds					
Swainson's hawk <i>Buteo swainsoni</i>	FSC	T	--	Nest in riparian forest and scattered trees; forage in grasslands and agricultural fields	Likely to occur; suitable foraging habitat and nesting habitat present
Burrowing owl <i>Athene cunicularia</i>	FSC	CSC	--	Grasslands and agricultural fields with presence of small rodent burrows	Likely to occur; suitable foraging and nesting habitat present
¹ Legal Status Definitions <u>U.S. Fish and Wildlife Service (USFWS)</u> FSC Federal Species of Concern (no formal protection) <u>California Department of Fish and Game (DFG)</u> T Threatened (legally protected) FP Fully Protected (legally protected, no take allowed) CSC California Species of Concern (no formal protection) <u>California Native Plant Society (CNPS) Categories</u> 1B Plant species considered rare or endangered in California and elsewhere (but not legally protected under FESA or CESA) 2 Plant species considered rare or endangered in California but more common elsewhere (but not legally protected under FESA or CESA) Source: EDAW 2004					

Special-Status Plants

Slough Thistle

Slough thistle is an annual or perennial herb that typically grows in chenopod scrub, freshwater marshes and swamps (usually sloughs), or riparian scrub habitats. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable, but poor quality habitat for Slough thistle in comparison to the large slough marshes where populations of this species are known to occur.

Rose-mallow

Rose-mallow is an aquatic, emergent perennial herb. This species grows in freshwater marshes and swamps. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable habitat for this species.

Sanford's Arrowhead

Sanford's arrowhead is a perennial, emergent herb. This species grows in assorted shallow freshwater marshes and swamps. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable habitat for this species.

Delta Tule Pea

Delta tule pea is a perennial herb that grows in freshwater and brackish marshes and swamps. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable habitat for this species.

Wright's Trichocoronis

Wright's trichocoronis is an annual herb that typically grows in moist, alkaline habitats including meadows and seeps, marshes and swamps, riparian scrub and vernal pools. The freshwater marsh habitat within the irrigation ditches on the project site provides potentially suitable habitat for this species.

Special-Status Wildlife

Swainson's Hawk

Swainson's hawks typically nest in riparian habitats or isolated trees bordered by suitable foraging habitat (i.e., grasslands and agricultural fields). Agricultural fields provide important foraging habitat for Swainson's hawks. Alfalfa, fallow fields, dry and irrigated pastures, and other low-growing row crops are preferred foraging habitats. Swainson's hawk could nest in the large trees located at the residential properties within and adjacent to the project site, as well as in trees along the irrigation control ditch adjacent to the project site. The alfalfa and other agricultural fields on the project site provide potential Swainson's hawk foraging habitat. No Swainson's hawks or nests were observed on the project site during EDAW's September 2004 reconnaissance survey. However, according to the Monk & Associates report, Swainson's hawks were observed flying over the project site during August 2003 surveys.

Burrowing Owl

Burrowing owl habitat is characterized by low-growing vegetation and may include annual and perennial grasslands and arid scrublands. Burrows are the essential component of burrowing owl habitat. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels or pocket gophers, but may also use artificial structures such as cement culverts; cement, asphalt, or wood debris piles; or openings beneath cement or asphalt pavement. Burrowing owls and their nests are protected under Section 3503.5 of the California Fish and Game Code. The project site includes potential nesting and foraging habitat for burrowing owl. Potential nesting habitat for burrowing owl occurs in the project site along the two main irrigation ditches and along the berm for the water storage basin. Several small rodent burrows were observed along the banks of the irrigation ditches during the September 2004

EDAW survey and along the berm of the water storage basin during the August 2003 Monk & Associates survey. No burrowing owls or sign of active burrowing owl burrows were observed during surveys.

Other Raptors

All raptors are protected under Section 3503.5 of the California Fish and Game Code, which prohibits take or destruction of raptors, including their nests and eggs. Raptors that occur or could occur on the project site include white-tailed kite (*Elanus leucurus*), red-tailed hawk (*Buteo jamaicensis*), and American kestrel (*Falco sparverius*). Large trees located on and adjacent to the project site provide suitable nesting habitat for raptors. Red-tailed hawks, white-tailed kites, and American kestrels were observed foraging over alfalfa fields in the project site by Monk & Associates during the August 2003 surveys.

Sensitive Habitats

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, and/or Section 404 of the Clean Water Act. The freshwater marsh habitat within the irrigation ditches on the project site could be considered sensitive habitat by regulatory agencies and protected under the County General Plan and Development Title 9-1505. Oak trees could be eligible for protection under the County General Plan and Development Title 9-1505, as well as the City Municipal Code § 17.61.030 and 17.19.060. The U.S. Army Corps of Engineers (USACE) may take jurisdiction over the agricultural ditches on the project site, even though they appear to have been excavated in uplands and do not appear to correspond to former natural drainages.

4.5.2 REGULATORY SETTING

Biological resources in California are protected and/or regulated by a variety of federal and state laws and policies. In addition, in many parts of California, there are local or regional habitat and species conservation planning efforts in which a project applicant may participate. Key regulatory and conservation planning issues applicable to the project are discussed below.

SECTION 404 OF THE CLEAN WATER ACT

Section 404 of CWA establishes a requirement for a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into “waters of the United States,” including wetlands. Waters of the United States include navigable waters of the United States, interstate waters, all other waters where the use or degradation or destruction of the waters could affect interstate or foreign commerce, tributaries to any of these waters, and wetlands that meet any of these criteria or that are adjacent to any of these waters or their tributaries. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Jurisdictional wetlands must meet three wetland delineation criteria:

hydrophytic vegetation, hydric soil types, and wetland hydrology. Many surface waters and wetlands in California meet the criteria for waters of the United States, including intermittent streams and seasonal lakes and wetlands.

Under Section 404 of the CWA, the USACE regulates and issues permits for activities that involve the discharge of dredged or fill materials into waters of the United States. Fills of less than ½ acre of nontidal waters of the United States for residential, commercial, or institutional development projects can generally be authorized under the USACE's nationwide permit (NWP) program, provided the project satisfies the terms and conditions of the particular NWP. Fills that do not qualify for a NWP require a letter of permission or an individual permit.

Pursuant to the federal Endangered Species Act, (federal ESA), the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service under the National Oceanic Atmospheric Administration (NOAA Fisheries) have authority over projects that may result in take of federally listed species. Under the federal ESA, the definition of take includes killing, harming, or harassing. USFWS has also interpreted the definition of harm to include significant habitat modification. If the project may affect a federally listed species, either an incidental "take" permit under Section 10(a) of the federal ESA, or federal interagency consultation, under Section 7 of the ESA, is required.

CALIFORNIA ENDANGERED SPECIES ACT

Pursuant to the California Endangered Species Act (CESA) and Section 2081 of the California Fish and Game Code, a permit from DFG is required for projects that could result in the take of a state-listed threatened or endangered species (i.e., species listed under CESA), except that plants may be taken without a permit pursuant to the terms of the California Native Plant Protection Act (Fish and Game Code, Section 1900 et seq.). Under CESA, the definition of "take" is understood to apply to an activity that would directly or indirectly kill an individual of a species, but the definition does not include "harm" or "harass," as the federal ESA does. As a result, the threshold for take under the CESA is typically higher than that under the federal ESA.

SECTION 1602 OF THE CALIFORNIA FISH AND GAME CODE

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by DFG under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by DFG, or use any material from the streambeds, without first notifying DFG of such activity. "Stream" is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation. DFG's jurisdiction within altered or artificial waterways is based on the value of those waterways to

fish and wildlife. A DFG Streambed Alteration Agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

SECTION 401 WATER QUALITY CERTIFICATION

Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredge or fill activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine regional boards. Each of the nine Regional Water Quality Control Boards must prepare and periodically update basin plans for water quality control in accordance with the Porter-Cologne Act. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. Under the Porter-Cologne Act, wetlands and drainages that are considered waters of the United States by USACE are often classified as waters of the state as well.

CALIFORNIA FISH AND GAME CODE SECTION 3503.5 (PROTECTION OF RAPTORS)

Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active raptor nests as a result of tree removal and failure of nesting attempts, resulting in loss of eggs and/or young, because of disturbance of nesting pairs by nearby human activity.

SAN JOAQUIN COUNTY MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) provides a strategy for balancing the desires to conserve open space, maintain the agricultural economy, and allow development in San Joaquin County. It was developed to avoid, minimize, and mitigate impacts on plant and wildlife habitat projected to occur in San Joaquin County between 2001 and 2051, resulting from the anticipated conversion of as much as 109,300 acres of open space land to non-open space uses (San Joaquin County 2000). Ninety-seven species are covered by the SJMSCP, which is intended to provide comprehensive mitigation, in accordance with local, state, and federal regulations, for impacts on these species from SJMSCP-permitted activities. USFWS and DFG participated in development of the SJMSCP, approved the mitigation, and agreed to issue incidental take permits for species and activities covered by the SJMSCP. Therefore, participation in the SJMSCP confers authorization for activities that result in (or may result in) incidental take of covered state-listed or federally listed species, as well as other covered but non-listed sensitive species, that may otherwise require a federal or state incidental take authorization.

The approach of the SJMSCP is to minimize the potential for take through implementation of take avoidance and minimization measures and compensation for incidental take and habitat

conversion through payment of fees (or in-lieu land dedication) for conversion of open space lands. These fees shall be used to preserve and create natural habitats to be managed in perpetuity through the establishment of habitat preserves.

Participation in the SJMSCP is voluntary for local jurisdictions and project proponents. The City of Manteca adopted the SJMSCP on February 5, 2001, and has signed the implementation agreement. As a result, a Section 10(a)(1)(B) permit was issued by USFWS to the City of Manteca. This Section 10 permit also constitutes a special purpose permit for species covered by the federal Migratory Bird Treaty Act (MBTA). A Section 2081 permit was also issued by DFG to the City of Manteca. As a result of the City of Manteca's participation in the SJMSCP and issuance of these permits, project proponents within the City of Manteca's jurisdiction have the opportunity to seek coverage under the SJMSCP.

The project proponent is committed to obtaining coverage under the SJMSCP to mitigate for project impacts and obtain incidental take authorization for SJMSCP-covered species under the City of Manteca's Section 10(a) and Section 2081 permits. The Section 10(a) permit also serves as a special-purpose permit for the incidental take of those species that are also covered under the MBTA. Coverage under the SJMSCP would fully mitigate all impacts on special-status species addressed in this section, with the exception of Sanford's arrowhead, slough thistle, rose-mallow, Delta tule-pea and Wright's trichocoronis. Impacts on sensitive habitats (waters of the United States) and protected trees are not covered by the SJMSCP.

Compensation for significant impacts on all SJMSCP-covered species would be accomplished through payment of development fees for conversion of open space lands that may provide habitat for these species. These fees would be used to preserve and/or create habitat in preserves to be managed in perpetuity. Development fees would be paid to the San Joaquin Council of Governments (SJCOG) in the amount specified by SJCOG, which administers the SJMCSP. Development fees for the SJMSCP are continually being revised, therefore a specified amount cannot be provided at this time. In addition, incidental take avoidance and minimization measures for species that could be significantly affected as a result of the project would be implemented, as determined by the SJCOG, and in accordance with requirements of the SJMSCP.

SAN JOAQUIN COUNTY GENERAL PLAN AND DEVELOPMENT TITLE 9-1505

The San Joaquin County General Plan 2010 (County General Plan) includes two primary objectives related to terrestrial biology:

- ▶ Protect and improve the County's vegetation, fish, and wildlife resources; and
- ▶ Provide undeveloped open space for nature study, protection of endangered species, and preservation of wildlife habitat.
- ▶ Specific Resource Protection and Management policies outlined in the County General Plan that are relevant to implementation of this project include the following:

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.
2. Development in the vicinity of significant oak groves shall be designed and sited to maximize the long-term preservation of the trees and the integrity of their natural setting.
5. No net loss of riparian or wetland habitat or values shall be caused by development.
7. The County shall support feeding areas and winter habitat for migratory waterfowl.
8. Strips of land along waterways shall be protected for nesting and foraging habitat and for protection of waterway quality.

In addition, San Joaquin County Development Title 9-1505 includes specific policies designed to preserve riparian vegetation and native and heritage oak trees. Among these are restrictions on removal of historical and heritage trees and mitigation requirements for removal of protected trees and riparian vegetation.

SAN JOAQUIN COUNTY TREE ORDINANCE

San Joaquin County Development Title 9-1505 includes specific policies designed to preserve riparian vegetation and native and heritage oak trees. Among these are restrictions on removal of historical and heritage trees and mitigation requirements for removal of protected trees and riparian vegetation. Tree protection under Title 9-1505 prohibits construction activities that would change grades within 6 feet of the tree trunk of heritage, historical, or native oak trees. No more than 6 inches of soil may be added or removed within the 6-foot buffer. A 5-foot chain link fence must be installed around the driplines of protected trees and no grading, trenching, or equipment storage may occur within the fenced areas. Paving within the driplines of trees should be minimized and only porous materials should be used. Title 9-1505 also requires approval of an Improvement Plan application before the removal of any native oak. Native oaks must be replaced at a ratio of 3 to 1 and plantings must be monitored for 3 years. Heritage oaks may only be removed if it is in the public interest and must be replaced at a ratio of 5 to 1 with monitoring for 3 years. A performance bond is required.

CITY OF MANTECA GENERAL PLAN

The following Biological Resources policies, identified in the Resource Conservation Element of the City of Manteca General Plan (City General Plan), are relevant to this project:

Policy RC-P-31: Minimize impact of new development on native vegetation and wildlife.

Policy RC-P-33: Discourage the premature removal of orchard trees in advance of development, and discourage the removal of other existing healthy mature trees, both native and introduced.

Policy RC-P-34: Protect special-status species and other species that are sensitive to human activities.

Policy RC-P-35: Allow contiguous habitat areas.

Policy RC-P-36: Consider the development of new drainage channels planted with native vegetation, which would provide habitat as well as drainage.

CITY OF MANTECA TREE ORDINANCE

Manteca Municipal Code calls for the avoidance of heritage trees. Heritage trees are defined under section 17.61.030 of the code as any natural woody plant rooted in the ground and having a diameter of 30 inches or more when measured 2 feet above the ground. Section 17.19.060 calls for protection of all existing trees having a diameter of 6 inches or more when measured 4½ feet above the ground. The city planning department must be notified of planned construction or grade changes. Existing trees must be protected from construction equipment, grade changes, excavation for utilities, paving, and footers for the proposed structure of walls. Replacement of existing trees is subject to approval from the planning director and must be with a minimum 24-inch box tree of compatible species for the development site. Agricultural and farming orchard areas of 1 acre or more are exempt from section 17.19.060.

Section 12.08.07 of the municipal code prohibits cutting, pruning, removing, injuring or interference with any tree, shrub, or plant, upon or in any street tree area or other public place in the city without prior permission and approval therefore from the superintendent. The superintendent is authorized to grant such permission at his discretion and where necessary. Excepting and with reference to utility companies, as provided in Section 12.08.080, no such permission granted shall be valid for a longer period than thirty days after its issuance. This regulation is pertinent to trees within the proposed sewer line route along Airport Way.

4.5.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

Information obtained from biological studies previously conducted in the vicinity of the project site (Monk & Associates report, Draft EIR for the Central Lathrop Specific Plan, and SJMSCP), field and reconnaissance-level surveys conducted for the project area, reviews of aerial photographs, CNDDDB records, and CNPS database records were used to assess impacts on biological resources resulting from implementation of the project.

THRESHOLDS OF SIGNIFICANCE

Implementation of the project would have a significant impact if it were to result in:

- ▶ a substantial adverse effect (either directly or through habitat modifications) on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by DFG or USFWS;
- ▶ a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by DFG or USFWS;
- ▶ a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, or coastal) through direct removal, filling, hydrological interruption, or other means;
- ▶ substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impediment to the use of native wildlife nursery sites;
- ▶ a conflict with any federal, state or local plans, policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- ▶ a conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

IMPACT ANALYSIS

Impact 4.5-1

Impacts on Common Plants and Wildlife. *Implementation of the project would not substantially reduce available habitat or the population of any common plant or animal. This impact would be **less than significant**.*

No significant natural habitats are present on the project site. Development of the project site to urban land uses would remove approximately 508 acres of agricultural land, which provides habitat for common plant and wildlife species. All of the common species that would be disturbed by project development are regionally common. Although, most of the existing wildlife present on the project site would be displaced, suitable habitat is abundant in the adjacent area. The project would not substantially reduce available habitat or the population of any common plant or animal. This would be a less-than-significant impact.

Impact 4.5-2

Impacts on Special-Status Plants. *Implementation of the project would result in loss and disturbance of freshwater marsh habitat that could support special-status plant species. This would be a **potentially significant** impact.*

Sanford's arrowhead, slough thistle, rose-mallow, Delta tule-pea and Wright's trichocoronis could be present in the freshwater marsh habitat within the two irrigation ditches on the

project site. No special-status plant occurrences have been reported in the project area, and these species were not observed during the reconnaissance-level survey or past surveys in the area. However, the potential for their occurrence on the project site cannot be dismissed, because protocol-level surveys have not been conducted and suitable habitat is present. Approximately 1 acre of suitable habitat for special-status plants could be lost as a result of removal of agricultural ditches. The potential loss of special-status plants as a result of project implementation would be a significant impact.

**Impact
4.5-3**

Impacts on Swainson’s Hawk. *Implementation of the project would result in loss of potential foraging habitat for Swainson’s hawk and could affect nesting Swainson’s hawks. This would be a **significant** impact.*

No Swainson’s hawks were observed nesting on the project site during reconnaissance surveys and there are no CNDDDB records of active nests on the project site. However, suitable nesting trees occur on and immediately adjacent to the project site. Active agricultural fields such as alfalfa; beet, tomato and other low growing row crops; and cereal grains (including corn after harvest) are considered high quality foraging habitat for Swainson’s hawk (DFG 1994). Alfalfa and harvested corn fields were observed on the project site during reconnaissance surveys. The loss or disturbance of active Swainson’s hawk nests and known nest trees and the loss of suitable foraging habitat as a result of project implementation would be significant impacts.

**Impact
4.5-4**

Impacts on Western Burrowing Owl. *Implementation of the project could result in loss of active burrows and disturbance of nesting owls. This would be a **potentially significant** impact.*

Potential nesting habitat for western burrowing owl exists in small rodent burrows located along the main drainage ditches and along the berm surrounding the water storage basin. No burrowing owls and no active owl burrows were observed at the project site during reconnaissance surveys. Additionally, no CNDDDB records for active burrowing owl burrows occur in the project site. Although no burrowing owls or active burrows occur in the project site, active burrows could become established before commencement of the project. Implementation of the project could result in disturbance of nesting owls or destruction of active burrows. This would be a potentially significant impact.

**Impact
4.5-5**

Impacts on Nesting Raptors. *Implementation of the project could result in loss of active nests and disturbance of nesting raptors. This would be a **potentially significant** impact.*

Potential nesting habitat for raptors including red-tailed hawk, American kestrel and white-tailed kite exists in the form of large trees in and adjacent to the project site. No active raptor nests were observed in suitable nesting trees during reconnaissance surveys. Additionally, no CNDDDB records for active nesting raptors occur in the project site. Although no red-tailed hawks, American kestrels or white-tailed kites were observed nesting in the project site, active nests could become established before commencement of the project. Implementation of the

project could result in disturbance of nesting raptors or destruction of active nests. This would be a potentially significant impact.

Impact
4.5-6

Impacts on Protected and Heritage Trees. *Implementation of the project would result in loss and disturbance of heritage trees, native oaks, and other existing trees that are protected by local ordinances. This would be a **significant** impact.*

Implementation of the project would result in the disturbance or removal of mature native and/or non-native trees and heritage trees on or adjacent to the project site and along the proposed sewer line alignment. These trees are protected under the San Joaquin County Code and the Manteca Municipal Code. Disturbance or removal of protected trees would be a significant impact.

Impact
4.5-7

Impacts to Sensitive Habitats. *Implementation of the project could result in fill or reconfiguration of up to approximately 1.29 acres of freshwater marsh habitat associated with the irrigation ditches traversing the project site. This would be a **significant** impact.*

Approximately 1.29 acres of irrigation ditches supporting freshwater marsh vegetation could be converted or filled as a result of project implementation. Freshwater marsh is considered a sensitive habitat type under Section 1602 of the Fish and Game Code of California and the irrigation ditches are potentially subject to USACE jurisdiction under Section 404 of the CWA. Conversion and/or fill of waters of the United States and disturbance or removal of freshwater marsh habitat would be a significant impact.

Impact
4.5-8

Impacts to Wildlife Movement. *Implementation of the project would not substantially impede wildlife movement or the use of important nursery sites as the project site does not link any areas of open space that serve as important wildlife habitat. This would be a **less-than-significant** impact.*

The project site is surrounded by urban and agricultural development and does not link any areas of open space that serve as important wildlife habitat. No migratory terrestrial wildlife species or animals requiring large territories inhabit the site. Implementation of the project would not substantially impede wildlife movement or the use of important nursery sites. This would be a less-than-significant impact.

Impact
4.5-9

Consistency with Federal, State, and Local Plans, Policies, and Ordinances. *Implementation of the project would not conflict or be inconsistent with adopted federal, state, or local policies that protect sensitive resources. This would be a **less-than-significant** impact.*

There are a number of federal, state and local policies and ordinances that protect biological resources in the vicinity of the project site, the majority of which are generally only applicable to *sensitive* biological resources. Sensitive biological resources include special-status plants and wildlife, sensitive natural communities, and waters of the United States. Although the project has the potential to affect special-status species and waters of the United States, these impacts would be addressed and mitigated accordingly with federal, state and local policies (i.e., CESA,

CWA Sections 404 and 401, California Fish and Game Code Sections 1602 and 3503.5, San Joaquin General Plan, City of Manteca General Plan). Additionally, San Joaquin County and the City of Manteca have adopted a Tree Preservation Ordinance. The project could involve the removal of several trees that are designated as protected and heritage trees. However, impacts to the protected and heritage trees would be addressed and mitigated in accordance with the guidelines in the Tree Preservation Ordinance (see Impact 4.5-6). As a result, implementation of the project would not conflict or be inconsistent with any such policies. This would be a less-than-significant impact.

**Impact
4.5-10**

Consistency with Adopted Habitat Conservation Plan, Natural Community Conservation Plan or Other Approved Conservation Plan. *Implementation of the project would not conflict with or be inconsistent with the adopted San Joaquin Multi-Species Conservation Plan. This would be a **less-than-significant** impact.*

The project site is located within the SJMSCP area. The special-status species potentially affected by the project are covered in the SJMSCP. The City of Manteca adopted the SJMSCP on February 5, 2001. The project proponent would work with the City of Manteca to ensure that the project is consistent with the provisions outlined in the SJMSCP. This would be a less-than-significant impact.

4.5.4 MITIGATION MEASURES

No mitigation measures are necessary for the following less-than-significant impacts:

Impact 4.5-1: Impacts on Common Plants and Wildlife.

Impact 4.5-8: Impacts on Wildlife Movement.

Impact 4.5-9: Consistency with Federal, State, and Local Plans, Policies and Ordinances.

Impact 4.5-10: Consistency with adopted Habitat Conservation Plan, Natural Community Conservation Plan, etc.

The following mitigation measures are provided for significant and potentially significant impacts.

4.5-2: Impacts on Special Status Plants.

- (1) The project applicant shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the URSP.
- (2) Potentially suitable habitat for special-status plant species that would be affected by implementation of the URSP is currently present in the irrigation ditches in the project site. During the SJMSCP application process, SJCOG will determine whether the project site supports suitable habitat for special-status plant species. If SJCOG determines suitable habitat is present on or adjacent to the project site, the following SJMSCP incidental take avoidance and minimization measures for special-status plant species shall be implemented:

(a) Before project construction, surveys for the special-status plants listed in Table 4.5-1 shall be conducted by a qualified botanist at the appropriate time of year when the target species would be in flower or otherwise clearly identifiable. Surveys shall be conducted in accordance with specific methodologies described in Section 5.2.2.5 of the SJMSCP. If special-status plants are found, the following measures shall be implemented:

- ▶ Sanford's arrowhead and slough thistle: The SJMSCP requires complete avoidance for these species; therefore, potential impacts on these species could not be covered through participation in the plan. If these species are present in the project area and cannot be avoided, a mitigation plan shall be developed, with review and input from the regulatory agencies (e.g., DFG). The mitigation plan shall identify mitigation measures for any populations affected by the project, such as creation of off-site populations through seed collection or transplanting, preserving and enhancing existing populations, or restoring or creating suitable habitat in sufficient quantities to compensate for the impact. All mitigation measures that the City determines through this consultation to be necessary shall be implemented by the project proponent. These measures shall be designed to ensure that the project does not result in a net reduction in the population size or range of Sanford's arrowhead and slough thistle.
- ▶ Rose mallow and Delta tule pea: These species are considered widely distributed species by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If these species are found in the project area, the possibility of establishing a conservation easement shall be evaluated. If dedication of a conservation easement is not a feasible option, payment of SJMSCP development fees may be used to mitigate impacts on these species. Use of conservation easements or development fees for establishment of habitat preserves, or a combination of the two mechanisms, shall be sufficient to avoid an overall net reduction in the population size or range of rose-mallow and Delta tule-pea.
- ▶ Wright's trichocoronis: This species is considered narrowly distributed by the SJMSCP, and dedication of conservation easements is the preferred option for mitigation. If this species is found in the project area, the possibility of establishing a conservation easement shall be evaluated. If dedication of a conservation easement is not an option, the SJMSCP requires a consultation with the permitting agency representatives on the Technical Advisory Committee to determine the appropriate mitigation measures. These may include seed collection or other measures and would be determined on a population basis, taking into account the species type, relative health, and abundance. After the appropriate mitigation has been determined, it shall be implemented by the project proponent.

4.5-3: Impacts on Swainson's Hawk.

- (1) The project applicant shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the URSP.
- (2) Potentially suitable nesting habitat for Swainson's hawk that would be affected by implementation of the URSP is currently present in large suitable nesting trees in the project site. During the SJMSCP application process, SJCOG will determine whether the project site supports suitable nesting habitat for Swainson's hawk. If SJCOG determines suitable habitat is present on or adjacent to the project site, the following SJMSCP incidental take avoidance and minimization measures for Swainson's hawk shall be implemented:
 - (a) If the project proponent elects to remove nest trees, then nest trees shall be removed between September 1 and February 15, when the nests are unoccupied.
 - (b) If the project proponent elects to retain a tree with an active nest or a nest becomes established in a suitable nest tree during the construction period, a setback shall be established that excludes all construction activities within a distance of two times the dripline of the tree, measured from the nest. This setback shall be maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave the nest. Setbacks shall be marked by brightly colored temporary fencing or other obvious markers.

4.5-4: Impacts on Burrowing Owl.

- (1) The project applicant shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the URSP.
- (2) Potentially suitable nesting habitat for burrowing owl that would be affected by implementation of the URSP is currently present along the sandy banks of the irrigation ditches and along the dirt berm at the water storage basin in the project site. During the SJMSCP application process, SJCOG will determine whether the project site supports suitable nesting habitat for burrowing owl. If SJCOG determines suitable habitat is present on or adjacent to the project site, the following SJMSCP incidental take avoidance and minimization measures for burrowing owl shall be implemented:
 - (a) Burrowing owls may be discouraged from entering or occupying construction areas by discouraging the presence of ground squirrels. To accomplish this, the project proponent could prevent ground squirrels from occupying the project site by employing one of several methods outlined in Section 5.2.4.15 of the SJMSCP. These include retention of tall vegetation, regular discing of the site, or use of chemicals or traps to kill ground squirrels.

(b) Preconstruction surveys for burrowing owls shall be conducted within 75 meters of areas of project activity in locations with potential burrow habitat, including field edges, roadsides, levees, and fallow fields. Actively farmed agricultural fields and regularly discing or graded fields do not provide suitable burrow sites and need not be surveyed. The survey shall be conducted within 1 week before the beginning of construction. If burrowing owls are found, the following measures shall be implemented:

- ▶ During the nonbreeding season (September 1 through January 31), burrowing owls occupying the project site shall be evicted from the project site by passive relocation as described in the DFG's Staff Report on Burrowing Owls (DFG 1995).
- ▶ During the breeding season (February 1 through August 31), occupied burrows shall not be disturbed and shall be provided with a 75-meter protective buffer until and unless the Technical Advisory Committee, with the concurrence of the permitting agencies' representatives on the Technical Advisory Committee, or a qualified biologist approved by the permitting agencies, verifies through noninvasive means that either (1) the birds have not begun egg laying or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. After the fledglings are capable of independent survival, the burrow can be destroyed.

4.5-5: Impacts on Nesting Raptors.

- (1) The project applicant shall request coverage under the SJMSCP and fees shall be paid in the amount determined by SJCOG during the application and review process for the URSP.
- (2) Potentially suitable nesting habitat for common raptors that would be affected by implementation of the URSP is currently present in large suitable nesting trees in the project site. During the SJMSCP application process, SJCOG will determine whether that specific project site supports suitable nesting habitat for common raptors. If SJCOG determines suitable habitat is present on or adjacent to the project site, the following SJMSCP incidental take avoidance and minimization measures for common raptors shall be implemented:
 - (a) If project activity would occur during the raptor nesting season (February 15 through September 15), preconstruction surveys shall be conducted during the nesting season in suitable nesting habitat within 100 feet of areas of project activity. Large trees throughout the project area provide suitable habitat. The survey shall be conducted within 1 week before the beginning of construction or tree removal.
 - (b) A setback of 100 feet from active nesting areas shall be established and maintained during the nesting season for the period encompassing nest building and continuing until fledglings leave nests. This setback applies whenever construction or other ground-disturbing activities must begin during the nesting season in the presence of

nests that are known to be occupied. Setbacks shall be marked by brightly colored temporary fencing.

4.5-6: Impacts on Sensitive Natural Habitats.

- (1) Before project implementation, a delineation of waters of the United States, including wetlands, that would be affected by the project shall be made by qualified biologists through the formal Section 404 wetland delineation process. The delineation shall be submitted to and verified by USACE.
- (2) If, based on the verified delineation, it is determined that fill of waters of the United States would result from implementation of the project, authorization for such fill shall be secured from USACE through the Section 404 permitting process.
- (3) The project proponent shall also consult with DFG to determine whether a Section 1602 Streambed Alteration Agreement may be required for alteration of irrigation ditches and impacts to freshwater marsh habitat.
- (4) The acreage of waters of the United States and freshwater marsh habitat that would be removed shall be replaced or restored/enhanced on a “no net loss” basis in accordance with USACE and DFG regulations and Development Title 9-1505. Habitat restoration, enhancement, and/or replacement shall be at a location and by methods agreeable to USACE and DFG, as determined during the permitting processes for CWA Section 404 and California Fish and Game Code Section 1602.

4.5-7: Impacts on Protected and Heritage Trees.

- (1) Before project implementation, a tree survey shall be conducted by an arborist certified by the International Society of Arboriculture (ISA) to enumerate and evaluate all trees on the site that meet the standards in the City or County Codes.
- (2) All trees that meet the following criteria shall be avoided by construction and protected during all construction activity:
 - ▶ Native Oak Trees with a trunk at least 6 inches in diameter at a height of 4.5 feet above the ground.
 - ▶ Heritage trees (all trees with a trunk diameter of 30 inches at a height of 2 feet above the ground).
- (3) Trees that are subject to protection but must be removed as a result of project implementation shall be replaced with in-kind species in accordance with tree planting specifications established by City and County tree ordinances. Native oak trees shall be replaced at a ratio of 3 to 1 and heritage trees shall be replaced at a ratio of 5 to 1.

- (4) Replacement tree plantings shall be monitored for 3 years in accordance with monitoring protocols set forth in the City and County tree ordinances.
- (5) If monitoring indicates that replacement plantings are not meeting performance standards, remedial measures shall be implemented. Appropriate measures shall be determined in coordination with the City and County.

4.5.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

Incorporation and implementation of the mitigation measures specified in the SJMSCP (and summarized in this Draft EIR) for Impacts 4.5-2 through 4.5-5; and incorporation and implementation of the mitigation measures outlined for Impacts 4.5-6 and 4.5-7, would result in no loss of individuals of special-status species, sensitive natural communities or other sensitive natural resources. The significance of these impacts would be reduced to a less-than-significant level.

4.6 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential hazardous material and public health impacts from implementation of the URSP project. The analysis presented in this section is based on review of the Phase I environmental site assessments (ESA) prepared for the project site by Kleinfelder in February 2002 and September 2003.

4.6.1 ENVIRONMENTAL SETTING

The project site is not located within ¼ mile of an existing or proposed school, nor is the site within an airport land use plan or within 2 miles of a public or private airport, both potential issues of consideration in an EIR. These issues are not evaluated further in this Draft EIR. The project's potential effect on emergency access routes and plans is discussed in Section 4.11, Transportation and Circulation.

Properties within the project site have multiple owners. The project site is used primarily for agricultural and farming operations, and includes numerous dwellings, barns, storage buildings, equipment and maintenance buildings, and other structures associated with existing farming operations. Phase I ESAs were prepared by Kleinfelder in February 2002 and September 2003 for the URSP site (copies of these reports are available for review at the City of Manteca Community development Department, 1001 Center Street, Manteca, CA). The purpose of the Phase I ESAs was to document recognized environmental conditions (RECs) on the property related to current and historical uses of the area and to evaluate the potential for release of hazardous materials from onsite or offsite sources that could significantly affect environmental conditions at the project site. The site reconnaissance and records search conducted for the Phase I ESAs did not find documentation of RECs in soil or groundwater associated with the historical use of the property (Kleinfelder 2002 and 2003).

EDAW searched the EPA's Envirofacts website and the State Water Resources Control Board's (SWRCB) Geotrack website to confirm and update information presented in these ESAs. The Envirofacts website presents information from several regulatory agencies and databases, including those for the EPA, Department of Toxic Substances Control (DTSC), and Office of Emergency Services (OES). According to these websites, the project site is not listed in any of the regulatory databases (EPA 2004). No sites within ¼ mile of the project site have the potential to create a hazardous condition on the project site or in groundwater beneath the site (EPA 2004). Therefore, this issue is not addressed further in this Draft EIR.

SOIL/GROUNDWATER

Based on the results of the Phase I reports, agricultural use of the project site could have resulted in elevated pesticide concentrations in onsite soils. In addition, dairy operations on several properties could have resulted in contamination of onsite soils with fecal coliform and bacteria from animal wastes. The Phase I report recommended that soil samples and testing be conducted to determine the concentrations of contaminants in onsite soils (Kleinfelder 2002 and 2003).

SEPTIC TANKS AND LEACH FIELDS

Septic tanks and leach fields currently provide wastewater treatment for residential areas on the project site. The Phase I ESAs recommended that all septic tanks be abandoned in accordance with local, state, and federal regulations.

ASBESTOS

Many of the onsite structures, including residences, barns, and sheds, were built before the 1980s and may have building materials containing asbestos. The Phase I reports recommended that an asbestos survey be performed on these structures by a certified California Occupational Safety and Health Administration (Cal-OSHA) inspector before any demolition activities (Kleinfelder 2002 and 2003).

No "Transite"-like piping was observed on the project site. However, properties with a history of agricultural uses, such as the project site, have been known to use underground Transite piping, which often contained asbestos. The Phase I ESAs recommend that in the event that Transite piping is encountered during site excavation and development that these pipelines should be removed, transported, and disposed of in accordance with local, state, and federal laws and regulations.

LEAD PAINT

The use of lead as an additive to paint was discontinued in 1978. Many of the onsite structures, including residences, barns, and sheds, were built before the 1980s and may contain lead-based paints. The Phase I reports recommended that a lead based paint survey be performed on these structures by a certified Cal-OSHA inspector before any demolition activities (Kleinfelder 2002 and 2003).

PCBS

Several pole-mounted transformers were observed on the southern edge project site, on the east and west sides of Union Road, and in the central portion of the site. Pole-mounted transformers may contain polychlorinated biphenyls (PCBs). The transformers were observed to be in good condition and there was no apparent leaking (Kleinfelder 2002 and 2003). The transformers are served by Pacific Gas and Electric (PG&E), which would be responsible for their removal.

PETROLEUM HYDROCARBONS

Two underground storage tanks were removed from Assessor's Parcel Number (APN) 204-100-25 in the southeastern portion of the southwestern corner of the project site along Union Road in 1983 under supervision of the Manteca Fire Department. According to the Phase I ESAs, the property owner indicated that the tanks appeared to be in good condition, and no evidence of leakage was reported.

A total of 8 aboveground storage tanks (ASTs) are located at the project site:

- ▶ one of unspecified size near the western wall of APN 204-100-26 in the southeastern portion of the southwestern corner of the project site at the intersection of Union Road and Lathrop Road;
- ▶ one 100–150-gallon tank on APN 197-020-14 in the southeastern portion of the project site along Union Road;
- ▶ two 500–750-gallon tanks along the southern edge of APN 204-100-25 in the southeastern portion of the southwestern corner of the project site along Union Road;
- ▶ three 10,000-gallon tanks along the western edge of APN 204-100-25 in the southeastern portion of the southwestern corner of the project site along Union Road; and
- ▶ one 10,000 gallon tank along the western edge of APN 197-020-18 east of APN 197-020-38 in the northeastern corner of the project site, east of Union Road and bound to the southwest by APN 197-020-38.

All ASTs appeared to be in good condition and showed no signs of leakage or staining (Kleinfelder 2002 and 2003).

In addition, numerous empty and partially filled 5- and 55-gallon drums, and various areas with soil stains, were noted on the project site. These areas could potentially contain petroleum-type products, and the Phase I ESAs recommended that these drums and areas of staining should be further characterized.

4.6.2 REGULATORY SETTING

Hazardous materials handling is subject to numerous laws and regulations at all levels of government. Table 4.6-1 lists the authority of federal and state regulatory agencies that oversee hazardous materials handling and management. A summary of the most pertinent regulations is provided below.

Table 4.6-1		
Summary of Hazardous Materials Regulatory Authority		
Regulatory Agency	Jurisdiction	Authority
Federal		
Environmental Protection Agency (EPA)	Federal	Federal Water Pollution Control Act Clean Air Act Resource Conservation & Recovery Act Federal Emergency Planning and Community Right to Know Act (EPCRA) Comprehensive Environmental Response, Compensation & Liability Act Superfund Amendments & Reauthorization Act Federal Insecticide, Fungicide & Rodenticide Act

Table 4.6-1 Summary of Hazardous Materials Regulatory Authority		
Regulatory Agency	Jurisdiction	Authority
Department of Transportation (DOT)	Federal	Hazardous Materials Transportation Act
Occupation Safety and Health Administration (OSHA)	Federal	Occupational Safety & Health Act
State		
Department of Toxic Substances Control (DTSC)	Statewide	Health and Safety Code CCR Titles 17, 19, & 22
Department of Industrial Relations (Cal-OSHA)	Statewide	California Occupational Safety & Health Act
Department of Transportation (Caltrans)	Statewide	Hazardous materials transportation
Public Utilities Commission (PUC)	Statewide	Natural gas pipelines; General Order No. 112-D
Office of Emergency Services (OES)	Statewide	Hazardous Materials Release/Response Plans Acutely Hazardous Materials Law
State Fire Marshall	Statewide	Uniform Fire Code, CCR Title 19 Hazardous liquid pipelines
Health & Welfare Agency	Statewide	Safe Drinking Water & Toxic Enforcement Act
Integrated Waste Management Board	Statewide	AB 939
State Water Resources Control Board (SWRCB)	Statewide	Porter-Cologne Water Quality Control Act CCR Title 23
San Francisco Bay Regional Water Quality Control Board (RWQCB)	Regional	Underground Storage Tanks NPDES permit requirements
Bay Area Air Quality Management District (BAAQMD)	Regional	California Clean Air Act, BAAQMD Regulations
Local		
San Joaquin County Environmental Health Department	County	Hazardous materials disclosure Underground storage tanks Contaminated sites cleanup CCR Title 22 CEQA implementation
County Agricultural Commissioner	County	Agricultural chemicals regulation
City of Manteca Sewer Utility	Local	Wastewater conveyance
City of Manteca Fire Department	Local	Hazardous materials disclosure Underground storage tanks Emergency response
Sources: EDAW 2004		

HAZARDOUS MATERIALS MANAGEMENT

Federal and state laws require detailed planning to ensure that hazardous materials are properly handled, used, stored and disposed of, and if such materials are accidentally released, to prevent or to mitigate injury to health or the environment. The Federal Emergency

Planning and Community Right to Know Act of 1986 imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.

The California Hazardous Materials Release Response Plans and Inventory Law of 1985 (Business Plan Act) requires preparation of Hazardous Materials Business Plans and disclosure of hazardous materials inventories. A business plan includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures (California Health and Safety Code, Division 20, Chapter 6.95, Article 1). Statewide, DTSC has primary regulatory responsibility for management of hazardous materials, with delegation of authority to local jurisdictions that enter into agreements with the state. Local agencies, including the San Joaquin County Department of Environmental Health (SJCDEH) and the City Manteca Fire Department administer laws and regulations.

Storage of hazardous materials in underground tanks is regulated by the SWRCB, which has overall responsibility for implementing all regulations set forth in the California Code of Regulations (CCR). State standards cover installation and monitoring of new tanks, monitoring of existing tanks, and corrective actions for removed tanks.

WORKER SAFETY

The Cal-OSHA and the Federal Occupational Safety and Health Administration (Fed-OSHA) are the agencies responsible for assuring worker safety in the handling and use of chemicals in the Occupational Safety and Health Act of 1970. Fed-OSHA has adopted numerous regulations pertaining to worker safety, contained in the Code of Federal Regulations Title 29 (29 CFR). These regulations set standards for safe workplaces and work practices, including standards relating to hazardous material handling. Cal-OSHA assumes primary responsibility for developing and enforcing state workplace regulations. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in 29 CFR. Cal-OSHA standards are generally more stringent than federal regulations.

Cal-OSHA regulations pertaining to the use of hazardous materials in the workplace, as detailed in CCR Title 8, include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal-OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that Material Safety Data Sheets (MSDS) be available to employees and that employee information and training programs be documented.

EMERGENCY RESPONSE TO HAZARDOUS MATERIALS INCIDENTS

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local government and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is managed by the State OES, which coordinates the responses of other agencies including the Cal-EPA, the California Highway Patrol (CHP), California Department of Fish and Game, Central Valley Regional Water Quality Control Board (RWQCB), SJCDEH, San Joaquin County Sheriff's Department, and the City of Manteca Fire Department.

HAZARDOUS MATERIALS TRANSPORT

The U.S. Department of Transportation regulates hazardous materials transportation between states. State agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the CHP and the California Department of Transportation (Caltrans). Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads.

HAZARDOUS WASTE MANAGEMENT

The California DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste under the Federal Resource Conservation and Recovery Act and the State Hazardous Waste Control Law. Both laws impose comprehensive regulatory systems for handling hazardous waste in a manner that protects human health and the environment.

SAN JOAQUIN COUNTY GENERAL PLAN

The San Joaquin County General Plan 2010 (County General Plan) does not specifically address the potential for existing hazardous materials at the URSP site, but includes policies regarding the safe use, manufacture, production, transportation, storage, treatment, disposal, and clean-up of hazardous materials and wastes. The following policies under the Hazardous Materials and Wastes section of the County General Plan would apply to the project:

- ▶ 1: Hazardous materials and wastes shall not contaminate air or water resources or soils.
- ▶ 2: The use, storage and disposal of hazardous materials and wastes shall be controlled to prevent harm to individuals.
- ▶ 3: Land uses and structures which contain hazardous materials or wastes which may be a safety hazard for nearby areas shall be located away from existing and planned populated areas.
- ▶ 4: The use of hazardous materials and the creation of hazardous wastes shall be minimized.
- ▶ 5: All development shall be consistent with the County's Waste Management Plans.

CITY OF MANTECA GENERAL PLAN

The City of Manteca General Plan (City General Plan) includes the following goals and policies related to hazards and hazardous materials that are relevant to this analysis:

Policy S-P-15: The City shall maintain an awareness of hazardous materials throughout the Manteca region.

Policy S-P-16: City approvals of all new development shall consider the potential for the production, use, storage, and transport of hazardous materials and provide for reasonable controls on such hazardous materials.

Policy S-P-17: Within its authority, the City shall regulate the production, use, storage, and transport of hazardous materials to protect the health of Manteca residents.

4.6.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

The following reports documenting potential hazardous conditions at the project site were reviewed for this analysis:

- ▶ plans for the project;
- ▶ available literature, including documents published by city, county, state, and federal agencies;
- ▶ applicable elements from the County and City general plans;
- ▶ *Phase I Environmental Site Assessment for Approximate 500-Acre Site* (Kleinfelder 2002); and
- ▶ *Phase I Environmental Site Assessment for Approximate 356-Acre Site* (Kleinfelder 2003)

In addition to reviewing the above reports, EDAW searched the EPA's Envirofacts website (as described above) to confirm information presented in the ESA and to identify any new hazardous material sites in the project area. Project activities were evaluated against the hazardous materials information gathered from the above sources to determine whether any risks to public health and safety or other conflicts would occur.

THRESHOLDS OF SIGNIFICANCE

The project would result in significant hazardous materials impacts if it would:

- ▶ create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment or through the routine transport, use, or disposal of hazardous materials;
- ▶ result in safety hazards to people residing or working in the project area; or

- ▶ expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

IMPACT ANALYSIS

Impact 4.6-1

Create a Safety Hazard to Construction Workers and Residents. *Although no hazardous environmental conditions have been identified to date on the project site, past agricultural and farming operations at the project site could have resulted in contamination of soil and/or groundwater in some locations. Demolition, excavation, and construction activities at the URSP site could result in the exposure of construction workers to hazardous materials, including asbestos, petroleum hydrocarbons, pesticides, herbicides, and fertilizers. Further, the presence of contamination in onsite soils could create a significant environmental or health hazard if left in place. This would be a **potentially significant** impact.*

The Phase I reports identified areas of the project site where past operations could have resulted in elevated concentrations of hazardous constituents (i.e., lead, asbestos, petroleum hydrocarbons, pesticides, herbicides, and fertilizers) in surface soils and potentially groundwater. Further, lead-based paint, asbestos, and poly-chlorinated biphenyls (PCBs) are also likely to be present in onsite buildings and transformers because of their age.

Development of the URSP project would involve site grading, excavation for utilities, backfilling, demolition of existing facilities, and construction of new residences and commercial facilities. During construction activities, construction workers could come in contact with and be exposed to hazardous material present in onsite buildings and soils and groundwater. Further, the presence of contamination in onsite soils could create a significant environmental or health hazard if left in place. Because construction workers could be exposed to hazardous materials present onsite during construction activities and contamination in onsite soils and groundwater could create a significant environmental or health hazard if left in place, this would be a potentially significant impact.

Impact 4.6-2

Create a Significant Hazard to the Public or the Environment. *The project would involve the storage, use, and transport of hazardous materials at the project site during construction activities. In addition, because the project includes commercial uses, it is likely that some facilities (e.g., dry cleaners and gas stations) could use hazardous materials during operation. However, use of hazardous materials at the site would be in compliance with local, state, and federal regulations. Therefore, impacts related to creation of significant hazards to the public through routine transport, storage, use, disposal, and risk of upset would be **less than significant**.*

Development of the project site with residential and commercial uses would involve the storage, use, and transport of hazardous materials (e.g., asphalt, fuel, lubricants, paint) during construction activities. In addition, commercial uses associated with project operation could include facilities, such as gas stations and dry cleaners that could use and routinely transport hazardous material on and off the project site. Transportation of hazardous materials on area roadways is regulated by the CHP and Caltrans, whereas use of these materials is regulated by the DTSC, as outlined in Title 22 of the CCR. The project applicant, builders, contractors,

business owners, and others would be required to use, store, and transport hazardous materials in compliance with local, state, and federal regulations during project construction and operation. Facilities that would use hazardous materials on-site after the project is constructed would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. Because the project would implement and comply with existing hazardous material regulations, impacts related to creation of significant hazards to the public through routine transport, use, disposal, and risk of upset would be unlikely with project development. Therefore, this would be a less-than-significant impact.

Impact
4.6-3

Potential Wildfire Hazard. *The project site is not located in a designated wildland fire area or a High Fire Hazard Severity Zone. Therefore, the project would not expose people or structures to significant risk of loss of injury involving wildland fires. This would be a less-than-significant impact.*

The California Department of Forestry and Fire Protection identify wildland fire areas and Very High Fire Hazard Severity Zones for all counties in California. None of these areas or zones are located in or near the City of Manteca (California Resources Agency 2003). In addition, the southern end of the project site is located immediately adjacent to an established urban area. Therefore, the project would not expose people or structures to significant risk of loss of injury involving wildland fires. This would be a less-than-significant impact.

4.6.4 MITIGATION MEASURES

No mitigation measures are necessary for the following less-than-significant impacts.

- 4.6-2: Create a Significant Hazard to the Public or Environment.
- 4.6-3: Potential Wildfire Hazard.

Mitigation is recommended for the following potentially significant impact:

4.6-1: Create a Safety Hazard for Construction Workers and Residents.

- ▶ To avoid health risks to construction workers, the contractor shall prepare a site Health and Safety Plan. This plan will outline measures that shall be employed to protect construction workers and the public from exposure to hazardous materials during demolition and construction activities. These measures could include, but would not be limited to posting notices, limiting access to the site, air monitoring, watering, and installation of wind fences. Development contractors shall be required to comply with state health and safety standards for all demolition work. If necessary, this shall include compliance with OSHA and Cal-OSHA requirements regarding exposure to asbestos and lead-based paint.
- ▶ Before demolition of any structures associated with past and current farming operations (e.g., buildings, ASTs, propane tanks, etc.), the project applicant shall investigate the extent to which soil and/or groundwater has been contaminated from these past operations. This

investigation shall follow ESA and/or other appropriate testing guidelines and shall include, as necessary, analysis of soil and/or groundwater samples taken at or near the potential contamination sites. If the results indicate that contamination exists at levels above regulatory action standards, then the SJCDEH shall be notified and the site shall be remediated in accordance with recommendations made by SJCDEH, RWQCB, DTSC, or other appropriate federal, state, or local regulatory agencies. The agencies involved would depend on the type and extent of contamination. Remediation activities could include but would not be limited to the excavation of contaminated soil areas and hauling of contaminated soil materials to an appropriate offsite disposal facility, mixing of onsite soils, and capping (i.e., paving or sealing)of contaminated areas.

- ▶ The project contractors shall prepare a site plan that identifies any necessary remediation activities appropriate for proposed land uses, including excavation and removal of onsite contaminated soils, and redistribution of clean fill material on the project site. The plan shall include measures that ensure the safe transport, use, and disposal of contaminated soil and building debris removed from the site. In the event that contaminated groundwater is encountered during site excavation activities, the contractor shall report the contamination to the appropriate regulatory agencies, dewater the excavated area, and treat the contaminated groundwater to remove contaminants before discharge in the sanitary sewer system. The development contractors shall be required to comply with the plan and applicable local, state, and federal laws and the requirements of the City of Manteca for dewatering discharge. The plan shall outline measures for specific handling and reporting procedures for hazardous materials, and disposal of hazardous materials removed from the site at an appropriate offsite disposal facility.

In addition, the following measures shall apply to construction activities as appropriate.

- (1) The SJCDEH shall be notified if evidence of previously undiscovered soil or groundwater contamination (e.g., stained soil, odorous groundwater) is encountered during excavation. Any contaminated areas shall be remediated in accordance with recommendations made by SJCDEH, RWQCB, DTSC, or other appropriate federal, state, or local regulatory agencies as generally described above.
- (2) Before demolition of any onsite buildings, the project applicant shall hire a qualified consultant to investigate whether any of these buildings contain asbestos-containing materials and lead that could become friable or mobile during demolition activities. If found, the asbestos-containing materials and lead shall be removed by an accredited inspector in accordance with EPA and Cal-OSHA standards. In addition, all activities (construction or demolition) in the vicinity of these materials shall comply with Cal-OSHA asbestos and lead worker construction standards. The asbestos-containing materials and lead shall be disposed of properly at an appropriate offsite disposal facility.

4.6.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the mitigation measures identified above, the project's hazards or hazardous materials impacts would be reduced to a less-than-significant level.

4.7 GEOLOGY, SOILS AND SEISMICITY

This section evaluates project-related impacts associated with onsite geology, slope stability, seismic hazards, and soils. A summary of applicable regulations and existing geologic conditions are also provided. Mitigation measures are recommended, as necessary, to reduce significant geological impacts.

4.7.1 ENVIRONMENTAL SETTING

PHYSIOGRAPHIC SETTING

The project area is located at the northern end of the San Joaquin Valley. Together, the San Joaquin Valley and the Sacramento Valley constitute the Great Valley of California. The Great Valley Geomorphic Province is located between the Sierra Nevada Geomorphic Province on the east and the Coast Range Geomorphic Province on the west.

The Great Valley is composed of thousands of feet of sedimentary deposits that have undergone periods of subsidence and uplift over millions of years. During the Jurassic (approximately 206 million years Before Present [B.P.]) and Cretaceous (approximately 144 million years B.P.) periods of the Mesozoic era, the Great Valley existed in the form of an ancient ocean. By the end of the Mesozoic era, the northern portion of the Great Valley began to fill with sediment as tectonic forces caused uplift of the basin. Geologic evidence suggests that the Sacramento Valley and San Joaquin Valley gradually separated into two separate water bodies as uplift and sedimentation continued. By the time of the Miocene epoch (approximately 24 million years ago), sediments deposited in the Sacramento Valley were mostly of terrestrial origin. In contrast, the San Joaquin Valley continued to be inundated with water for another 20 million years, as indicated by marine sediments dated to the late Pliocene epoch (approximately 5 million years ago). Most of the surface of the Great Valley is covered with Recent (Holocene) (less than 10,000 years ago) and Pleistocene [age] alluvium. This alluvium is composed of sediments from mountains of the Sierra Nevada to the east and the Coast Ranges to the west that were carried by water and deposited on the valley floor. Siltstone, claystone, and sandstone are the primary types of sedimentary deposits.

LOCAL GEOLOGY

The project area is located in the U.S. Geological Survey (USGS) Manteca 7.5-Minute Quadrangle and is approximately 553 acres in size. The topography of the site is relatively flat and elevations range from 25 to 30 feet above mean sea level.

According to the Atwater 1982 and Wagner et al. 1987, the only geologic formation exposed at the project site is the Pleistocene-age Modesto Formation, which varies from unconsolidated, unweathered, coarse sand and sandy silt (upper member) to consolidated, slightly weathered, well-sorted silt and fine sand, silty sand, and sandy silt (lower member).

The project site is located immediately north of the Manteca city limits approximately 3.5 miles east of the San Joaquin River, on an ancient floodplain of the Stanislaus River. Most of the

sedimentary deposits in the project vicinity accumulated in a marine environment during alternating cycles of deposition and erosion over many thousands of years. Fluctuations of glacial meltwaters in the Sierra Nevada account for the deposition of alluvial-fan deposits in the northern San Joaquin Valley, and are generally correlated with the Pleistocene-age Modesto (approximately 40,000 years Before Present [BP]) and Riverbank Formations (approximately 300,000 years BP). In addition, more Recent (i.e., Holocene, 10,000 years BP to Present Day) sediments are continually being deposited on the Valley Floor and in tributaries to the Sacramento-San Joaquin Delta as a result of sediment transport and deposition by rivers, streams, and creeks. (Olmsted and Davis 1961, Atwater 1982, Helley and Harwood 1985, Page 1986.)

As shown on the geologic map provided in Exhibit 4.7-1, the project site is located entirely within Pleistocene-age sediments of the Modesto Formation, designated as “Qm.” In the project area, sediments of the Modesto were probably derived from the western slopes of the Sierra Nevada. Erosional forces carried the sediments downstream, where they were eventually deposited to form high alluvial fans and terraces of the Stanislaus River. (Atwater and Marchand 1980, Atwater 1982, Helley and Harwood 1985, Wagner et al. 1987.) For additional information on local geology, see Section 3.8, Paleontological Resources.

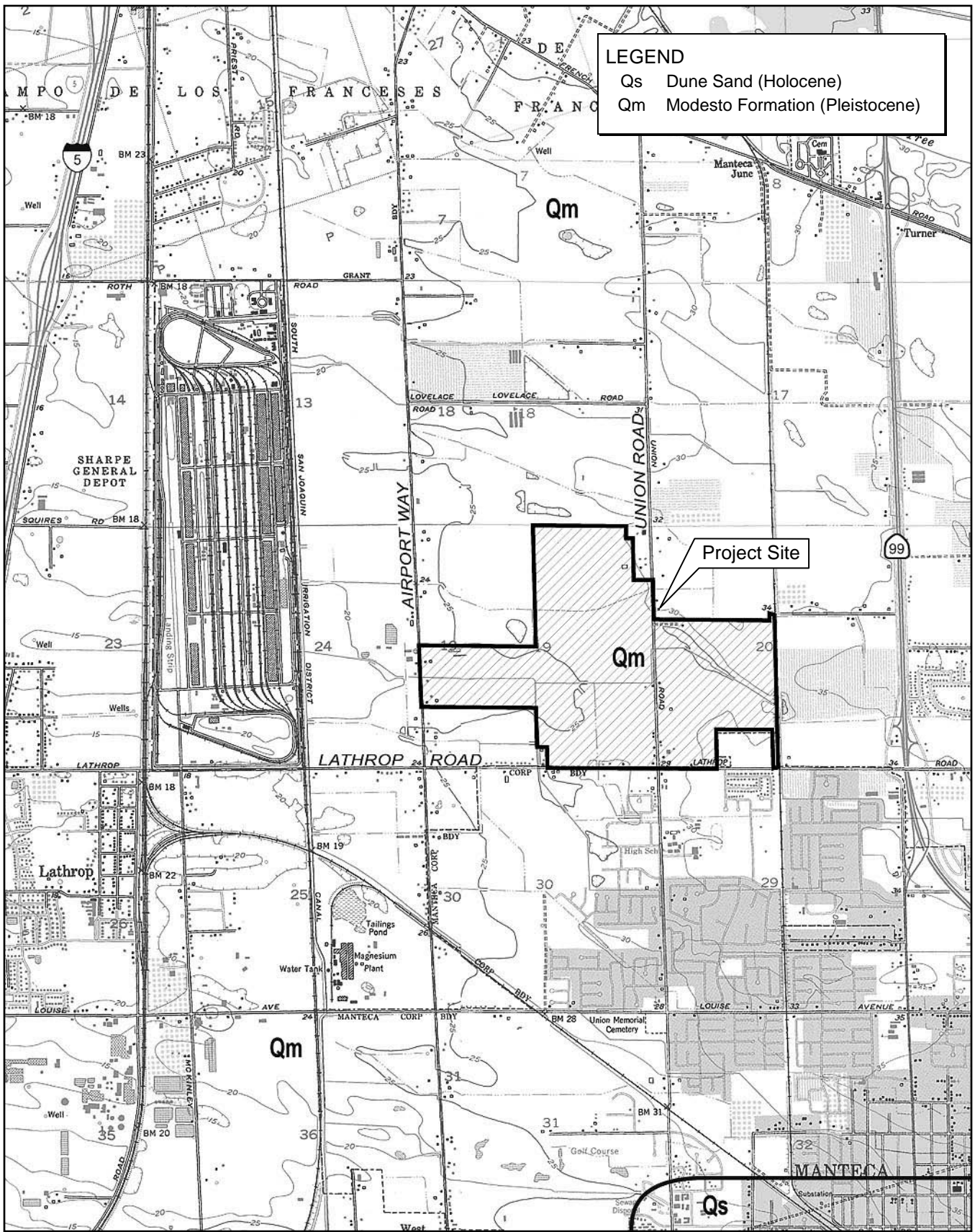
Because connections to City sewer lines would be provided, the project would not involve the use of septic waste disposal systems, and this issue is not discussed further in this Draft EIR. Further, because the project would be located on flat land in the San Joaquin Valley, and a review of geologic maps and literature indicates the project site is not located within or near a landslide hazard area, this issue will not be further addressed in this Draft EIR.

RECREATIONAL GEOLOGIC FEATURES

Recreational geologic resources typically include rock or mineral collecting, volcanoes, surface hydrothermal features, or surface expression of geologic features unique enough to generate recreational interests of the general public (e.g., natural bridges, caves, features associated with glaciation, and geomorphic features such as waterfalls, cliffs, canyons, and badlands). Based on a review of available geological literature, topographic maps, and a field visit to the site, there are no known recreational geologic resources associated with the project area.

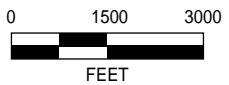
REGIONAL SEISMICITY AND FAULT ZONES

The northern San Joaquin Valley has generally not been seismically active in the last 10,000 years. Most faults in the project region with known or estimated activity during the Holocene epoch are generally located in the Bay Area, approximately 40 miles to the west, and lie within the Coast Ranges geomorphic province, as shown in Table 4.7-1.



Source: U.S.G.S. Lathrop and Manteca Quad 1952 (revised 1994) -- Contour Interval 5 Feet and Wagner et al. 1991

Geologic Formations



Faults Active in Holocene Time in the Vicinity of the Project Site	Distance from Project Site	Probable Maximum Magnitude ¹	Location
Great Valley	23 miles	6.7	Coast Ranges, western margin of San Joaquin Valley
Greenville/Marsh Creek	38 miles	6.9	Coast Ranges, Bay Area
Ortogonalita	40 miles	6.9	Coast Ranges, Bay Area
Calaveras	60 miles	6.8	Coast Ranges, Bay Area
Hayward	63 miles	7.1	Coast Ranges, Bay Area
Concord	63 miles	6.9	Coast Ranges, Bay Area
Green Valley	65 miles	6.9	Coast Ranges, Bay Area
San Andreas (1838 Event)	65 miles	7.9	Coast Ranges, Bay Area
¹ A measure of earthquake size calculated on the basis of seismic moment called Moment Magnitude (Mw). Source: Jennings 1994, Helley and Harwood 1987, Kleinfelder 2003			

The fault closest to the project site that has been active during the Holocene epoch is the Great Valley Fault System, a series of blind-thrust faults located along the western edge of the San Joaquin Valley. A number of earthquakes have been attributed to this fault system during the last 100 years, including the 1892 Vacaville –Winters earthquake (although some researchers dispute the Great Valley fault as the source for this earthquake), the 1881 West San Joaquin Valley earthquakes, the 1983 Coalinga earthquake, and the 1985 Kettleman Hills earthquake (Topozada 1987, Kleinfelder 2003a and 2003b).

Potential seismic hazards resulting from a nearby moderate to major earthquake can generally be classified as primary and secondary. The primary effect is fault ground rupture, also called surface faulting. Surface ground rupture along faults is generally limited to a linear zone a few meters wide. Common secondary seismic hazards include ground shaking, liquefaction, and subsidence, which are discussed below.

SEISMIC GROUND SHAKING

The most important geologic hazard that could affect the project is the risk to life and property from an earthquake generated by active and potentially active faults in the Bay Area and along the western margin of the San Joaquin Valley.

Seismic ground shaking is the most likely seismic hazard to affect the site. According to the California Building Standards Code (CBC), 1998 edition, the site is located in Seismic Zone 3. This location implies a minimum horizontal acceleration of 0.3 g (where “g” is the acceleration of gravity) for use in earthquake resistant design.

Ground motions can be estimated by probability of occurrence at specified hazard levels. The intensity of ground shaking depends on the distance from the earthquake epicenter to the site,

the magnitude of the earthquake, site soil conditions, and the characteristic of the source. The Probabilistic Seismic Hazard Assessment for the State of California (Petersen et al. 1996), published by the USGS and the California Division of Mines and Geology, identifies the seismic hazard based on a review of these characteristics and historical seismicity throughout California. The results of these studies suggest there is a 10% probability that the peak horizontal acceleration experienced at the site would exceed 0.2 g in 50 years. The preliminary geotechnical reports prepared by Kleinfelder (2003a and 2003b) for the project site suggest that a horizontal ground surface acceleration of 0.22g would have a 10% probability of being exceeded in 50 years. Damage to a single-family dwelling typically begins at 0.2 g (Risk Prediction Initiative 1996, Rogers et al. 1996).

The CBC specifies more stringent design guidelines where a project would be located adjacent to a Class “A” or “B” faults as designed by the California Probabilistic Seismic Hazard Maps (Cao et al. 2003). Faults with an “A” classification are capable of producing large-magnitude (M) events (M greater than 7.0), have a high rate of seismic activity (e.g., having slip rates greater than 5 millimeters per year), and have well constrained paleoseismic data (e.g., evidence of displacement within the last 700,000 years). Class “B” faults are those that lack paleoseismic data necessary to constrain the recurrence intervals of large-scale events. Faults with a “B” classification are capable of producing an event of magnitude 6.5 or greater. The Great Valley Fault System is a Type B fault. Based on preliminary segmentation of the Great Valley Fault System, a 30-kilometer-long segment with a characteristic earthquake magnitude of 6.7 (Richter scale) is indicated approximately 23 miles west of the URSP project site.

GROUND FAILURE/LIQUEFACTION

Liquefaction is a process by which water-saturated materials (including soil, sediment, and certain types of volcanic deposits) lose strength and may fail during strong ground shaking. Liquefaction is defined as “the transformation of a granular material from a solid state into a liquefied state as a consequence of increased pore-water pressure” (Youd 1992). This behavior is most commonly induced by strong ground shaking associated with earthquakes. In some cases, a complete loss of strength occurs and catastrophic ground failure may result. However, liquefaction may happen where only limited strains develop, and in these cases, ground surface deformations are much less serious.

Factors determining the liquefaction potential of a given site are soil type, the level and duration of possible seismic ground motions, the type and consistency of soils, and the depth to groundwater. Loose sands and peat deposits are susceptible to liquefaction, whereas clayey silts, silty clays, and clays deposited in fresh water environments are generally stable under the influence of seismic ground shaking.

Geotechnical engineering reports prepared by Kleinfelder (2003a and 2003b) for the project site presented test well data indicating that groundwater was encountered at depths of approximately 19 to 23 feet beneath the surface at the project site. Kleinfelder further determined, based on the results of on-site testing, that sands underlying the project site were

sufficiently dense to resist excessive volume changes, and thus the liquefaction potential is considered to be low (Kleinfelder 2003a and 2003b).

There are four types of ground failure or collapse of soil structures that commonly result from liquefaction: lateral spread, flow failure, ground oscillation, and loss of bearing strength. However, because the liquefaction potential is considered low at the site, this issue is not discussed further in this Draft EIR.

SUBSIDENCE AND SETTLEMENT

Land surface subsidence can be induced by both natural and human phenomena. Natural phenomena include: subsidence resulting from tectonic deformations and seismically induced settlements; soil subsidence from consolidation, hydrocompaction, or rapid sedimentation; subsidence from oxidation or dewatering of organic-rich soils, and subsidence related to subsurface cavities. Subsidence related to human activity includes subsurface fluid or sediment withdrawal. Pumping of water for residential, commercial and agricultural uses from subsurface water tables causes more than 80% of the identified subsidence in the U.S. (Galloway et al. 1999).

By 1970, subsidence in excess of 1 foot had affected one-half of the San Joaquin Valley, more than 5,200 square miles of farmland. The maximum subsidence, over 28 feet, was recorded near Mendota. Land subsidence in the San Joaquin Valley since the 1970s has generally slowed from reductions in groundwater pumping and the subsequent recovery of groundwater levels as a result of a greater emphasis on surface water irrigation. In the late 1980s, pumping of groundwater during a period of extended drought resulted in rapid decline in groundwater levels and renewed subsidence (Galloway et al. 1999).

TIDAL WAVES AND SEISMIC SEICHES

Earthquakes may affect open bodies of water in two ways: by creating seismic sea waves and by creating seiches. Seismic sea waves (often called “tidal waves”) are caused by abrupt ground movements (usually vertical) on the ocean floor in connection with a major earthquake. Because of the distance of the project site from the ocean (i.e., greater than 20 miles), seismic sea waves would not be a factor. A seiche is a sloshing of water in an enclosed or restricted water body such as a basin, river, or lake. It is caused by earthquake motion; the sloshing can occur for a few minutes or several hours. In 1868, for example, an earthquake along the Hayward fault in the San Francisco Bay area is known to have generated a seiche along the Sacramento River.

The project is approximately 3.5 miles from the San Joaquin River, and is located in an area of flat topography. The San Joaquin River is lined by levees in the region and none of the earthquakes caused by faults listed in Table 4.7-1 are known to have resulted in seismic seiche events along the river. Therefore, the risk of seiche is considered low.

SOIL RESOURCES

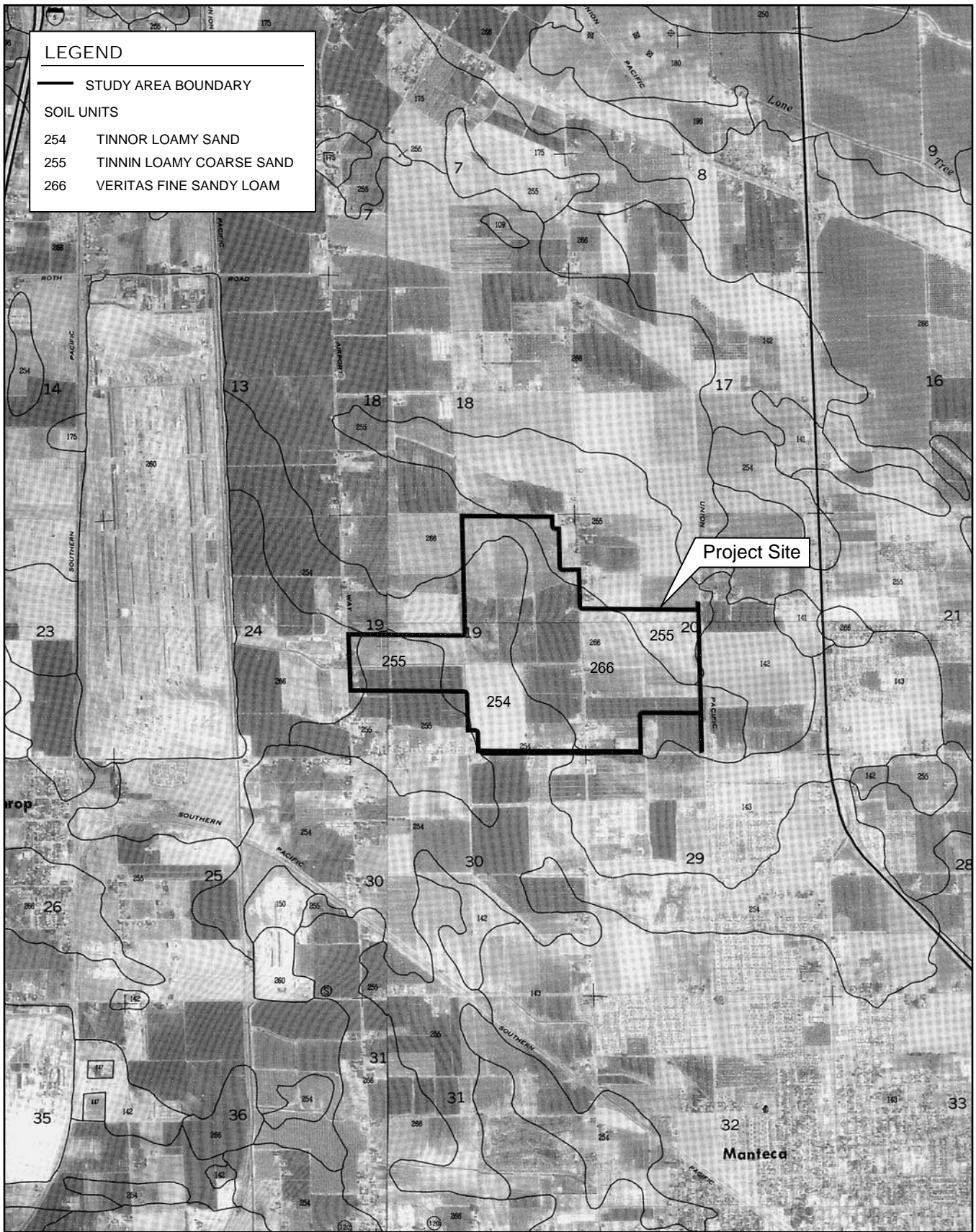
The URSP site lies at the northern end of the San Joaquin Valley, approximately 3.5 miles east of the San Joaquin River. Surface soils on the project site and the surrounding area consist of terrace deposits formed by ancient channels of the Stanislaus River (Atwater 1982) and more recent alluvial deposits of the San Joaquin River. Subsurface data from Kleinfelder (2003b) indicate that the majority of the project site is underlain by loose, silty sand, clayey sand, “clean” sand, and sandy silt from the surface to depths ranging from 4.5 to 12 inches below site grade. The loose soils are underlain by interbedded strata of medium-dense sand and very stiff silt and clay to a depth of 10 to 16 feet, depending on borehole location. Soil conditions encountered in the Union Ranch East portion of the project site consisted of concrete and asphalt debris along with silty sand and sandy silt, which may represent artificial fill material (Kleinfelder 2003c).

Identification of soil types and their distribution was accomplished primarily through a review of maps provided by the U.S. Soil Conservation Service (now called the Natural Resources Conservation Service [NRCS]). Exhibit 4.7-2 provides a detailed map of the surficial soils in the project area. Table 4.7-2 provides a detailed summary of the physical and chemical characteristics of each soil type identified from the project site. A discussion of soil characteristics is presented below.

254 Timor Loamy Sand, 0 to 2% slopes—This soil type is found on low fan terraces, and formed from alluvium derived from granitic rock. Timor loamy sand grades downward from a grayish brown loamy sand to a light gray, strongly cemented to indurated hardpan at depths ranging from 30 to 60 inches below the surface. Water may be perched above the hardpan following winter storm events, and during years of heavy rainfall, the soil is subject to periodic flooding. The soil is moderately well drained, runoff is slow, and there is only a slight hazard of water erosion. However, the wind erosion hazard is severe. This soil type has a low shrink-swell potential. The extremely rapid permeability rate makes this soil unsuitable for septic systems. The primary use of this soil type in San Joaquin County is irrigated crops or irrigated pasture.

255 Tinnin Loamy Coarse Sand, 0 to 2% slopes—Tinnin loamy coarse sand is a deep, well drained soil found on alluvial fans, and is derived from granitic rock sources. The soil grades downward from a grayish brown loamy coarse sand to a pale brown mottled loamy coarse sand at depths of 75 inches. Runoff is slow and there is only a slight hazard of water erosion. However, the wind erosion hazard is severe. This soil type has a low shrink-swell potential. The extremely rapid permeability rate makes this soil unsuitable for septic systems. The primary use of this soil type in San Joaquin County is irrigated crops, orchards, or vineyards.

266 Veritas Fine Sandy Loam, 0 to 2% slopes—This moderately well drained soil is found on low fan terraces, and formed from alluvium derived from mixed rock sources. The soil grades downward from a brown fine sandy loam to a grey, cemented hardpan at a depth of approximately 70 inches below tG:\PRODUCTS\EDAW\2004\4T040 Manteca Union Ranch_Public Draft EIR 1-10-05\4.7 Geology and Soils.doc surface. A hardpan is present at depths of 40 to 60 inches below the surface. Water may be perched above the hardpan



Source: U.S. Department of Agriculture, Soil Conservation Service 1988

Soil Types

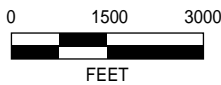


Table 4.7-2 Soil Mapping Unit Descriptions										
Map ¹	Soil Series Name	Depth (inches)	USDA texture	Shrink-Swell Potential	Permeability (in/hr)	Erosion Factors ²		Wind Erodibility Group ³	pH	Plasticity Index ⁴
						K	T			
254	Timor	0-14	Loamy sand	Low	6.0-20	0.17	3	2	6.6-7.8	NP
		14-56	Loamy sand, loamy coarse sand, sand	Low	6.0-20	0.17			7.4-8.4	NP
		56-60	Cemented	---	---	---			---	---
255	Tinnin	0-28	Loamy coarse sand	Low	6.0-20	0.17	5	2	6.1-7.8	NP
		28-53	Loamy coarse sand, loamy sand	Low	6.0-20	0.17			6.1-7.8	NP
		53-75	Loamy coarse sand, loamy sand, sand	Low	6.0-20	0.17			6.6-8.4	NP
266	Veritas	0-15	Fine sandy loam	Low	2.0-6.0	0.28	3	3	7.4-8.4	NP-10
		15-54	Sandy loam, fine sandy loam	Low	2.0-6.0	0.32			7.4-8.4	NP-10
		54-70	Cemented	---	---	---			---	---

¹ Soil map numbers refer to numbers shown on Figure 3.7-2 (Soil Map of Project Site).

² K is a measurement of relative susceptibility to sheet and rill erosion by water. It ranges from 0.10 to 0.64, with lower values representing a lower susceptibility to erosion.

T represents soil loss tolerance, which is defined as the maximum rate of soil erosion (wind and water) without reducing crop production or environmental quality. Values range from 1 to 5 tons of soil loss per acre per year, with 5 representing soils less sensitive to erosion.

³ A measure of the susceptibility of soil to movement by wind. Groups are 1 through 8, with 8 being soil types not subject to soil blowing because of coarse fragments on the surface or surface wetness.

⁴ Soils with a high plasticity index have a wide range of moisture content in which the soil performs as a plastic material. Larger PI values (e.g. 20-40) indicate highly plastic soils. NP=Not plastic

--- Either not measured or not applicable.

Source: NRCS 1992.

following winter storm events, and during years of heavy rainfall, the soil is subject to periodic localized flooding. Runoff is slow and there is only a slight hazard of water erosion. Wind erosion poses a moderate hazard. This soil type has a low shrink-swell potential. The primary use of Veritas fine sandy loam in San Joaquin County is irrigated crops, orchards, or vineyards.

Expansive/Compressive Soils

Expansive soils have the ability to shrink and swell with wetting and drying. The shrink-swell potential of expansive soils can result in differential movement beneath foundations. Mapped soil types at the project site (see Exhibit 4.7-2) are not considered to be expansive because of their low clay content and low plasticity index (NRCS 1992).

MINERAL RESOURCES

There are a number of natural gas fields within San Joaquin County, although the majority are located in and around the Sacramento-San Joaquin River Delta. The URSP project site is approximately 4 miles southeast of Lathrop Gas, a large natural gas field that was actively producing 1,121,100 Mcf (a unit of measurement equal to 1,000 cubic feet) in 1998. McMullin Ranch Gas, approximately 4 miles south of the project site, is another large natural gas field located south of Manteca, which produced 63,258 Mcf in 1998. Given the uncertainty in locating oil and gas reserves, the high cost of exploratory well drilling, the fact that the project site does not lie within an existing oil or gas production field, and the shallow excavation depth for building footings, it is unlikely that natural gas reserves would be encountered.

In compliance with the California Surface Mining and Reclamation Act (SMARA), the California Department of Conservation, Division of Mines and Geology (CDMG) has established the classification system shown in Table 4.7-3 to denote both the location and significance of key extractive resources.

Table 4.7-3 CDMG Mineral Land Classification System	
Classification	Description
MRZ-1	Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their presence
MRZ-2	Areas where adequate information indicates that significant mineral deposits are present or where it is judged that a high likelihood for their presence exists
MRZ-3	Areas containing mineral deposits, the significance of which cannot be evaluated from existing data
MRZ-4	Areas where available data is inadequate for placement in any other MRZ zone
Source: Dupras 1988	

According to the California Division of Mines and Geology, the URSP project site is classified as MRZ-3, an area where the significance of mineral deposits cannot be evaluated from existing data. Results from geotechnical explorations in 2003 (Kleinfelder) indicated the presence of

sand throughout the project site. The closest sand and gravel mines in the vicinity of the project site are both owned by Brown Sand, Inc. and have recently ceased operations: (1) the Oakwood Lake Pit located on Woodward Avenue in Manteca, approximately 4 miles southwest of the project site, and; (2) the Mossdale Ranch site located in Lathrop, approximately 5 miles southwest of the project site.

4.7.2 REGULATORY SETTING

FEDERAL EARTHQUAKE HAZARDS REDUCTION ACT

In October 1997, the U.S. Congress passed the Earthquake Hazards Reduction Act to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by the National Earthquake Hazards Reduction Program Act (NEHRPA), by refining the description of the agency responsibilities, program goals, and objectives.

NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The NEHRPA designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Other NEHRPA agencies include the National Institute of Standards and Technology, National Science Foundation, and U.S. Geological Survey.

CALIFORNIA BUILDING STANDARDS CODE

The State of California provides minimum standard for building design through the California Building Standards Code (California Code of Regulations, Title 24). Where no other building codes apply, Chapter 29 regulates excavation, foundations, and retaining walls. The California Building Standards Code (CBC) also applies to building design and construction in the state and is based on the federal Uniform Building Code (UBC) used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with numerous more detailed and/or more stringent regulations.

The State earthquake protection law (California Health and Safety Code 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety and structural design requirements are set forth in Chapter 16 of the CBC. The CBC identifies seismic factors that must be considered in structural design.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on unstable soils, such as expansive soils and liquefaction areas.

CALIFORNIA SEISMIC HAZARDS MAPPING ACT

The California Seismic Hazards Mapping Act of 1990 (California Public Resources Code Section 2690-2699.6) addresses seismic hazards other than surface rupture, such as liquefaction and induced landslides. The Seismic Hazards Mapping Act specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

ALQUIST-PRIOLO FAULT ZONING ACT

The Alquist-Priolo Earthquake Fault Zoning Act was passed by the California Legislature to mitigate the hazard of surface faulting to structures. The main purpose of the act is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The act addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. Local agencies must regulate most development in fault zones established by the State Geologist. Before a project can be permitted in a designated Alquist-Priolo Fault Study Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

CALIFORNIA SURFACE MINING AND RECLAMATION ACT

The California Surface Mining and Reclamation Act (SMARA) was enacted by the State Legislature to regulate activities related to mineral resource extraction. The Act requires the prevention of adverse environmental effects caused by mining, the reclamation of mined lands for alternative land uses, and the elimination of public health and safety hazards from the effects of mining activities. At the same time, SMARA encourages both the conservation and production of extractive mineral resources, requiring the State Geologist to identify and attach levels of significance to the State's varied extractive resource deposits. Under SMARA, the mining industry in California must adequately plan for the reclamation of mined sites for beneficial uses and provide financial assurances to guarantee that the approved reclamation will actually be implemented. The requirements of SMARA must be implemented by the local lead agency with permitting responsibility for the proposed mining project.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

In California, the State Water Resources Control Board administers the federal Environmental Protection Agency promulgated regulations (55 CFR 47990) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Eliminations System (NPDES). In turn, the Board's jurisdiction is administered through Regional Water Quality Control Boards (RWQCBs). Pursuant to these federal regulations, an operator must obtain a General Permit under the NPDES Stormwater Program for all construction activities with

ground disturbance of 1 acre or greater. The General Permit requires the implementation of Best Management Practices (BMPs) to reduce pollutant loads into the waters of the State and measures to reduce sediment and erosion control. In addition, a Storm Water Pollution Prevention Plan (SWPPP) must be prepared. The SWPPP addresses water pollution control during construction. SWPPPs requires that all storm water discharges associated with construction activity, where clearing, grading and excavating results in soil disturbances must by law, be free of site pollutants.

SAN JOAQUIN COUNTY GENERAL PLAN

The San Joaquin County General Plan 2010 (County General Plan) (County of San Joaquin 1992) Public Health and Safety Element specifies policies to minimize the risk associated with seismic and geologic hazards. The following policies relate to the project:

Seismic and Geologic Hazards

- ▶ The risk to human safety and property from seismic and geologic hazards shall be considered in determining the location and intensity of development and the conditions under which it may occur.
- ▶ Facilities necessary for emergency services, major utility lines and facilities, manufacturing plants using or storing hazardous materials, high occupancy structures (such as multifamily residences and large public assembly facilities), and facilities housing dependent populations (such as prisons, schools, and convalescent centers) shall not be located within one-eighth of a mile of an active fault.
- ▶ Regional and local efforts to curb subsidence of the Delta should be promoted.
- ▶ The County General Plan also states that the County shall comply with state regulations, require studies where necessary for geologic information, require mitigation of seismic or unstable geologic hazards for new construction, and include erosion and sediment control regulations in its planning efforts.

Extractive Resources

The Resources Element of the County General Plan also contains the following policies related to the project:

- ▶ The County shall permit the development of its oil and natural gas resources, provided that such development ensures adequate protection to the resource and the environment, protects public health and safety, and is compatible with the current and projected uses of the land.
- ▶ The County General Plan further states that a discretionary planning permit is required for development in all areas of significant sand and gravel deposits as identified by the State Mines and Geology Board.

CITY OF MANTECA GENERAL PLAN

Geologic and Seismic Safety

The Safety Element of the City of Manteca General Plan (City General Plan) outlines goals and policies associated with geology and soils. The following policies relate to the project:

Policy S-P-1: The City shall require preparation of geological reports and/or geological engineering reports for proposed new development located in areas of potentially significant geological hazards, including potential subsidence (collapsible surface soils) because of groundwater extraction.

Policy S-P-2: The City shall require new development to mitigate the potential impacts of geologic hazards through Building Plan review.

Policy S-P-3: The City shall require new development to mitigate the potential impacts of seismic induced settlement of uncompacted fill and liquefaction (water-saturated soil) because of the presence of a high water table.

Policy S-P-5: The City shall ensure that all public facilities, such as buildings, water tanks, and reservoir, are structurally sound and able to withstand seismic shaking and the effects of seismically induced ground failure.

The Safety Element of the City General Plan further states that all new development shall comply with the current CBC requirements and with California Health and Safety Code Section 19100 et seq. (Earthquake Protection Law).

Soils and Erosion Control

The Resource Conservation Element of the City General Plan contains the following policies related to the project:

Policy RC-P-10: Minimize soil erosion and loss of topsoil from land development activities, wind, and water flow.

The Resource Conservation Element of the City General Plan further states that all new development shall comply with the current CBC requirements for construction standards for specific soil types, and with CBC Chapter 70 regulating grading activities including drainage and erosion control. The City requires site-specific land management and development practices for proposed development projects, including appropriate mitigation measures to avoid or reduce erosion.

GRADING PERMITS

In San Joaquin County, grading and construction are regulated through grading permits in compliance with the requirements of the most current version of the California Building Standards Code.

4.7.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

Evaluation of potential geologic and soil impacts was based upon a review of documents pertaining to the project area, including geologic maps, published and unpublished geologic literature, the San Joaquin County General Plan, the City of Manteca General Plan, geotechnical reports prepared by Kleinfelder, and a field visit to the project site.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a project is considered to have a significant impact on geology and soils if it would:

- ▶ expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:
 - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
 - strong seismic ground shaking;
 - seismic-related ground failure, including liquefaction;
 - landslides; or
 - seismically-induced tidal waves or seiches;
 - result in substantial soil erosion or loss of topsoil;
 - be located on a geologic unit or soil that is unstable, or that would become unstable as a result of a project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, or liquefaction or collapse;
 - be located on expansive soil, creating substantial risks to life or property;
 - have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water;

- result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state;
- result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan; or
- result in the destruction, covering, or modification of unique geologic, physical, or recreational features.

IMPACT ANALYSIS

Impact 4.7-1

Rupture of a Known Earthquake Fault. *Because of its distance from known earthquake faults, implementation of the project would not be likely to expose people or structures to potential substantial adverse effects resulting from rupture of a known earthquake fault. This would be a **less-than-significant** impact.*

Review of geologic data indicates there are no type “A” or “B” faults located on or adjacent to the project site. The project site is not located in an Alquist-Priolo Earthquake Special Study Zone. The Fault Activity Map of California and Adjacent Areas (Jennings 1996) indicates that the closest active fault (Great Valley Fault system) is located approximately 23 miles from the project site. Therefore, the potential for fault ground rupture at the project site would be considered less than significant.

Impact 4.7-2

Strong Seismic Ground Shaking. *In the event of a moderate to major seismic event along the Great Valley fault, ground shaking could result in lateral forces exceeding the capabilities of structures built to minimum CBC design standards. Severe structural and nonstructural damage and associated hazards resulting from such a seismic event would be a **significant** impact.*

Seismic activity in the nine-county San Francisco Bay Area (San Andreas, Hayward, and Calaveras faults) and the Great Valley Fault System could generate strong ground shaking on the project site. Because of this potential fault activity, ground shaking is a hazard for facilities in the San Joaquin Valley. Intensity of the ground shaking would depend on the magnitude of the earthquake, the distance from the epicenter, and the duration of shaking. The damage sustained and the degree of hazard depend on the seismic hazards of each specific site, the type of structure and its building materials, and construction quality. The project involves the development of residential and commercial property, as well as associated utility improvements. The proposed development would be anticipated to experience at least one major earthquake during the operational lifetime of the project. Although the project area would not likely experience a fault rupture, ground shaking could cause structural damage to buildings, pipelines, stormwater detention basins, and other permanent improvements proposed as part of the project.

The project developers would be required to comply with the provisions of the CBC. Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure and combined with the gravity forces of dead-and-live loads. The CBC-prescribed lateral forces generally are substantially smaller than the expected peak

forces that would be associated with a major earthquake. Therefore, when built according to CBC standards, structures are anticipated to:

- ▶ resist minor earthquakes without damage,
- ▶ resist moderate earthquakes without structural damage but with some nonstructural damage, and
- ▶ resist major earthquakes without collapse but with some structural as well as nonstructural damage.
- ▶ Conformance to the current building code standards does not constitute any kind of guarantee that significant structural damage would not occur in the event of a maximum magnitude earthquake; however, it is reasonable to expect that a well-designed and well-constructed structure would not collapse or cause loss of life in a major earthquake.

At this time, the CBC requirements (based on the probabilistic seismic event) are considered the design minimum. Because of the relatively close presence of the Great Valley fault, it is conceivable that the site may experience ground shaking more severe than the CBC-specified ground shaking (produced by the more distant Greenville fault), but the probability of occurrence is lower. In the event of a moderate to major seismic event along the Great Valley fault, ground shaking could result in lateral forces exceeding the capabilities of structures built to minimum CBC design standards. Severe structural and nonstructural damage and associated hazards resulting from such a seismic event would be a significant impact.

Impact
4.7-3

Liquefaction and Seismic-Related Ground Failure. *Although the near-surface soils at the project site are relatively weak and moderately compressible, they would be sufficient to resist liquefaction provided that light structural loads and proper engineering designs are employed. Because the project developers would design and construct proposed facilities in conformance with the requirements of the CBC, and soils at the site would be sufficient to resist liquefaction under proper design standards, this would be a **less-than-significant** impact.*

Liquefaction occurs when saturated soil loses shear strength and deforms as a result of increased pore water pressure induced by strong ground shaking during an earthquake. As the excess pore pressure dissipates, volume changes are produced within the liquefied soil layer, which can manifest at the ground surface as settlement of structures, floating of buried structures, and failure of retaining walls. Soil types most susceptible to liquefaction are saturated, loose, sandy soils. According to data generated by Kleinfelder (2003b and 2003c), subsurface soils consist of loose silty sand, clayey sand, sand, and sandy silt at depths of 4 to 12 feet below the surface, underlain by medium-dense sand and very stiff silt and clay. Depth to groundwater is approximately 19-23 feet below the ground surface. According to the geotechnical analysis, the near-surface soils are relatively weak and moderately compressible; however, they would be sufficient to resist liquefaction provided that light structural loads and proper engineering designs are employed. Because the project developers would design and construct proposed facilities in conformance with the requirements of the CBC and soils at the

site would be sufficient to resist liquefaction under proper design standards, this would be a less-than-significant impact.

Impact
4.7-4

Construction-Related Soil Erosion. *Construction activities during project implementation would involve excavations, fills, and movement and stockpiling of earth, which could expose soils to erosion and the loss of topsoil, particularly during periods of strong winds. This would be a **potentially significant** impact.*

The URSP project is located on undeveloped agricultural land. Project development would include substantial construction activity over a 500-acre area, including soil removal, trenching, pipe installation, concrete channel fabrication, grading, and revegetation. Construction activities would remove any vegetative cover and could expose disturbed areas to winter storm events. Topography at the URSP project site is flat, which minimizes the potential for water erosion. However, according to the NRCS (Table 4.7-2), soil types at the project site are subject to a severe hazard from wind erosion, which could result in a loss of topsoil during the spring and summer months. This would be a potentially significant impact.

Impact
4.7-5

Expansive Soils (Shrink-Swell Potential). *Project-related structures would be constructed on soil types with a low clay content. Thus, damage to structures, underground utilities, and other facilities on the project site during the operation of proposed development as a result of soil shrink/swell potential is low. This impact is considered **less than significant**.*

Expansive soils shrink and swell as a result of moisture change. These volume changes can result in damage over time to building foundations, underground utilities, and other subsurface facilities if they are not designed and constructed appropriately to resist the changing soil conditions. Volume changes of expansive soils also can result in the consolidation of soft clays following the lowering of the water table or the placement of fill.

The project site is underlain by soils in the Timor, Tinnin, and Veritas series, which have a very low clay content and are rated by the NRCS (Table 4.7-2) as either non-plastic (no shrink-swell potential), or of very low plasticity. Thus, it is unlikely that damage to structures would result, and this impact would be less than significant.

Impact
4.7-6

Mineral Resources. *Because sand resources at the project site would not be suitable for aggregate mining, development of the project site would result in **less-than-significant** impacts to mineral resources.*

The URSP project site is located on land classified by the CDMG as MRZ-3, an area where the significance of mineral deposits cannot be evaluated from existing data. Results from geotechnical explorations in 2003 (Kleinfelder) indicated the presence of sand throughout the project site. Sand has been extracted from two mining sites in the project vicinity in the past. Sand and gravel mined in San Joaquin County is used for construction. Construction aggregates are an important building material used in Portland cement concrete, asphalt concrete, plaster, stucco, and as a road base material. While the geotechnical report prepared for the project site did identify areas with the USDA soil texture of “sand,” these occurred as a

series of discontinuous, shallow lenses at various depths across the project site. Further, the sand at the project site is not “clean” (it contains varying amounts of silt and clay), thus rendering it unsuitable for aggregate mining (Goldsmith, pers. comm.). This would be a less-than-significant impact.

4.7.4 MITIGATION MEASURES

No mitigation measures are necessary for the following less-than-significant impacts:

- 4.7-1: Rupture of a Known Earthquake Fault.
- 4.7-3: Liquefaction and Seismic-Related Ground Failure
- 4.7-5: Expansive Soils.
- 4.7-6: Mineral Resources.

The following mitigation measures are provided for significant and potentially significant impacts:

4.7-2 Strong Seismic Ground Shaking.

Project facilities shall be designed for maximum horizontal ground surface accelerations of at least 0.22g. The project site is located with CBC seismic zone 3, indicating that a horizontal ground surface acceleration of 0.3g at the URSP site would have a 10% probability of being exceeded in a 50-year project design life. This estimate incorporates the possibility of a seismic event associated with the Great Valley Fault System. A surface acceleration of 0.22g exceeds the maximum ground surface accelerations previously recorded in the area (estimated at 0.16g), which occurred during the 1906 San Francisco earthquake. If project facilities are designed to meet minimum safety standards during a seismic event with ground surface accelerations of at least 0.22g, the risk of loss, injury, or death from ground shaking would be substantially reduced.

4.7-4: Construction-Related Soil Erosion.

Develop and Implement an Erosion Control Plan. A grading and erosion control plan shall be prepared by a California Registered Civil Engineer and submitted to the Manteca Department of Public Works for all new development. The plan shall be consistent with the CBC grading requirements and shall include the site-specific grading proposed for the new development. The project applicant shall ensure that the construction contractor is responsible for securing a source of transportation and deposition of excavated materials.

Implement Best Management Practices (BMPs). To ensure that soils do not directly or indirectly discharge sediments into surface waters as a result of construction activities, water quality protection measures shall be implemented by the project applicant/construction contractor during construction as discussed in Section 3.9, Hydrology and Water Quality. The mitigation measures shall be in accordance with Central Valley RWQCB regulations involving control of stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) program, which requires the applicant to:

- ▶ File a Notice of Intent (NOI) to discharge stormwater with the Central Valley RWQCB
- ▶ Prepare a Storm Water Pollution Prevention Plan (SWPPP) that identifies best management practices (BMPs) that would be employed to prevent or minimize the discharge of sediments and other contaminants with the potential to affect beneficial uses or lead to violation of water-quality objectives
- ▶ Complete a self-implemented annual monitoring program and prepare a report on BMP performance
- ▶ BMPs shall include dust control measures such as wetting the top layer of exposed soils and covering soil stockpiles, as necessary.

4.7.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the mitigation measures identified above, the project's geology and soils impacts would be reduced to a less-than-significant level.

4.8 PALEONTOLOGICAL RESOURCES

Paleontological resources (fossils) are the remains or traces of prehistoric animals and plants. This section assesses the potential for earth-moving activities associated with development at the URSP project site to adversely affect scientifically important fossil remains. The analysis presented in this section conforms to Society of Vertebrate Paleontology criteria. This analysis includes a description of the local geologic setting, the impacts associated with implementation of the project, and any recommended measures to mitigate the project's potential impacts.

4.8.1 ENVIRONMENTAL SETTING

GEOGRAPHIC LOCATION AND PHYSIOGRAPHIC ENVIRONMENT

The project site is located in the Great Valley Geomorphic Province of California, a large northwest-trending valley bounded by the Sierra Nevada range to the east and south, the Coast Ranges to the west, and the Klamath Mountains to the north. The Great Valley is drained by the Sacramento and San Joaquin Rivers, which join and flow out of the province through the San Francisco Bay. This geomorphic province is an asymmetric trough approximately 400 miles long and 50 miles wide filled with a thick sequence of sediments ranging from Jurassic (180 million years ago) to Recent age. The sediments in the Great Valley vary between 5 and 10 kilometers in thickness and were derived primarily from erosion of the Sierra Nevada to the east, with lesser amounts of material from the Coast Ranges to the west.

For additional information on geographic location and physiographic setting, see Section 4.7, Geology, Soils and Seismicity.

REGIONAL AND LOCAL GEOLOGIC SETTING

Geology of the San Joaquin Valley has been described in some detail by authors such as Bartow (1991), Graham and Olson (1988), Page (1986), and Bailey (1966), among others. Geologic history and conditions are relevant to the evaluation of paleontological resources in that they influence the type of fossils that may be found (i.e., aquatic vs. terrestrial organisms) and the probability that any prehistoric remains would be subject to fossilization rather than normal decay. The depositional history of the upper San Joaquin Valley during the Quaternary period (approximately 1.8 million years Before Present [BP]) included several cycles related to fluctuations in regional and global climate that caused periods of deposition along the valley floor alternating with periods of subsidence and erosion. By the middle of the Pleistocene epoch (approximately 900,000 years BP), the sea-way serving as a drainage outlet connecting the San Joaquin Valley with the Pacific Ocean had closed, leaving behind a large lake (the Corcoran lake) in the Central Valley. Meanwhile, continued uplift of the Sierra Nevada resulted in ongoing sediment deposition along the valley floor. Thus, the project region during the Pleistocene epoch consisted of stages of wetland and floodplain creation as tidewaters rose in the valley from the west, areas of erosion when tidewaters receded, deposition of alluvial fans that were reworked by wind to create extensive sand dunes, and

alluvial fan deposition from streams emanating from the adjacent mountain ranges (Bartow 1991, Atwater 1982).

The project area is located entirely within San Joaquin County and within the U.S. Geological Survey (USGS) Manteca quadrangle (mapped at 1:24,000 scale).

Modesto Formation

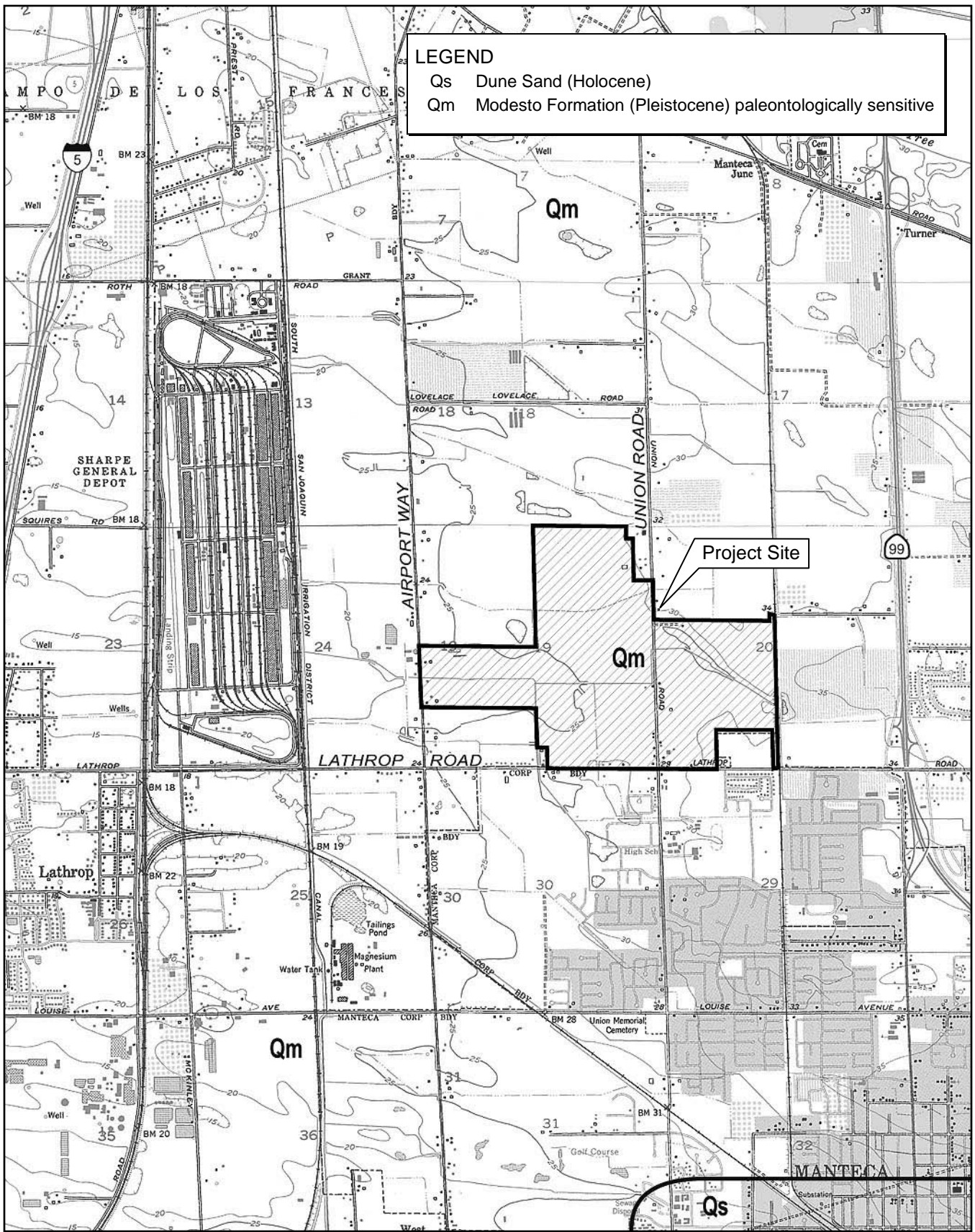
Gale et al. (1938) and Piper et al. (1939) were the first to publish detailed geologic maps in the southern Sacramento/northern San Joaquin Valley areas, and they designated the older alluvial Pleistocene deposits as the Victor Formation. However, in 1959, Davis and Hall proposed a subdivision of the Victor Formation into the Turlock Lake (oldest), Riverbank (middle), and Modesto (youngest) formations. The type section of Modesto was designated along the south bluff of the Tuolumne River south of Modesto. Marchand and Allwardt (1981) proposed that the name Victor Formation be abandoned and that the Turlock Lake, Riverbank, and Modesto Formations be adopted as formal nomenclature for Quaternary deposits in the Sacramento and San Joaquin Valleys. Most later researchers have followed this recommendation.

In the San Joaquin Valley and at the project site in particular, the Modesto Formation forms alluvial fans of the Stanislaus River and can be divided into upper and lower members. Researchers differ as to the age of this formation: Marchand and Allwardt (1981) place the age between approximately 12,000 and 42,000 years BP, Atwater (1982) places the age from 9,000 to 73,000 years BP, while Helley and Harwood (1985) follow Marchand and Allwardt's dating scheme. In the proposed project area, the upper member is composed primarily of unconsolidated, unweathered, coarse sand and sandy silt. This unit may range in age from 9,000 to 26,000 years BP (Exhibit 4.8-1). The lower member of the Modesto Formation is composed of consolidated, slightly weathered, well-sorted silt and fine sand, silty sand, and sandy silt (Exhibit 4.8-1). Age estimates for the lower member range from 29,000 to 73,000 year BP.

The Modesto Formation is underlain by various rock units reflecting the changing nature of depositional sediments, from alluvial fan to lacustrine to marine, including the Riverbank Formation (mid-Pleistocene), the Turlock Lake Formation (early Pleistocene), the Corcoran Clay (early Pleistocene), the Tulare Formation (Plio-Pleistocene) and the San Joaquin Formation (late Pliocene).

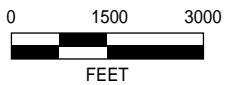
PALEONTOLOGICAL RESOURCE INVENTORY METHODS

A stratigraphic inventory and paleontological resource inventory were completed to develop a baseline paleontological resource inventory of the project site and surrounding area by rock unit, and to assess the potential paleontological productivity of each rock unit. Research methods included a review of published and unpublished literature and a cursory field survey. These tasks complied with Society of Vertebrate Paleontology (1995) guidelines.



Source: U.S.G.S. Lathrop and Manteca Quad 1952 (revised 1994) -- Contour Interval 5 Feet and Wagner et al. 1991

Paleontologically Sensitive Rock Formations



Stratigraphic Inventory

Geologic maps and reports covering the geology of the project site and surrounding study area were reviewed to determine the exposed rock units and to delineate their respective distributions in the project study area.

Paleontological Resource Inventory

Published and unpublished geological and paleontological literature was reviewed to document the number and locations of previously recorded fossil sites from rock units exposed in and near the proposed project site and the surrounding region, as well as the types of fossil remains each rock unit has produced. The literature review was supplemented by an archival search conducted at the University of California Museum of Paleontology (UCMP) in Berkeley, California, on October 14, 2004.

Field Survey

A field reconnaissance survey was conducted on August 10, 2004 to document the presence of any previously unrecorded fossil sites and of strata that might contain fossil remains. Reconnaissance was limited to inspection of the visible ground surface where access was available. Most areas could not be surveyed because the property was planted with row crops or was overgrown with vegetation. Thus, a complete pedestrian survey of the entire area of potential effect for paleontological resources was not possible. However, no exposures of potentially fossiliferous strata were observed in the areas surveyed.

PALEONTOLOGICAL RESOURCE ASSESSMENT CRITERIA

The potential paleontological importance of the project site can be assessed by identifying the paleontological importance of exposed rock units within the project area. Because the distribution of a rock unit in a specific area can be easily depicted on a topographic map, this method is conducive to delineating parts of the project site that are of higher and lower sensitivity for paleontological resources.

A paleontologically important rock unit is one that has a high rating for potential paleontological productivity and is known to have produced unique, scientifically important fossils. The potential paleontological productivity rating of a rock unit exposed at the project site refers to the abundance and densities of fossil specimens and/or previously recorded fossil sites in exposures of the unit in or near the project site. If exposures of a specific rock unit at the project site yield fossils, they are most likely to yield fossil remains representing particular species in quantities or densities similar to those previously recorded from the unit near the project site.

An individual vertebrate fossil specimen may be considered unique or significant if it is:

- ▶ identifiable;
- ▶ complete;
- ▶ well preserved;
- ▶ age diagnostic;
- ▶ useful in paleoenvironmental reconstruction;
- ▶ a type specimen (i.e., the individual from which a species or subspecies has been described);
- ▶ a member of a rare species;
- ▶ a species that is part of a diverse assemblage;, or
- ▶ a skeletal element different from, or a specimen more complete than, those now available for its species.

For example, identifiable vertebrate marine and terrestrial fossils are generally considered scientifically important because they are relatively rare. The value or importance of different fossil groups varies, depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions (such as for a research project). Marine invertebrates are generally common, the fossil record is well developed and well documented, and they would generally not be considered a unique paleontological resource.

The following tasks were completed to establish the paleontological importance of each rock unit exposed at or near the project site:

- ▶ The potential paleontological productivity of each rock unit was assessed, based on the density of fossil remains previously documented within the rock unit.
- ▶ The potential for a rock unit exposed at the project site to contain a unique paleontological resource was considered.

RESOURCE INVENTORY RESULTS

Stratigraphic Inventory

Regional and local surficial geologic mapping and correlation of the various geologic units in the vicinity of the project site has been provided at a scale of 1:500,000 by Bartow (1991), 1:250,000 by Wagner et al. (1991), and 1:62,500 by Atwater (1982).

Paleontological Resource Inventory and Assessment by Rock Unit

Vertebrate mammalian fossils have proved helpful in determining the relative age of alluvial fan sedimentary deposits (Albright 2000, Louderback 1951, Savage 1951). Mammalian inhabitants of the Pleistocene alluvial fan and floodplain included mammoths, horses, mastodons, camels, ground sloths, and pronghorns.

The Pleistocene epoch, known as the “great ice age,” began approximately 1.8 million years ago. Surveys of late Cenozoic land mammal fossils in northern California have been provided by Hay (1927), Lundelius et al. (1983), Jefferson (1991a, 1991b), Savage (1951), and Stirton (1939). On the basis of his survey of vertebrate fauna from the non-marine late Cenozoic deposits of the San Francisco Bay region, Savage (1951) concluded that two major divisions of Pleistocene-age fossils could be recognized: the Irvingtonian (older Pleistocene fauna) and the Rancholabrean (younger Pleistocene and Holocene fauna). These two divisions of Quaternary Cenozoic vertebrate fossils are widely recognized today in the field of paleontology. The age of the later Pleistocene, Rancholabrean fauna was based on the presence of bison and on the presence of many mammalian species that are inhabitants of the same area today. In addition to bison, larger land mammals identified as part of the Rancholabrean fauna include mammoths, mastodons, camels, horses, and ground sloths.

Modesto Formation

Remains of land mammals have been found in the project region at various localities in alluvial deposits referable to the Modesto Formation. Jefferson (1991a, 1991b) compiled a database of California late Pleistocene vertebrate fossils from published records, technical reports, unpublished manuscripts, information from colleagues, and inspection of museum paleontological collections at more than 40 public and private institutions. He listed a number of sites in San Joaquin County that have yielded Rancholabrean vertebrate fossils that could be referable to the Modesto Formation. Jefferson’s information corresponds with the records in the UCMP database.

The closest identified vertebrate fossils to the project site are located 2.8 miles northeast, at Mormon Slough (UCMP V-5107). This site yielded 7 specimens from Rancholabrean-age Columbian mammoth, horse, and an unidentified carnivore. Approximately 12 miles north of the project site, in Stockton, locality V-4822 yielded a Rancholabrean-age horse specimen. Hay (1927) reported remains of camel, horse, and mammoth at another site in Stockton.

UCMP localities V-66150, V-3315, V-4809, V-4810, V-4808, V4819, and V-4807, along the Delta Mendota Canal west of Tracy (approximately 20 miles southwest of the project site), yielded numerous specimens from bison, mammoth, ground sloth, horse, and gopher. In the same area, the Wagner’s Aqueduct site, V-70122, yielded 3 specimens from the class Osteichthyes (bony fishes). Localities V-4804 and V-4867 from the Reiche Gravel Pit, west of the Delta Mendota Canal, yielded three specimens of horse and mammoth remains. Locality V-66150 at the Tracy Gravel Pit yielded a specimen of Jefferson’s ground sloth, while locality V-3315 at the Hetch Hetchy Tunnel yielded remains from a Rancholabrean-age camel.

Finally, a site along Cometa Road, approximately 20 miles east of the project site (V-5039) yielded 2 Pleistocene horse specimens.

Specimens from sediments referable to the Modesto Formation have been reported at other locations throughout the Central Valley (UCMP 2004). The Tranquility site in Fresno County (UCMP V-4401), for example, has yielded more than 130 Rancholabrean-age fossils of fish, turtles, snakes, birds, moles, gophers, mice, wood rats, voles, jack rabbits, coyote, red fox, grey fox, badger, horse, camel, pronghorn antelope, elk, deer, and bison from sediments referable to the Modesto Formation.

Results of a paleontological record search at the UC Berkeley Museum of Paleontology indicated no fossil remains at the project site, and no fossils were observed during the reconnaissance field visit.

4.8.2 REGULATORY SETTING

FEDERAL, STATE, AND LOCAL LAWS, ORDINANCES, AND REGULATIONS

Paleontological resources are classified as nonrenewable scientific resources and are protected by several federal and state statutes, most notably by the 1906 Federal Antiquities Act (PL 59-209; 16 U.S. Code 431 et seq.; 34 Stat. 225), which calls for protection of historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest on federal lands. The project currently does not involve such lands.

State requirements for paleontological resource management are found in Public Resources Code Chapter 1.7, Section 5097.5, Archeological, Paleontological, and Historical Sites. This statute specifies that state agencies may undertake surveys, excavations, or other operations as necessary on state lands to preserve or record paleontological resources. The statute would apply to the URSP project site only if the state or a state agency were to obtain ownership of project lands.

No state or local agencies have specific jurisdiction over paleontological resources on private lands. No state or local agency requires a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earth moving on state or private land in a project site.

Neither the San Joaquin County General Plan, the City of Manteca General Plan, nor the URSP contain policies relating to paleontological resources (San Joaquin County 1993, City of Manteca 2003c, Union Ranch/Pulte 2004).

PROFESSIONAL STANDARDS

The Society of Vertebrate Paleontology (1995, 1996), a national scientific organization of professional vertebrate paleontologists, has established standard guidelines that outline acceptable professional practices in the conduct of paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, specimen

preparation, analysis, and curation. Most practicing professional paleontologists in the nation adhere to the Society of Vertebrate Paleontology assessment, mitigation, and monitoring requirements, as specifically spelled out in its standard guidelines.

4.8.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

In its standard guidelines for assessment and mitigation of adverse impacts on paleontological resources, the Society of Vertebrate Paleontology (1995) established three categories of sensitivity for paleontological resources: high, low, and undetermined. Areas where fossils have been previously found are considered to have a high sensitivity and a high potential to produce fossils. In areas of high sensitivity that are likely to yield unique paleontological resources, full-time monitoring is typically recommended during any project-related ground disturbance. Areas that are not sedimentary in origin and that have not been known to produce fossils in the past typically are considered to have low sensitivity and monitoring is usually not needed during project construction. Areas that have not had any previous paleontological resource surveys or fossil finds are considered to be of undetermined sensitivity until surveys and mapping are performed to determine their sensitivity. After reconnaissance surveys, observation of exposed cuts, and possibly subsurface testing, a qualified paleontologist can determine whether the area should be categorized as having high or low sensitivity. In keeping with the significance criteria of the Society of Vertebrate Paleontology (1995), all vertebrate fossils are generally categorized as being of potentially significant scientific value.

The significance of potential adverse impacts on paleontological resources under CEQA, resulting from project-related activities at the URSP project site, was determined using the criteria discussed above.

THRESHOLDS OF SIGNIFICANCE

Significance thresholds can be drawn from the questions outlined in the sample Initial Study Checklist form found in Appendix G of the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.). Based on that appendix, viewed in light of the Society of Vertebrate Paleontology described above, the City of Manteca concludes that significant adverse environmental impacts on paleontological resources would result if the project would:

- ▶ directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature. For the purposes of this EIR, a unique resource or feature is one that is significant under the Society of Vertebrate Paleontology criteria identified above.

IMPACT ANALYSIS

Impact
4.8-1

Disturbance of Paleontological Resources During Earth-Moving Activities.

*Although no previously recorded paleontological sites were observed or are known to occur at the project site, previously undiscovered paleontological resources could be present in sediments of the Modesto Formation that underlie the project site. In addition, fossils have been found at excavations in similar soils less than 3 miles from the project site. Therefore, construction activities could potentially disturb unknown subsurface paleontological resources. This would be a **potentially significant** impact.*

Based on the record search conducted at UCMP, there are no previously recorded fossil sites at the project site. However, the project site is located within sediments of the Modesto Formation, which is a paleontologically sensitive rock unit under the Society of Vertebrate Paleontology guidelines (1995, 1996). A vertebrate fossil site at Mormon Slough (UCMP V-5107), approximately 2.8 miles northeast of the project site, has been recorded in sediments of the Modesto Formation. This site yielded 7 specimens from Rancholabrean-age Columbian mammoth, horse, and an unidentified carnivore. In addition, the occurrence of numerous Pleistocene vertebrate fossil remains in sediments referable to the Modesto Formation from the nearby cities of Stockton and Tracy suggests that the potential exists for uncovering additional similar fossil remains during construction-related earth-moving activities at the project site. Because the potential exists for proposed earth-moving activities at the project site to uncover or disturb previously undiscovered paleontological resources, this would be a potentially significant impact.

4.8.4 MITIGATION MEASURES

The following mitigation measures are provided for significant and potentially significant impacts:

4.8-1: Disturbance of Paleontological Resources During Earth-Moving Activities.

For earth-moving activities at the project site, the project applicant shall implement the following measures:

- (1) Before the start of construction activities, construction personnel involved with earth-moving activities shall be informed of the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction activities, and proper notification procedures should fossils be encountered. This training shall be prepared and presented by a qualified paleontologist.
- (2) If paleontological resources are discovered during earth-moving activities, the construction crew shall immediately cease work in the vicinity of the find. The City or the project applicant shall retain a qualified paleontologist to evaluate the resource and prepare a proposed mitigation plan in accordance with Society of Vertebrate Paleontology guidelines (1995). The proposed mitigation plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen

recovered, and a report of findings. Recommendations determined by the City to be necessary and feasible shall be implemented by the project applicant before construction activities can resume at the site where the paleontological resources were discovered.

4.8.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the recommended mitigation measure, the project's impacts to paleontological resources would be reduced to a less-than-significant level.

4.9 HYDROLOGY AND WATER QUALITY

This section analyzes the hydrology and water quality conditions of local waterways on and near the URSP site and the project's potential impacts to these local waterways. This evaluation uses existing information from previously completed documents that address water resources in the project vicinity, including (1) URSP (Union Ranch/Pulte 2004); (2) the Draft EIR for the City of Manteca General Plan 2023 (City of Manteca 2003a); (3) City of Manteca Storm Drain Master Plan (City of Manteca in prep.), and (4) City of Manteca, 2000 Urban Water Management Plan, 2002 Update (City of Manteca 2002). The results of these reports are summarized in this section. A copy of these reports are available for review at the City of Manteca Community Development Department.

4.9.1 ENVIRONMENTAL SETTING

HYDROLOGY AND DRAINAGE

URSP Site Surface Hydrology

The URSP site occupies approximately 553 acres of land in the Central Valley within the central portion of San Joaquin County just to the north of the City of Manteca limits. Existing ground slopes in the area average approximately 0.1%, with elevations ranging from approximately 25 to 35 feet above mean sea level. Average annual rainfall in the URSP site is approximately 14 inches, with most of this rain occurring between October and April.

The URSP site is located on relatively flat land with no major drainages traversing the site. Major drainages in the project vicinity include Lone Tree Creek approximately 1.5 miles north, the Stanislaus River approximately 10 miles south, and the San Joaquin River approximately 4 miles southwest and west of the site. The nearest significant body of water is the San Joaquin River located approximately 4 miles from the project site. A tributary to the San Joaquin, Walthall Slough, flows just to the south of the project site. The project site is not located in the 100- or 500-year floodplain, would not be subject to stream flooding, and flooding by any dam failure is highly unlikely (City of Manteca 2003a). Therefore, flooding hazards are not addressed further in this Draft EIR. The project site is not located near an open body of water and therefore would not be subject to adverse effects associated with a tsunami.

The City currently provides storm drainage via a system of gravity storm drain lines typically running east to west through the city terminating at detention or retention facilities that drain into SSJID's irrigation system drainage facilities. The drainage facilities operated by SSJID pass through Manteca and carry a portion of the City's drainage to the French Camp Outlet Canal to the west, which eventually flows into French Slough to the north. French Camp Slough empties into the San Joaquin Delta. Several open channels and underground pipes owned by the SSJID bisect the URSP site.

Groundwater Hydrology

The City is located in the Eastern San Joaquin County Groundwater Basin (ESJCGB), which is a sub-basin of the San Joaquin Valley Groundwater Basin. The Department of Water Resources (DWR) classified the ESJCGB as a basin in a state of overdraft in DWR Bulletin 160-98 (DWR 1998). Basin groundwater modeling predicts a continued decline in groundwater levels if the overdraft continues. The most recent model results reported in the Flood Control District's Comprehensive Water Management Plan Report of 2001 predicted a groundwater decline of 10 feet from the 2000 levels by 2030 if there is no change in groundwater pumping (City of Manteca 2002). The groundwater aquifers underlying the City have been identified to include four geologic formations. In increasing depth from the surface, the identified aquifers are Victor Formation, Laguna Formation, Mehrten Formation, and Valley Springs Formation. The City's wells primarily withdraw water from the Victor and Laguna Formations (City of Manteca 2002).

Within the URSP site, groundwater levels are relatively high as a result of the low topographic elevation and proximity to the San Joaquin River and Delta channels to the west. High groundwater can be influenced by water levels in the San Joaquin River, subsurface groundwater flow from areas of higher elevation to the east, and local irrigation practices. Groundwater recharge also may occur as a result of irrigation of agricultural lands and infiltration from streams flowing west out of the Sierra Nevada. The recharge occurs in areas with permeable materials that allow infiltration of water along streams, alluvial fans and foothill areas. There are no substantial groundwater recharge areas identified within the URSP site (City of Manteca 2003a, County of San Joaquin 2002).

Local Water Supplies

The City of Manteca currently provides domestic water to its customers via a network of wells and transmission lines that extract groundwater from the underlying aquifers and distribute it throughout the City. The City does not currently obtain any municipal water supplies from surface water; however, construction is underway on a project that would convey surface water to the City for municipal use. The SSJID's South County Surface Water Supply Project (SCSWSP) is a joint project of SSJID and the cities of Manteca, Lathrop, Escalon, and Tracy to supply treated potable water to these cities. This project involves construction and operation of a new surface water treatment plant near Woodward Reservoir in Stanislaus County and a 36.5-mile water transmission pipeline with pumping facilities to transport treated water to turnouts at each city. Construction is currently underway, with initial deliveries expected in 2005. For additional information regarding local water supplies and the SCSWSP, see Section 4.10, Public Services and Utilities.

WATER QUALITY

Surface Water Quality

Section 303(d) of the federal Clean Water Act requires each state to periodically prepare a list of all surface waters in the state for which beneficial uses of the water – such as drinking, recreation, aquatic habitat, and industrial use – are impaired by pollutants. These are water quality-limited estuaries, lakes, and streams that fall short of state surface water quality standards, and are not expected to improve within the next two years.

California's Section 303(d) list, issued by the State Water Resources Control Board (SWRCB) identifies impaired status for channels in the eastern Delta, the San Joaquin River, and the Deep Water Ship Channel in the lower San Joaquin River near Stockton. The upper San Joaquin River is listed for impairment from boron, chlorpyrifos, diazinon, DDT, electrical conductivity, unknown toxicity, Group A pesticides, and mercury. The Deep Water Ship Channel is listed for impairment from dissolved oxygen. Potential sources of pollution for all of the listed constituents in the basin include agriculture, resource extraction, and other unknown sources. Waters placed on the 303(d) list require preparation of Total Maximum Daily Loads (TMDLs), which identify the maximum amount of a pollutant allowed to be released into a waterbody so as not to impair uses of the water, and allocate that amount among various sources. The Central Valley Regional Water Quality Control Board (RWQCB) has initiated work on a dissolved oxygen TMDL to address low dissolved oxygen levels in the Stockton area. TMDLs have also been initiated for organophosphorus pesticides (i.e., diazinon and chlorpyrifos), salinity and boron, and selenium in the upper San Joaquin River watershed, and for TDS and mercury in Delta channels. A stakeholder process is used in each of these TMDL efforts to address technical, social, and economic issues. TMDLs for other listed pollutants are scheduled to be developed at various times over the next 13 years, in accordance with the priorities contained in the Section 303(d) list.

Groundwater Quality

The City's wells currently produce groundwater that meets or exceeds the State Department of Health Services (DHS) recommended drinking water quality standards (City of Manteca 2003a). Some areas of the City's groundwater basin are subject to saltwater intrusion from the Delta and adverse water quality impacts from infiltration of area runoff from urban and agricultural areas. The saline intrusion is the possible result of excessive groundwater withdrawal from the aquifer. The extent of saline intrusion in the Manteca area is not well defined but is known to be west of Lathrop. Saline intrusion would be an important issue on the reliability of the existing groundwater system as it could result in well abandonment or treatment to maintain water quality. The planned conjunctive use of surface water and groundwater targeted for 2005 (SCSWSP) is intended to stabilize existing groundwater levels by eliminating groundwater overdraft and thereby prevent or delay the possibility of saline intrusion into the area (City of Manteca 2002). Other groundwater quality concerns in the Manteca area include increased concentrations of nitrate, arsenic, manganese, organic chemicals, and radiological constituents (City of Manteca 2002).

4.9.2 REGULATORY SETTING

HYDROLOGY

U.S. Army Corps of Engineers Sacramento and San Joaquin River Basins Comprehensive Study

The Sacramento and San Joaquin River Basins Comprehensive Study is a joint effort by the State Reclamation Board and the U.S. Army Corps of Engineers (USACE), in coordination with federal, state, and local agencies, groups, and organizations in California's Central Valley, to develop a comprehensive plan for flood damage reduction and environmental restoration for the Sacramento and San Joaquin River basins. The comprehensive study is more of a regionwide planning effort than a regulatory program; however, consistency with its goals and objectives is important for any project affecting flood control in the Sacramento-San Joaquin River basins. The proposed URSP project is in the Lower San Joaquin River Region of the comprehensive study area.

San Joaquin County General Plan 2010

The San Joaquin County General Plan 2010 (County General Plan) includes the following policies under Stormwater Drainage and Flood Hazard Elements:

Stormwater Drainage

The following shall be minimum requirements for stormwater drainage facilities for the approval of tentative maps and may also be necessary for other discretionary applications:

- ▶ Public drainage system, with a terminal drainage unless a Master Drainage/Special Purpose Plan permits retention ponds.
- ▶ Public stormwater drainage systems shall be provided by either existing public agencies or new districts.
- ▶ In antiquated subdivisions a public drainage system shall be required for issuance of building permits for new residences on parcels less than two acres.
- ▶ Use of natural, non-structural stormwater drainage systems shall be encouraged to preserve and enhance the natural features of a site.
- ▶ Recreational and visual opportunities shall be considered in the design of stormwater ponds.
- ▶ Stormwater, if safe quality, shall be considered for use in the replenishment of the areas groundwater basin.

Water Resources

1. The County shall support coordinated efforts to obtain water supplies conjunctive use of ground and surface waters, and provisions for water storage facilities to meet expected water demand.
2. Substantial groundwater recharge areas, shall be kept in open space.
3. The replenishment of aquifers shall be supported to minimize the overdraft of groundwater.
4. The county shall support a multi-jurisdictional aquifer evaluation that involves all adjacent counties in analysis of groundwater supplies, demand, and use. If the results of the evaluation indicate that overdrafting is occurring, a coordinated effort should be undertaken to provide an alternate water source.
5. The County shall encourage water conservation.
6. The County shall support properly timed, sufficient flows in the rivers to maintain spawning grounds, fish migration, and resident fish populations.
7. The County shall encourage reduction of pavement area in project design and the use of permeable pavements where possible.

City of Manteca General Plan 2023

The City of Manteca General Plan 2023 includes the following policies to maintain adequate service in the City's drainage system and to protect both surface and groundwater resources from contamination:

Public Facilities and Services Element (Major Drainage)

Policy PF-P-27: The City shall require the dedication and improvement of drainage detention basins as a condition of development approval according to the standards of the Drainage Master Plan. The responsibility for the dedication and improvement of detention basins shall be based on the prorated share of stormwater runoff resulting from each development.

Policy PF-P-28: Storm drainage systems within new development areas shall include open drainage corridors where feasible to supplement or replace an underground piped drainage system. The drainage system would provide for short-term storm water detention, storm water conveyance for storm waters exceeding a 10-year event, storm water quality treatment, bike and pedestrian paths, and visual open space within neighborhoods. The width and length of the corridors would be determined by the storm water management requirements. The drainage systems would provide a pedestrian connection between parks and access to open space from residential neighborhoods. The

neighborhoods would be designed with homes from oriented to, rather than backing on the open space corridor.

City of Manteca Storm Drain Master Plan

The City is in the process of updating its Storm Drain Master Plan (SDMP). The City's SDMP is based on the City's Drainage Design Criteria supplemented by the SSJID's requirements and standards, San Joaquin County's Improvement Standards, and the County Hydrology Manual. These standards are further supplemented by design practices of other cities and counties and by the California Stormwater Quality Association Stormwater Best Management Practice Handbook (City of Manteca in prep.).

The policies and criteria included in the SDMP are designed to guide and set minimum standards for the design of storm drainage conveyance, retention facilities, and drainage pump stations within the City. Storm drain design must conform to the City's current SDMP and the City's standard Plans and Specifications. The SMDP requires drainage studies to be submitted and accepted by the Public Works Department prior to completion of a tentative subdivision or parcel map.

The SDMP requires all new development to provide drainage plans that do not adversely affect adjacent properties and that allow all properties within a given watershed an appropriate means of discharging surface runoff. The storm drainage design standards for both the City and the County require that a drainage report be prepared for all subdivisions greater than 25 acres in size. The report must include maps showing drainage basins relative to the project and subbasins within the project, with catch basin and inlet locations, and calculations of design runoff before and after subdivision development. Hydraulic calculations for depth of flow and quantity of runoff, pipe sizing, pump stations, and detention/retention basins must be included in the drainage report. All urban development within the City is required to be protected from flooding.

The City's draft SDMP includes the following drainage requirements and design standards relevant to the project (Items 1 through 4 are also included in the adopted current SDMP [City of Manteca 1986]):

1. all stormwater improvements shall comply with the requirements of the SSJID agreement with the City;
2. operation of stormwater facilities shall comply with SSJID requirements to eliminate uncontrolled inflows to drains and laterals;
3. drawings of any proposed crossing of storm drains discharging to or passing under SSJID Drains or Laterals must be submitted for approval by SSJID prior to construction;
4. pump stations shall be designed with backup pumps;

5. detention basins and pump stations shall be designed to accommodate 48-hour, 100-year storm flows;
6. storm drain pipes shall be 12 inches or larger in diameter; and
7. minimum separation distance between the bottom of detention basins and the high groundwater level shall be 2 feet unless an impermeable liner is provided and approved.

GROUNDWATER HYDROLOGY

California groundwater law is extremely complicated because of the variety of groundwater rights recognized in the state. Groundwater is classified as either a subterranean stream or percolating groundwater. A subterranean stream exists when the flow of groundwater is confined to a known and defined subsurface channel. Groundwater not flowing as a subterranean stream is classified as percolating groundwater. Subterranean streams are subject to surface water law, which recognizes riparian and appropriative rights, and are regulated by the SWRCB. Percolating groundwater is subject to general court-enforced principles of groundwater law, which recognizes overlying and appropriative rights. This latter category of groundwater can be regulated by ordinances adopted at the local level but is generally not subject to SWRCB regulation or oversight.

WATER QUALITY

Federal Clean Water Act

The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act of 1972 (CWA) is the primary federal law that governs and authorizes water quality control activities by the EPA as well as the states. Various elements of the CWA address water quality. These are discussed below. Wetland protection elements administered by the USACE under Section 404 of the CWA, including permits to dredge or fill wetlands, are discussed in Section 4.5, Biological Resources.

Water Quality Criteria and Standards

Under federal law, the EPA has published water quality regulations under Volume 40 of the Code of Federal Regulations (40 CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question and (2) criteria that protect the designated uses. Section 304(a) requires the EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. In California, the EPA has designated the SWRCB and its nine regional water quality control boards (RWQCBs) with authority to identify beneficial uses and adopt applicable water quality objectives.

National Pollutant Discharge Elimination System Permit Program

The National Pollutant Discharge Elimination System (NPDES) permit program was established in the CWA to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

In November 1990, the EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges. Phase 1 of the permitting program applied to municipal discharges of stormwater in urban areas where the population exceeded 100,000 persons. Phase 1 also applied to stormwater discharges from a large variety of industrial activities, including general construction activity if the project would disturb more than 5 acres. Phase 2 of the NPDES stormwater permit regulations, which became effective in March 2003, required that NPDES permits be issued for construction activity for projects that disturb between 1 and 5 acres. Phase 2 of the municipal permit system (known as the NPDES General Permit for Small MS4s) requires small municipal areas of less than 100,000 persons to develop stormwater management programs. The RWQCBs in California are responsible for implementing the NPDES permit system (see additional information below).

Section 401 Water Quality Certification or Waiver

Under Section 401 of the CWA, an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the United States) must first obtain a certificate from the appropriate state agency stating that the fill is consistent with the state's water quality standards and criteria. In California, the authority to either grant water quality certification or waive the requirement is delegated by the SWRCB to the nine RWQCBs.

Section 303(d) Impaired Waters List

Refer to the discussion in Environmental Setting, above.

State Laws and Regulations

In California, the SWRCB has broad authority over water quality control issues for the state. The SWRCB is responsible for developing statewide water quality policy and exercises the powers delegated to the state by the federal government under the CWA. Other state agencies with jurisdiction over water quality regulation in California include the California Department of Health Services (DHS) (for drinking water regulations), the California Department of Pesticide Regulation, the California Department of Fish and Game (CDFG), and the Office of Environmental Health and Hazard Assessment.

Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The regional boards are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The Central Valley RWQCB is responsible for the water bodies in the project vicinity.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969 is California's statutory authority for the protection of water quality. Under the act, the state must adopt water quality policies, plans, and objectives that protect the state's waters for the use and enjoyment of the people. The act sets forth the obligations of the SWRCB and RWQCBs to adopt and periodically update water quality control plans (Basin Plans). Basin Plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The act also requires waste dischargers to notify the RWQCBs of their activities through the filing of Reports of Waste Discharge (RWD) and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, Section 401 water quality certifications, or other approvals. The RWQCBs also have authority to issue waivers to RWD/WDRs for broad categories of "low threat" discharge activities that have minimal potential for adverse water quality effects when implemented according to prescribed terms and conditions.

Water Quality Control Plan for the Sacramento-San Joaquin River Basins

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), adopted by the Central Valley RWQCB in 1998, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and San Joaquin River basins, including the Delta. State and federal laws mandate the protection of designated "beneficial uses" of water bodies. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050[f]). Additional protected beneficial uses of the San Joaquin River include groundwater recharge and fresh water replenishment.

The Basin Plan contains specific narrative and numeric water quality objectives for a number of physical properties (e.g., temperature, turbidity, and suspended solids), biological constituents (e.g., coliform bacteria), and chemical constituents of concern, including inorganic parameters, trace metals, and organic compounds. Water quality objectives for toxic priority pollutants (i.e., select trace metals and synthetic organic compounds) are included in the Basin Plan and the California Toxics Rule (CTR) that was adopted in May 2000.

1995 Bay-Delta Water Quality Control Plan

The Central Valley Project and State Water Project are currently responsible for maintaining water quality in the Delta to standards established by the SWRCB as stipulated in the 1995

Bay-Delta Water Quality Control Plan (Bay-Delta Plan). Among the various criteria described in the Bay-Delta Plan are numeric objectives for water quality constituents (salinity and dissolved oxygen), numeric operational constraints for the CVP and SWP, a narrative objective to protect salmon, and a narrative objective to protect brackish tidal marshes in Suisun Marsh. The Bay-Delta Plan is the substantive regulatory authority over Delta hydrologic conditions. Compliance with the standards is maintained, in part, by regulating the releases from CVP and SWP reservoirs upstream of the Delta. During certain months of certain years, a major portion of inflow to the Delta is affected by CVP and SWP regulation.

NPDES Permit System and WDRs

The SWRCB and Central Valley RWQCB have adopted specific NPDES permits for a variety of activities that have potential to discharge wastes to waters of the state. The SWRCB's statewide stormwater permit for general construction activity (Order 99-08-DWQ, as amended) is applicable to all land-disturbing construction activities that would disturb more than 1 acre. The Central Valley RWQCB's general NPDES permit for construction dewatering activity (Order 5-00-175) authorizes direct discharges to surface waters up to 250,000 gallons per day for no more than a 4-month period each year. The NPDES permit requires submittal to the Central Valley RWQCB a Notice of Intent (NOI) to discharge and implementation of best management practices (BMPs) to minimize those discharges. The Central Valley RWQCB may also issue site-specific WDRs, or waivers to WDRs, for certain waste discharges to land or waters of the state. In particular, Central Valley RWQCB Resolution R5-2003-0008 identifies activities subject to waivers of WDRs and/or WDRs for a variety of activities, including minor dredging activities and construction dewatering activities that discharge to land.

Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce nonstormwater discharges to storm sewer systems and other waters. The permit also requires dischargers to consider the use of permanent postconstruction BMPs that would remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements. In response to a court decision, the Central Valley RWQCB also implemented mandatory water quality sampling requirements in Resolution 2001-046 for visible and nonvisible contaminants in discharges from construction activities. Water quality sampling is now required if the activity could result in the discharge of turbidity or sediment to a water body that is listed as impaired under Section 303(d) because of sediment or siltation, or if a release of a nonvisible contaminant occurs. Where such pollutants are known or should be known to be present and have the potential to contact runoff, sampling and analysis is required. NPDES permits require the implementation of design and operational BMPs to reduce the level of contaminant runoff. Types of BMPs include source controls, treatment controls, and site planning measures.

Discharges subject to the SWRCB's NPDES general permit for construction activity must develop and implement a stormwater pollution prevention plan (SWPPP). The SWPPP includes a site map and description of construction activities and identifies the BMPs that would be employed to prevent soil erosion and discharge of other construction-related

pollutants (e.g., petroleum products, solvents, paints, cement) that could contaminate nearby water resources. A monitoring program is generally required to ensure that BMPs are implemented according to the SWPPP and are effective at controlling discharges of stormwater-related pollutants.

Safe Drinking Water Act

Under the Safe Drinking Water Act (Public Law 93-523), passed in 1974, the EPA regulates contaminants of concern to domestic water supply. Contaminants of concern relevant to domestic water supply are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary Maximum Contaminant Levels (MCLs). MCLs and the process for setting these standards are reviewed triennially. Amendments to the SDWA enacted in 1986 established an accelerated schedule for setting drinking water MCLs.

The EPA has delegated to DHS the responsibility for administering California's drinking water program. DHS is accountable to the EPA for program implementation and for adopting standards and regulations that are at least as stringent as those developed by the EPA.

Title 22 of the California Code of Regulations (Article 16, Section 64449) also defines secondary drinking water standards, which are established primarily for reasons of consumer acceptance (i.e., taste) rather than because of health issues. For mineralization (i.e., TDS and chloride), the secondary standards are expressed in the form of recommended, upper, and short-term MCLs. The recommended, upper, and short-term MCLs for TDS are 500, 1,000, and 1,500 milligrams per liter (mg/l), respectively.

San Joaquin County General Plan 2010

The County General Plan Resources Element provides for the protection of surface water and groundwater and encourages wastewater reclamation efforts. These policies generally call for strict water quality maintenance and include the following (County of San Joaquin 1992):

Water Resources and Quality

1. Water quality shall meet the standards necessary for the uses to which the water resources are put.
2. Surface water and groundwater quality shall be protected and improved where necessary.

City of Manteca General Plan 2023

The City General Plan provides the following policies to protect both surface and groundwater resources from contamination (City of Manteca 2003c):

Resource Conservation Element (Water Quality)

Policy RC-P-11: Minimize sedimentation and loss of top soil from soil erosion.

Policy RC-P-12: Minimize pollution of waterways and other surface water bodies from urban runoff.

Policy RC-P-13: Protect the quality of Manteca's groundwater.

The City's General Plan also includes provisions that new commercial development with a significant potential to adversely affect San Joaquin River water quality or groundwater quality shall not be approved; that buffer areas between waterways and urban development shall be maintained to protect water quality and riparian areas; that BMPs shall be utilized to limit urban pollutants from entering water courses; and that compliance with the RWQCB regulations and standards to maintain and improve groundwater quality in Manteca shall be required.

City of Manteca Storm Drainage Master Plan

The SDMP (City of Manteca in prep.) provides for the City's compliance with Section 401(p) of the CWA or a Small Municipal Separate Storm Sewer System and with General Permit Number CA000004, Water Quality Order No. 2003-005-DWG. Development within the City is governed primarily by the requirements of Attachment 4 to the General Permit. Attachment 4 provides guidance and design standards required to achieve stormwater quality objectives. The guidance standards include:

- ▶ Receiving Water Limitations
- ▶ Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the San Joaquin River Basin Plan.

Design standards include several structural and nonstructural BMPs to treat storm water runoff. BMPs included in the City's design standards have been implemented as part of the proposed project and are listed below in section 4.9.3.

4.9.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

The environmental analysis for hydrology and water quality was based largely on documents and plans prepared specifically for the project. Background information included in the recent Manteca General Plan Draft EIR (City of Manteca 2003a) was also used to the degree it was applicable to the project. The project's hydrology and water quality effects were compared to environmental baseline conditions (i.e., existing conditions at the time the NOP was prepared) to determine impacts. The project represents a substantial change in land use in the

URSP site, transforming the site from primarily agricultural production to mixed-use residential and commercial development. The project site is located outside the 100-year floodplain (i.e., protected from the 100-year flood by the east levee of the San Joaquin River). Therefore, the project would not require levee or other flood control improvements.

The Project Area Storm Drain Master Plan (Union Ranch/Pulte 2004) describes the proposed drainage facilities that would be constructed to safely control and convey stormwater runoff in accordance with City policies and procedures. Currently, the City of Manteca is updating its Storm Drain Master Plan. Specific data on the extent of improvements to existing SSJID facilities is not available at this time. However, enough data is available to determine general drainage plan design.

The Project Area Storm Drain Master Plan includes permanent water quality features (BMPs) designed in conformance with the standards of the RWQCB for the Central Valley Region, the City of Manteca, and the SSJID (Union Ranch/Pulte 2004). Therefore, for purposes of this analysis, these BMPs are assumed to be an element of the project because they are specifically outlined in the URSP. The following BMPs which are consistent with the City's SDMP (City of Manteca in prep.) would be implemented as an element of the project.

- ▶ **Peak Storm Water Runoff Discharge Rates.** Post-development peak storm water runoff discharge rates shall not exceed the estimated pre-development rate for developments where the increased peak storm water discharge rate would result in increased potential for downstream erosion.
- ▶ **Conserve Natural Areas.** If applicable, the following items are required and must be implemented in the site layout during the subdivision design and approval process, consistent with applicable General Plan and Local Area Plan policies:
 - Concentrate or cluster Development on portions of a site while leaving the remaining land in a natural undisturbed condition.
 - Limit clearing and grading of native vegetation at a site to the minimum amount needed to build lots, allow access, and provide fire protection.
 - Maximize trees and other vegetation at each site by planting additional vegetation, clustering tree areas, and promoting the use of native and/or drought tolerant plants.
 - Promote natural vegetation by using parking lot islands and other landscaped areas.
 - Preserve riparian areas and wetlands.
- ▶ **Minimize Storm Water Pollutants of Concern.** Storm water runoff from a site has the potential to contribute oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens to the storm water conveyance system. The development must be designed so as to minimize, to the maximum extent practicable, the introduction of pollutants of concern that may result in significant impacts, generated from site runoff of directly connected

impervious areas (DCIA), to the storm water conveyance system as approved by the building official. Pollutants of concern consist of any pollutants that exhibit one or more of the following characteristics: current loadings or historic deposits of the pollutant are impacting the beneficial uses of a receiving water, elevated levels of the pollutant are found in sediments of a receiving water and/or have the potential to bioaccumulate in organisms therein, or the detectable inputs of the pollutant are at concentrations or loads considered potentially toxic to humans and/or flora and fauna.

In meeting this specific requirement, “minimization of the pollutants of concern” would require the incorporation of a BMP or combination of BMPs best suited to maximize the reduction of pollutant loadings in that runoff to the Maximum Extent Practicable. Those BMPs best suited for that purpose are those listed in the California Stormwater Quality Association Best Management Practices Handbooks; Caltrans Storm Water Quality Handbook: Planning and Design Staff Guide; Manual for Storm Water Management in Washington State; The Maryland Stormwater Design Manual; Florida Development Manual: A Guide to Sound Land and Water Management; Denver Urban Storm Drainage Criteria Manual, Volume 3 – Best Management Practices and Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters, USEPA Report No. EPA-840-B-92-002, as “likely to have significant impact” beneficial to water quality for targeted pollutants that are of concern at the site in question. However, it is possible that a combination of BMPs not so designated, may in a particular circumstance, be better suited to maximize the reduction of the pollutants.

- ▶ **Protect Slopes and Channels.** Project plans must include BMPs consistent with local codes, ordinances, or other regulatory mechanism and the Design Standards to decrease the potential of slopes and/or channels from eroding and impacting storm water runoff:
 - Convey runoff safely from the tops of slopes and stabilize disturbed slopes.
 - Utilize natural drainage systems to the maximum extent practicable.
 - Stabilize permanent channel crossings.
 - Vegetate slopes with native or drought tolerant vegetation, as appropriate.
 - Install energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels in accordance with applicable specifications to minimize erosion, with the approval of all agencies with jurisdiction, e.g., the U.S. Army Corps of Engineers and the California Department of Fish and Game.

- ▶ **Provide Storm Drain System Stenciling and Signage.** Storm drain stencils are highly visible source controls that are typically placed directly adjacent to storm drain inlets. The stencil contains a brief statement that prohibits the dumping of improper materials into the storm water conveyance system. Graphical icons, either illustrating anti-dumping symbols or images of receiving water fauna, are effective supplements to the anti-dumping message.

All storm drain inlets and catch basins within the project area must be stenciled with prohibitive language (such as: “NO DUMPING – DRAINS TO RIVER”) and/or graphical icons to discourage illegal dumping. Signs and prohibitive language and/or graphical icons, which prohibit illegal dumping, must be posted at public access points along channels and creeks within the project area. Legibility of stencils and signs must be maintained.

- ▶ **Properly Design Outdoor Material Storage Areas.** Outdoor material storage areas refer to storage areas or storage facilities solely for the storage of materials. Improper storage of materials outdoors may provide an opportunity for toxic compounds, oil and grease, heavy metals, nutrients, suspended solids, and other pollutants to enter the storm water conveyance system. Where proposed project plans include outdoor areas for storage of materials that may contribute pollutants to the storm water conveyance system, the following Structural or Treatment BMPs are required:
 - Materials with the potential to contaminate storm water must be: (1) placed in an enclosure such as, but not limited to, a cabinet, shed, or similar structure that prevents contact with runoff or spillage to the storm water conveyance system; or (2) protected by secondary containment structures such as berms, dikes, or curbs.
 - The storage area must be paved and sufficiently impervious to contain leaks and spills.
 - The storage area must have a roof or awning to minimize collection of storm water within the secondary containment area.
- ▶ **Properly Design Trash Storage Areas.** A trash storage area refers to an area where a trash receptacle or receptacles (dumpsters) are located for use as a repository for solid wastes. Loose trash and debris can be easily transported by the forces of water or wind into nearby storm drain inlets, channels, and/or creeks. All trash container areas must meet the following Structural or Treatment Control BMP requirements (individual single family residences are exempt from these requirements):
 - Trash container areas must have drainage from adjoining roofs and pavement diverted around the area(s).
 - Trash container areas must be screened or walled to prevent offsite transport of trash.
- ▶ **Provide Proof of Ongoing BMP Maintenance.** Improper maintenance is one of the most common reasons why water quality controls would not function as designed or which may cause the system to fail entirely. It is important to consider who would be responsible for maintenance of a permanent BMP, and what equipment is required to perform the maintenance properly. As part of project review, if a project applicant has included or is required to include, Structural or Treatment Control BMPs in project plans, the Permittee shall require that the applicant provide verification of maintenance provisions through such means as may be appropriate, including, but not limited to legal agreements, covenants, CEQA mitigation requirements and/or Conditional Use Permits.

For all properties, the verification would include the developer's signed statement, as part of the project application, accepting responsibility for all structural and treatment control BMP maintenance until the time the property is transferred and, where applicable, a signed agreement from the public entity assuming responsibility for Structural or Treatment Control BMP maintenance. The transfer of property to a private or public owner must have conditions requiring the recipient to assume responsibility for maintenance of any Structural or Treatment Control BMP to be included in the sales or lease agreement for that property, and would be the owner's responsibility. The condition of transfer shall include a provision that the property owners conduct maintenance inspection of all Structural or Treatment Control BMPs at least once a year and retain proof of inspection. For residential properties where the Structural or Treatment Control BMPs are located within a common area which would be maintained by a homeowner's association, language regarding the responsibility for maintenance must be included in the project's conditions, covenants and restrictions (CC&Rs). Printed educational materials would be required to accompany the first deed transfer to highlight the existence of the requirement and to provide information on what storm water management facilities are present, signs that maintenance is needed, how the necessary maintenance can be performed, and assistance that the Permittee can provide. The transfer of this information shall also be required with any subsequent sale of the property.

If Structural or Treatment Control BMPs are located within a public area proposed for transfer, they would be the responsibility of the developer until they are accepted for transfer by the County or other appropriate public agency. Structural or Treatment Control BMPs proposed for transfer must meet design standards adopted by the public entity for the BMP installed and should be approved by the County or other appropriate public agency prior to its installation.

- ▶ **Design Standards for Structural or Treatment Control BMPs.** The Permittees shall require that post-construction treatment control BMPs incorporate, at a minimum, either a volumetric or flow based treatment control design standard, or both, as identified below to mitigate (infiltrate, filter or treat) storm water runoff:
 - **Volumetric Treatment Control BMP**
 - The 85th percentile 24-hour runoff event determined as the maximized capture storm water volume for the area, from the formula recommended in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ ASCE Manual of Practice No. 87, (1998); or
 - The volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment by the method recommended in California Stormwater Best Management Practices Handbook – Industrial/ Commercial, (2003); or

- The volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for “treatment” that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.
- Flow Based Treatment Control BMP
 - The flow of runoff produced from a rain event equal to at least two times the 85th percentile hourly rainfall intensity for the area; or
 - The flow of runoff produced from a rain event that would result in treatment of the same portion of runoff as treated using volumetric standards above.
- ▶ **Parking Lots Properly Design Parking Area.** Parking lots contain pollutants such as heavy metals, oil and grease, and polycyclic aromatic hydrocarbons that are deposited on parking lot surfaces by motor-vehicles. These pollutants are directly transported to surface waters. To minimize the offsite transport of pollutants, the following design criteria are required:
 - Reduce impervious land coverage of parking areas.
 - Infiltrate or treat runoff.

THRESHOLDS OF SIGNIFICANCE

The project would result in significant hydrology and water quality impacts if it would:

- ▶ violate any water quality standards or waste discharge requirements, including violating NPDES waste discharge or stormwater runoff requirements, state or federal antidegradation policies, enforceable water quality standards contained in the Central Valley RWQCB Basin Plan or statewide water quality control plans, or federal rulemakings to establish water quality standards in California;
- ▶ substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
- ▶ create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; and/or
- ▶ substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a substantial lowering of the local groundwater table level.
- ▶ substantially degrade water quality;

- ▶ place housing within a 1-in-100-AEP flood hazard area as mapped on a federal flood hazard boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- ▶ place within a 1-in-100-AEP flood hazard area structures that would impede or redirect flood flows; or
- ▶ expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

IMPACT ANALYSIS

Impact
4.9-1

Temporary Construction-Related Water Quality Effects. *Temporary construction-related ground disturbances within the URSP site could result in the discharge of stormwater and nonstormwater discharges containing pollutants to drainage systems and ultimately to the San Joaquin River. The discharge of pollutants to local waterways would be a **potentially significant** construction-related water quality impact.*

Construction activities within the URSP site would occur across the entire 553 acre site. Grading, earth moving, excavation and utility installation, infrastructure development, and building construction would disturb the existing vegetative cover, soil, and drainage systems over the entire plan area. Construction activities are anticipated to occur on and off in various locations in several phases. During this period, disturbed sites, throughout the area, would be subject to exposure to wind erosion, rainfall, and winter stormwater runoff events. In particular, construction activities could result in substantial soil erosion and stormwater discharges of suspended solids, increased turbidity, and potential mobilization of other pollutants from project construction sites as contaminated runoff or direct discharges to drainage channels. Although the project site is relatively flat and the potential for soil erosion is considered low, intense rainfall and associated stormwater runoff could result in short periods of sheet erosion within areas of exposed or stockpiled soils. If this erosion is uncontrolled, these soil materials could cause sedimentation and blockage of nearby drainage channels. Further, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase the potential for runoff and erosion. Consequently, the potential surface water quality impacts on offsite drainage channels from proposed construction activities would be potentially significant.

Impact
4.9-2

Long-Term Water Quality Effects of Urban Runoff. *Although the project would convert land that is primarily agricultural to residential and commercial uses and thereby change the amount and timing of potential waste discharges in stormwater runoff, the combination of nonstructural and structural BMPs proposed for the new stormwater drainage system would reduce the overall volume of potential contaminant discharges. This would be a **less-than-significant** impact.*

The predominant existing land use in the URSP site is agriculture. In general, irrigation and stormwater runoff from agricultural lands (including the URSP site) are not considered to be of high quality and contain a variety of constituents/contaminants in relatively high

concentrations. In addition, agricultural runoff, including in the URSP site, is not typically treated prior to discharge. Conversion of agricultural land within the URSP site to urban land uses would alter the types, quantities, and timing of contaminant discharges in stormwater runoff relative to existing conditions. If this stormwater runoff is uncontrolled and not treated, the water quality of the discharge could adversely affect offsite drainage channels and downstream waterbodies.

Residential activities could contribute to water quality degradation through maintenance of yards associated with the use of fertilizers, herbicides, and pesticides; motor vehicle operation and maintenance; and animal waste. In addition, an increase in impervious surfaces would have the potential to increase the volume of runoff discharges from the project site. Runoff from developed uses typically contains contaminants such as oils, grease, fuel, antifreeze, byproducts of combustion (such as lead, cadmium, nickel, and other metals), nutrients, sediment, and other pollutants. Implementation of the project could result in discharge of pollutants to downstream water bodies including the San Joaquin River.

Stormwater runoff generated within the URSP site would be collected in new drainage systems that would include structural water quality treatment measures (i.e., basins and swales) consistent with the City's standards and ordinances and as outlined in the City's Storm Drain Master Plan. Stormwater would pass through these treatment measures and continue to the detention facilities, where it would then be pumped to SSJID facilities. The structural BMPs listed above, which are designed to remove pollutant constituents from runoff, would maintain runoff water quality. Implementation of nonstructural BMPs, through various public education and outreach programs maintained by the City under the municipal NPDES stormwater permit, would also serve to limit the types, amounts, and likely discharges of contaminants into stormwater. Because the project includes BMPs to treat stormwater discharged from the site, the project's urban runoff impacts would be less-than-significant.

Impact
4.9-3

Effects on Potential Onsite and Offsite Flooding Risk from Increased Stormwater Runoff. *Implementation of the URSP project would increase the area of impervious surfaces onsite increasing surface runoff and discharge. The increased surface runoff could result in an increased potential for offsite and onsite flooding. However, the URSP project includes a stormwater runoff collection system, including drainage detention facilities, to provide onsite stormwater storage and discharge capacity sufficient to protect the URSP site during a 48-hour, 100-year flood event and avoid increases in offsite flooding. Therefore, this would be a **less-than-significant** impact.*

Proposed development of the URSP site would increase the area of impervious surfaces (e.g., buildings, paved roadways, parking surfaces) onsite, which would increase both the total volume and peak discharge rate of stormwater runoff generated at the project site. If not properly accommodated, increased stormwater runoff could result in localized flooding on the URSP site and adjacent properties. Also, if stormwater runoff from the project site were discharged in sufficient quantities during severe storm events, properties downstream of the project site could be exposed to increased flooding risk because of increased river flows.

The incremental increase in runoff generated at the project site and discharged offsite would not substantially increase flows in a manner that would cause flooding at or downstream of the project site because detention facilities would limit the discharge rate of the onsite runoff rate consistent with City standards.

The proposed drainage plan is designed to detain stormwater generated by the 48-hour, 100 year flood event on the project site, while limiting discharges as described above. The drainage system is designed to meet both drainage and discharge criteria and onsite flooding criteria. The proposed URSP drainage system would provide sufficient capacity to accommodate project-related stormwater volumes and would prevent stormwater-related flooding damage on the project site.

Because the URSP project includes a stormwater runoff collection and detention system sufficient to protect the project site and address protect against increase offsite flooding potential, this would be a less-than-significant impact.

Impact
4.9-4

Impacts to Groundwater. *The project would construct groundwater wells that would be incorporated within the City's conjunctive use water supply system as part of the South County Surface Water Supply Project. These wells would be located in the deep aquifer, would be part of a conjunctive use water supply, and are not anticipated to result in the substantial lowering (i.e., 10 feet or more) of local groundwater levels. However, the underlying groundwater aquifer may be unsuitable for potable uses. Therefore, the project would result in a **potentially significant** groundwater impact.*

The project would result in increased demand for water supply. To meet initial water supply demands, the project would include the construction of two new domestic water wells that would provide a total capacity of 1800 gallons per minute. Groundwater quality is assumed to be relatively uniform across the site, but there may be localized areas of unsuitable water quality. The two project-related wells are planned for areas that are anticipated to have suitable water quality; however, this can not be determined with certainty because well testing has not been performed. One of the wells would be constructed in the southwest corner of storm drain detention basin/Park A within the URSP site. The other well would be constructed in the northeast corner of the SCSWSP's water storage tank site (offsite), located on Lathrop Road east of Union Road.

Operation of the two groundwater wells could result in minor localized draw down effects (i.e., lowering of the groundwater table) near the proposed well locations, but are not expected to be substantial because these wells would draw water from the deeper aquifer and would be minimized through implementation of a conjunctive use water supply system in the City (i.e., SCSWSP), the impacts of which have been evaluated in the South County Surface Water Supply Project EIR (certified in May 2000). Groundwater modeling performed for the SCSWSP EIR indicates that over the long term groundwater storage and water levels would increase in the South San Joaquin Irrigation District region. The EIR concluded that with implementation of the SCSWSP Project "the long-term impact on the basins ground water elevations was determined to be negligible" and less than significant (SSJID 2000). The

proposed wells are not anticipated to result in the substantial lowering (i.e., 10 feet or more) of the local groundwater table.

Once online, the SCSWSP is expected to provide sufficient surface water supplies to meet the City's water demands. Upon completion of the SCSWSP, the project's groundwater wells would remain in place to supplement the City's water supply during dry years and to provide appropriate reliability and redundancy in the City's water supply system. Please refer to Section 4.10, Public Services and Utilities, for additional details regarding water supply.

Because underlying groundwater aquifer may be unsuitable for potable uses, the project would result in a potentially significant groundwater impact.

Impact
4.9-5

Reduction in Groundwater Recharge. *The URSP site does not serve as a substantial groundwater recharge area. Therefore, development of the site would result in a **less-than-significant** groundwater recharge impact.*

The project would result in increased impervious surfaces that may limit recharge of groundwater in the local area. The project interior lake would be lined and would not provide any recharge. The URSP site does not support streams or other features that could function as substantial groundwater recharge areas. The City of Manteca General Plan indicates that the project site is not located within an area that provides a substantial source of groundwater recharge (City of Manteca 2003a). Therefore, implementation of the project is not anticipated to substantially affect groundwater recharge rates in the local area. This would be a less-than-significant groundwater recharge impact.

4.9.4 MITIGATION MEASURES

No mitigation is necessary for the following less-than-significant impacts.

4.9-2: Long-term Water Quality Effects of Urban Runoff.

4.9-3: Effects on Potential Onsite and Offsite Flooding Risk from Increased Stormwater Runoff.

4.9-5: Reduction in Groundwater Recharge.

Mitigation is recommended for the following potentially significant impact:

4.9-1: Temporary Construction-related Water Quality Effects

The project applicant shall consult with the Central Valley RWQCB to acquire the appropriate regulatory approvals that may be necessary to obtain Section 401 water quality certification, SWRCB statewide NPDES stormwater permit for general construction activity, Central Valley RWQCB NPDES permit for construction dewatering activity, and any other necessary site-specific WDRs or waivers under the Porter-Cologne Act. As required under the NPDES stormwater permit for general construction activity, the project applicant shall prepare and submit the appropriate NOIs and prepare the SWPPP and any

other necessary engineering plans and specifications for pollution prevention and control. The SWPPP and other appropriate plans shall identify and specify the use of erosion and sediment control BMPs, means of waste disposal, implementation of approved local plans, nonstormwater management controls, permanent postconstruction BMPs, and inspection and maintenance responsibilities. The SWPPP would also specify the pollutants that are likely to be used during construction that could be present in stormwater drainage and nonstormwater discharges. A sampling and monitoring program would be included in the SWPPP that meets the requirements of SWRCB Order 99-08-DWQ to ensure that the BMPs are effective.

Construction techniques shall be identified that would reduce the potential for runoff, and the plan shall identify the erosion and sedimentation control measures to be implemented. The SWPPP shall also specify spill prevention and contingency measures, identify the types of materials used for equipment operation, and identify measures to prevent or clean up spills of hazardous materials used for equipment operation and hazardous waste. Emergency procedures for responding to spills shall also be identified. BMPs identified in the SWPPP shall be used in all subsequent site development activities. The SWPPP would identify personnel training requirements and procedures that would be used to ensure that workers are aware of permit requirements and proper installation and performance inspection methods for BMPs specified in the SWPPP. The SWPPP shall also identify the appropriate personnel responsible for supervisory duties related to implementation of the SWPPP. All construction contractors shall retain a copy of the approved SWPPP on the construction site.

- ▶ The project applicant shall also prepare and submit an NOI and acquire authorization for the Central Valley RWQCB NPDES permit for construction dewatering activities that may be necessary for foundation and utility installations within the URSP site.

Under SWRCB Order 99-08-DWQ, as amended, the SWRCB has determined that implementation of a SWPPP, the BMPs identified in the SWPPP, and the monitoring and sampling program required in the SWPPP are considered to meet the water quality requirements of the Porter-Cologne Act, barring a violation identified by the monitoring or sampling procedures.

4.9-4: Impacts to Groundwater

- ▶ The project applicant shall conduct groundwater testing in consultation with the City to ensure that groundwater beneath the site is suitable for potable uses and would meet applicable drinking water quality standards with treatment (if necessary). If testing concludes that well groundwater quality does not meet applicable standards, the applicant, in consultation with the City, shall locate a suitable alternate well location within the project site first and at offsite locations if necessary. The siting and location of these wells shall be done in coordination the City Public Works Department.

Because it is unknown whether the proposed groundwater wells would result in a substantial drop in local groundwater elevations and no other feasible mitigation is available, for purposes of CEQA, this impact would be considered significant and unavoidable.

4.9.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the mitigation measures identified above, the project's hydrology and water quality impacts would be reduced to a less-than-significant level.

4.10 PUBLIC SERVICES AND UTILITIES

This section provides an overview of existing public services for the City of Manteca and the proposed project area, including water supply, wastewater service, solid waste management, electrical service, natural gas service, telephone service, fire protection, police service, public schools, and parks. Impacts are evaluated in relation to increased demand for public services associated with the URSP project and actions needed to provide the services that could potentially lead to physical environmental effects. Stormwater management is addressed in Section 4.9, Hydrology and Water Quality.

4.10.1 ENVIRONMENTAL SETTING

WATER SUPPLY

Groundwater is presently the only source of domestic water for the City. The City operates a system of wells interconnected with a transmission and distribution pipeline. Well depths range from 155 feet to 400 feet, and individual capacities of the operating wells range from 380 gallons per minute (gpm) to 2,300 gpm. The closest existing groundwater well is located at Chadwick Square Park, approximately 0.4 mile south of the project site. Groundwater aquifers underlying the City extend to depths in excess of 600 feet, and the strata slope from the hills east of the City downward to the west. The groundwater basin safe yield was estimated at 1.0 acre-foot per acre per year.

Area groundwater levels are buoyed by the proximity of the Delta channels to the west. Groundwater recharge comes from rainfall, irrigation of agricultural lands surrounding the City, and infiltration from streams flowing west out of the Sierra Nevada. This recharge occurs in areas with permeable materials that allow filtration of water along streams, alluvial fans, and foothill areas; however, none of these geographic features are present within the City, and there are no notable groundwater recharge areas within the local area.

The City's 2000 Urban Water Management Plan (2002) defines future water supply, storage, and delivery for the City. For water development planning, the City uses an annual growth rate of 3.9 percent, which is the maximum allowable growth rate specified in the City General Plan. The actual growth rate is expected to be approximately 2.7 percent annually (City of Manteca 2003). Table 4.10-1 shows the projected water use in the City based on the maximum growth rate.

Projection Year	Water Use (acre-feet per year [AFY])
2005	15,270
2010	18,480
2015	22,380
2020	27,100
2025	35,000

Source: City of Manteca 2002

The City is currently participating in the South County Surface Water Supply Project (SCSWSP). In 1995, the City entered into an agreement with the South San Joaquin Irrigation District and the cities of Lathrop, Tracy, and Escalon to jointly study the issues and related costs associated with developing a surface water treatment plant for the affected areas. This project now includes the construction of a water treatment plant at Woodward Reservoir and 40 miles of pipeline to deliver treated water to each of the partner cities. When complete in June 2005, the SCSWSP would deliver up to 12,000 AFY of treated surface water to the City through 2010. According to the Manteca 2000 Urban Water Management Plan, a subsequent phase would increase the City's water allocation to 18,500 AFY (City of Manteca 2002).

The City's water management plan recommends a conjunctive use of surface water from the SCSWSP and groundwater. Surface water supply would be used as the base supply and groundwater facilities would be used to supplement the surface supply and to meet peak water demands. City wells would be used only as necessary. Table 4.10-2 shows the projected future annual water supply distribution for the City.

Projection Year	Annual Water Use (acre-feet)		
	Surface Water	Groundwater	Total
2005	9,900	8,100	18,000
2010	12,000	10,000	22,000
2015	14,200	12,200	26,400
2020	16,300	14,400	30,700

Source: City of Manteca 2002

The City's level of service goal for water is to supply an average of 200 gallons per day per person at pressures no less than 40 pounds per square inch (psi) under average conditions, and 20 psi under emergency and peak demand conditions.

WASTEWATER

The City provides sanitary sewer service through a collection network of gravity and force main sewer lines. Several pump stations and lift stations throughout the City augment this sewer line network. This conveyance system terminates at the City of Manteca Wastewater Quality Control Facility (WQCF). The WQCF has a current capacity of 6.95 million gallons per day (mgd) and treats an average of 6 mgd. An agreement with the adjacent City of Lathrop allocates 14.7% of treatment capacity to Lathrop. WQCF treats wastewater by a secondary activated sludge process. The facility would be expanded to a capacity of 9.87 mgd by December 2005 and has an ultimate expansion capacity of 25 mgd. Treated wastewater (secondary effluent) from the Manteca WQCF is disinfected and then most of the water is discharged into the San Joaquin River. A portion of the secondary effluent is used to irrigate crops.

The City's level of service goal for wastewater is to collect and treat an average of 325 gallons per day (gpd) per dwelling unit equivalent. This level of service standard is applicable to the URSP project site.

The City of Manteca Sewer Master Plan (1993) was prepared to ensure that sewer facilities are adequate as the City grows and develops. This plan defines sewer facilities required to meet the City's level of service standard with respect to forecasted development through 2014. The master plan identifies and recommends the extension of a sewer trunk line north to a point adjacent to the URSP site.

SOLID WASTE DISPOSAL

Pick up and disposal of solid waste is provided by the City of Manteca Solid Waste Division. The City provides the following solid waste services: residential, biweekly curbside pickup of compost materials; leaf and Christmas tree pickup; oil collection pickup; commercial recycling; and household hazardous waste collection.

Wastes are transported to the Lovelace Transfer Station. Recyclable materials are stored at this facility, while other solid waste and green waste is transported to the Forward Landfill on Austin Road. At present, the Forward Landfill is permitted to accept 1,300 cubic yards per day (cypd) of solid waste. The landfill has a total capacity of 51 million cubic yards, and a remaining capacity of 1.6 million cubic yards. Currently, the landfill has a closure date of 2053 (California Integrated Waste Management Board 2004a).

Assembly Bill 939 (AB 939) requires local agencies to implement source reduction, recycling, and composting (see discussion under "Regulatory Context"). The countywide Integrated Waste Management Plan (IWMP) requires recycling and other programs, which are required to ultimately result in a 50 percent diversion away from landfills, thereby extending the life of landfills.

ELECTRICITY AND NATURAL GAS

Pacific Gas and Electric (PG&E) is responsible for provision of electricity to the City. PG&E delivers approximately 81,923 million kilowatt-hours (kWh) of electricity to its 13 million customers throughout the 70,000-square-mile service area in northern and central California. The service area is divided into seven distribution areas, with Manteca located in the Stockton Division of PG&E's Operations, Maintenance, and Construction Area 5 (EDAW 2002). PG&E is also responsible for the provision of natural gas to the City. The nearest gas and electrical feeder mains are located on the south side of Lathrop Road.

FIRE PROTECTION

The project site is in the service area of the Manteca Fire Department (MFD). Fire Station 243, approximately 1.8 miles south of the project site, would provide first-response service to the project area, initially. The first-response goal in the MFD is 5 minutes for all emergencies (MFD 2004). The following information on the MFD was obtained from the department's

website (MFD 2004). The department's service area covers approximately 60 square miles in southern San Joaquin County. The MFD currently employs 36 career personnel and 12 reserve firefighters. The MFD maintains three fire stations:

- ▶ Station 241 – 290 South Powers Avenue, Manteca
- ▶ Station 242 – 1154 South Union Road, Manteca
- ▶ Station 243 – 399 West Louise Avenue, Manteca

The MFD is equipped with three engines, three reserve engines, one rescue unit, one command vehicle, seven staff vehicles, and one pickup truck. Additional assistance can be summoned under mutual aid and automatic aid agreements with surrounding cities, the County, and state firefighting agencies.

An important requirement in fire suppression is adequate fire flow, which is the amount of water, expressed in gallons per minute (gpm), available to control a given fire and the duration this flow is available. The total fire flow needed to extinguish a structural fire is determined by a variety of factors, including building design, internal square footage, construction materials, dominant use, height, number of floors, and distance to adjacent buildings. Minimum requirements for available fire flow at a given building are dependent on standards set in the California Fire Code. Generally, fire flow requirements for the type of development associated with the URSP project are 1,250 gpm for low-density residential, 2,500 gpm for commercial, and 3,500 gpm for industrial development (measured at 20 psi) with a minimum 2-hour duration.

The MFD provides public fire education, fire prevention, organized and efficient response to fires, first response to hazardous materials incidents, and basic level medical response. Medically-related responses account for slightly over 50 percent of all requests for service. To maintain a standard level of care, all fire personnel are trained and certified Emergency Medical Technician-1(EMT) and EMT-D (defibrillation). The MFD has adopted an EMT-defibrillation program. This program allows the fire personnel to deliver an electrical shock to victims of cardiac arrest while also performing cardiopulmonary resuscitation. All medical patients in the MFD service area are transported to one of two local hospitals, depending on proximity and available space.

POLICE SERVICES

The Manteca Police Department is a full service law enforcement agency comprised of over 70 sworn staff and 30 civilian support staff. The department is organized into two divisions: Operations, and Services. Operations is the largest division of the department and includes all uniformed officers and their support teams. Operations Division units include patrol, traffic, school resource officers, community service officers, special weapons and tactics (SWAT), crisis response team, mounted patrol, canine, gangs, and bomb squad. The Services Division includes all the teams and units that support the police function of the department, including dispatch, records, property and evidence, crime analysis, and animal services. In addition, the department has more than 200 volunteers working with its officers and employees.

The department operates out of 1001 West Center Street, Manteca, approximately 2.3 miles south of the project site. The department uses a staffing ratio goal of one patrol officer to every 1,000 residents and is generally able to meet this goal (Manteca Police Department 2004.)

SCHOOLS

The Manteca Unified School District (MUSD) provides educational services in the City for grades K-12. MUSD serves approximately 22,500 students. The school district has experienced considerable growth in the past few years with an increase in student population levels of 1,200 children each year for the past 3 years. and The MUSD is operating at or near capacity for its elementary and high schools. With the introduction of year-round classes, the district can serve 20% more students than a traditionally scheduled school district. MUSD schools currently include 17 elementary schools, three high schools, two community day schools, and one continuation school. The teacher-student ratio is 1:20 for grades K-3 and 1:34 for grades 4-12.

The nearest elementary school is Neil Hafley Elementary School located at 849 North Gate in the City of Manteca, approximately 1.8 miles east Union Road and south of the URSP project site. Neil Hafley Elementary School had a student enrollment of 810 students during the 2002-2003 school year. This school can accommodate between 950 and 1,050 students annually (MUSD 2003a). The nearest high school is East Union High located at 1700 North Union Road, in the City of Manteca, approximately 0.5 mile south of the project site. East Union High had an enrollment of 2,200 students during the 2002-2003 school year. This school is currently at its enrollment capacity (MUSD 2003b).

The school district funds new facilities with 50% state and 50% local sources. Under state law, the district can receive local funding through developer impact fees, tax revenue from Mello-Roos districts, and general obligation (GO) bonds. For MUSD, developer impact fees constitute the major source of local funding for the district. Based on the provisions of Government Code §65996, developers can be charged a fee to help pay for the maintenance and repair of school facilities and that the fees constitute the exclusive means of both “considering” and “mitigating” school facilities impacts of projects and are “deemed to provide full and complete school facilities mitigation” (Government Code §65996[a] and [h]). Currently, the developer is charged \$3.90 per square foot for residential development and \$0.34 per square foot for commercial development in the district boundaries. Mello-Roos districts are areas, mainly new residential subdivisions, which have an additional voter-approved school tax imposed on them. The GO bonds require approval through a general vote by residents in the district boundary.

PARKS

The City currently provides 28 neighborhood and 5 community parks. Many parks are co-located with a small detention basin that serves the surrounding neighborhood. According to the City General Plan, the primary objective of park improvements is to provide recreational

amenities for all residents. A secondary objective is to provide space for public gatherings that may attract visitors to the community. Park facility standards include the provision of 1.5 acres of community park space and 3.5 acres of neighborhood park space per 1,000 residents. (City of Manteca 2003.) The City acquires and improves parks through collection of a development mitigation fee as authorized under the Subdivision Map Act.

4.10.2 REGULATORY SETTING

The San Joaquin County (County) General Plan 2010 (County of San Joaquin 1992) and the City of Manteca (City) General Plan identify goals, policies, and implementation programs associated with providing the public services addressed in this section. These plans provide guidance on the provision of utility services and on eliminating deficiencies and obstacles to the expansion of utility services to adequately serve existing and future development. In addition to the City and County general plans, state legislation ties proposed development to the availability of adequate long-term water supplies to serve the proposed project. These county, city, and state requirements, as they apply to each utility element, are summarized below.

SAN JOAQUIN COUNTY GENERAL PLAN

In the context of public services and utilities, development of the project would only occur if the site is annexed to the City. Once annexed, the project would be subject to compliance with the City's policies with regards to design and siting of public services and facilities, as the City would be responsible for providing or regulating the installation of these services. Therefore, county policies related to public services would not apply and are not discussed for this resource.

CITY OF MANTECA GENERAL PLAN

General

LU-P-3: The City shall encourage a pattern of development that promotes the efficient and timely development of public services and facilities.

ED-P-24: Public infrastructure adequate to serve planned economic growth should be available and properly phased.

ED-I-55: Collect appropriate fees from new development to provide necessary infrastructure.

Water Supply

PF-P-4: Secure sufficient sources of water to meet the needs of the existing community and planned residential and commercial growth.

PF-P-6: The City shall develop new water sources as necessary to serve new development.

PF-P-7: The City shall develop new water storage facilities and major distribution lines as necessary to serve new development.

PF-P-8: The City will provide water for future development to maintain a balance of jobs and housing.

PF-P-11: The City will develop and implement water conservation measures as necessary elements of the water system.

PF-P-12: The City shall continue to assess a water development fee on all new commercial, industrial, and residential development sufficient to fund systemwide capacity improvements. The water development fee schedule shall be periodically reviewed and revised as necessary.

PF-P-13: Ensure that all new development provides for and funds a fair share of the costs for adequate water distribution, including line extensions, easements, and plant expansions.

PF-P-17: The City of Manteca shall consider incremental increases in the demands on groundwater supply and water quality when reviewing development applications.

PF-I-3: The City shall require, as a condition of project approval, dedication of land and easements, or payments of appropriate fees and exactions, to help offset municipal costs of expansion of water treatment facilities and delivery systems.

PF-I-4: The City shall retain a water conservation ordinance requiring the installation of low-flush toilets, low-flow shower heads, and similar features in all new development.

PF-I-7: The City will encourage the use of recycled water for landscape irrigation where feasible, within the parameters of State and County Health Codes and standards.

Wastewater

PF-P-18: Ensure wastewater collection and treatment for all development in the City and the safe disposal of wastes.

PF-P-20: The City shall develop new sewage treatment and trunk line capacity as necessary to serve new development.

PF-P-24: Ensure that all new development provides for and funds a fair share of the costs for adequate sewer distribution, including line extensions, easements, and plant expansion.

Solid Waste Disposal

PF-P-31: The City will implement and enforce the provisions of its Source Reduction and Recycling Element.

Electricity, Natural Gas, and Telephone Services

PF-P-29: Ensure that reliable, adequate electrical service is available to all users in the City.

PF-I-17: The City will require undergrounding of utility lines in new development, and as areas are redeveloped, except where infeasible for operational reasons.

Fire Protection

PF-P-43: The City shall endeavor through adequate staffing and patrol arrangements to maintain minimum feasible police response time for fire and emergency calls.

PF-P-44: The City shall provide fire services to serve existing and projected population.

PF-I-25: The Planning Commission and City Engineer will review proposed residential developments to evaluate the accessibility for fire engines and emergency response.

Police Services

PF-P-39: The City shall endeavor through adequate staffing and patrol arrangements to maintain minimum feasible police response times for police calls.

PF-P-40: The City shall provide police services to serve existing and projected population.

PF-I-23: The Planning Commission and City Engineer will review proposed residential developments to evaluate the accessibility for police patrols and emergency response.

Parks

PF-P-46: The City shall expand the community and neighborhood park system with the goal of providing neighborhood park facilities within reasonable walking distance of all city residential areas.

PF-P-49: City park acquisition and development efforts shall be based on a goal of 5 acres of developed neighborhood and community parkland per 1,000 residents within city limits. The distribution of land between neighborhood and community parks shall be determined within the Parks and Recreation Master Plan.

PF-P-50: Neighborhood parks shall conform to the following general guidelines (specific details and standards to be determined within the Parks and Recreation Master Plan):

- ▶ The typical minimum size shall be set to support active and passive recreation activities.
- ▶ The typical service area for a neighborhood park is approximately ¼ mile walking distance.

- ▶ Neighborhood parks shall include a turf area above the basin flood line of sufficient area to be used for playgrounds, sports, picnic areas, and other recreational facilities.

PF-P-53: All new residential development will be required to pay a park acquisition and improvement fee, based on providing 5 acres per 1,000 residents, to fund system-wide improvements.

PF-P-54: The City shall require the provision of private open space and recreational facilities as part of new residential developments.

State Water Considerations

In addition to the County's and City's goals and policies, the State of California has legislation applicable to the CEQA consideration of larger projects. Senate Bill (SB) 610 (Section 21151.9 of the Public Resources Code and Section 10910 et seq. of the Water Code) requires the preparation of "water supply assessments" for large developments (defined generally as more than 500 dwelling units or nonresidential equivalent), which includes the URSP project. These assessments, prepared by "public water systems" responsible for serving project areas (here the City itself), address whether there are adequate existing or projected water supplies available to serve such projects, in addition to existing urban and agricultural demands and other anticipated development in the service area which the project is located. Where a water supply assessment concludes that insufficient supplies are available, the assessment must lay out the steps that would be required to obtain the necessary supply. The content requirements for the assessment include, but are not limited to, identification of the existing and future water suppliers and quantification of water demand, and supply by source in 5-year increments over a 20-year projection. This information must be provided for average normal, single-dry, and multiple-dry years. The absence of an adequate current water supply does not preclude project approval, but does require a lead agency to address a water supply shortfall in its project approval findings. Further, at the subdivision map level, if there are insufficient water supplies development may be precluded (see discussion of SB 221 below).

An SB 610 water supply assessment has been prepared for the URSP project (City of Manteca 2004). A copy of the assessment is provided in Appendix F. The conclusions of the assessment are summarized in the impact analysis portions of this section.

If the URSP is approved, additional, complementary statutory requirements, created by 2001 legislation known as SB 221 (Gov. Code Section 66473.7) would apply to the approval of tentative subdivision maps for more than 500 residential dwelling units. This statute requires the preparation of a water supply verifications prior to the approval of such tentative maps. To permit approval of such maps, the verifications must demonstrate that there is a "sufficient water supply" for the newly created residential lots. The law defines "sufficient water supply" as "the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that will meet the projected demand associated with the proposed subdivision, in addition to existing and planned future uses, including, but not limited to,

agricultural and industrial uses.” A number of factors must be considered in determining the sufficiency of projected supplies, including:

- (a) The availability of water supplies of a historical record of at least 20 years;
- (b) The applicability of an urban water shortage contingency analysis that includes action to be undertaken by the public water system in response to water supply shortages;
- (c) The reduction in water supply allocated to a specific water use sector under a resolution or ordinance adopted, or a contract entered into, by the public water system, as long as that resolution, ordinance, or contract does not conflict with statutory provision giving priority to water needed for domestic use, sanitation, and fire protection; and
- (d) The amount of water that the water supplier can reasonable rely on receiving from other water supply project, such as conjunctive use, reclaimed water, water conservation, and water transfer, including programs identified under federal, state, and local water initiatives such as CALFED and Colorado River tentative agreements.

If the verification relies on a projected source of water, the verification must included detailed information indicating that supplies will actually be available when needed. That information should include, to the extent that it is applicable:

- (1) Written contracts or other proof of valid rights to the identified water supply that identify the terms and conditions under which the water will be available to serve the proposed subdivision;
- (2) Copies of a capital outlay program for financing the delivery of a sufficient water supply that has been adopted by the applicable governing body;
- (3) Securing of applicable federal, state, and local permits for construction of necessary infrastructure associated with supplying a sufficient water supply; and
- (4) Any necessary regulatory approvals that are required to be able to convey or deliver a sufficient water supply to the subdivision.

4.10.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

Evaluation of potential public service and utility impacts was based on a review of documents pertaining to the proposed project area, including the City of Manteca General Plan, the URSP, consultation with appropriate agencies, and field review of the project site and surroundings. The active adult community is assumed to have varying impacts on public services and utilities compared to a standard residential subdivision. It is anticipated that the active adult community would result in less water consumption and generate less wastewater flow than a single-family housing development.

Impacts on public utilities and services that would result from the project were identified by comparing existing service capacity and facilities against future demand associated with project implementation. The following analysis is based on the project proposal, which consists of 167 acres of low-density residential development (1,960 units), 13.6 acres of high-density residential development (341 units), 25.3 acres of commercial uses (350,000 square feet), 32.2 acres of open space, and 37.3 acres of parks. Construction is anticipated to be completed in 2011 resulting in a total of 5,150 residents at full buildout.

THRESHOLDS OF SIGNIFICANCE

Implementation of the URSP project would result in a significant impact on public services if it would:

- ▶ create a need for the development of new service facilities (e.g., fire, police, schools), the construction of which could result in significant environmental impacts;
- ▶ create circumstances where existing services and facilities could not meet established performance standards (i.e., response times, provider per resident ratios);
- ▶ substantially impede existing services;
- ▶ generate solid waste beyond the capacity of existing landfills; or
- ▶ violate federal, state, or local statutes and regulations related to solid waste.

Implementation of the URSP project would result in a significant impact on utilities if it would:

- ▶ create demand beyond available service capacity;
- ▶ create demand for wastewater treatment/disposal beyond available service;
- ▶ create demand for electrical or natural gas service that is substantial in relation to the existing demands;
- ▶ exceed wastewater treatment requirements of the Regional Water Quality Control Board (RWQCB);
- ▶ require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or
- ▶ have insufficient water supplies available to serve the project from existing or permitted entitlements and resources, or require new or expanded entitlements.

IMPACT ANALYSIS

Impact 4.10-1

Increased Demand for Water Supply and Distribution. *Although the project would create demand for potable water that could not be met by existing City water production facilities (i.e., wells), the project includes the construction of two new groundwater wells that would provide groundwater supplies and distribution facilities to meet projected demands until the SCSWSP is operational. This would be a **less-than-significant** impact.*

The SB 610 Water Supply Assessment prepared for the URSP project (City of Manteca 2004) evaluates the adequacy of existing and future water supplies to meet the water demand created by the URSP project in conjunction with existing and future development in the City over the next 20 years. The assessment accomplishes this by identifying water demand and supply taking into account not only existing water supplies but also planned and/or approved water supplies not yet constructed (such as surface water supplies under the approved SSJID SCSWSP).

The URSP water demand consists of potable and landscape irrigation demands. The estimated peak demand of the URSP project is approximately 2.2 million gallons per day (mgd). Future water supply for the City is planned to consist of groundwater from the City's existing and planned municipal wells and surface water deliveries from the SCSWSP. The City currently has approximately 12,600 afy of available water supplies, all via groundwater production. Although the URSP water demands would represent less than 1% of existing water supply sources, capacity is not currently available in the existing groundwater extraction and distribution system to provide service to the site. The City is currently participating in the SCSWSP, which would deliver up to 11,500 AFY of treated water through 2010. A subsequent phase would increase the City's water allocation to 18,500 AFY.

The potable water required to serve the project would be provided, in part, by the City's municipal well system. However, to provide the necessary groundwater supplies for the project, two existing City water mains would be extended to the specific plan site on an interim basis and two new water wells would be developed on the project site (Exhibit 3-7). These wells would provide a total capacity of 1,800 gallons per minute. One well would be located in the southwest corner of storm drain detention basin/Park A, and the other would be located in the northeast corner of the SCSWSP's water storage tank site on Lathrop Road east of Union Road. After completion of the SCSWSP, the wells would remain in place to supplement the City's water supply and would be used in the City's conjunctive use water supply system.

The URSP project would be served by the extension of two existing City water mains to the project site. The existing 12-inch water line in Lathrop Road would be extended within roadway right-of-way to the project site, and the 12-inch water line at the intersection of Lathrop Road and Airport Way would be extended north in Airport Way adjacent to the project frontage. These extensions would result in a 12-inch line loop that would form the backbone network throughout the project site.

The proposed water distribution system would be developed in phases throughout the site. Each phase would connect to a 12-inch water transmission line and other connection points in preceding phases. This continually looped system of water mains would provide for necessary fire flows and line pressures. The proposed groundwater wells and infrastructure have been planned for under the City's Water Master Plan. Groundwater from these wells would be the initial source for potable water to the project site. Upon commencement of planned surface water deliveries to the City from the SCSWSP in 2005, water for the project would be provided through the conjunctive use of both groundwater from city wells and the surface water from SCSWSP. In the absence of the SCSWSP the proposed groundwater wells would provide an adequate water supply source for the URSP project. The specific environmental impacts of constructing these groundwater wells are evaluated where relevant throughout this Draft EIR.

Based on the URSP water use estimates, existing facilities and proposed water infrastructure improvements would be adequate to serve the project. Further, the City has identified a reliable water supply source for the proposed development. Therefore, the project's water supply and water distribution facilities impacts would be less than significant.

Impact
4.10-2

Environmental Impacts Associated with the SSJID SCSWSP. *According to the EIR prepared for the SSJID SCSWSP, construction and operation of this facility could contribute to significant impacts for the following issue areas: hydrology, flooding, and water quality; air quality; geology, soils, and seismicity; biological resources; noise; hazardous materials / public health; visual resources; transportation and traffic circulation; public service and utilities/energy; cultural resources; and recreation. The SCSWSP would provide municipal water to the City, including the proposed project. These impacts would be reduced to **less-than-significant** levels with implementation of the mitigation measures identified in the SCSWSP EIR.*

SSJID, under contract to the Cities of Manteca, Escalon, Lathrop, and Tracy, is currently constructing the SCSWSP. The project would provide treated potable water to the participating cities through construction and operation of a WTP and water transmission facilities to deliver treated water. The proposed WTP would be located near SSJID's Woodward Reservoir in Stanislaus County. Water would be delivered from the reservoir to the approximately 40-acre WTP facility. An approximately 36.5-mile pipeline would carry treated water from the WTP to turnouts for each participating City. Under normal precipitation conditions, approximately 42.9% of the overall water supply delivered to the participating cities by the SCSWP would be allocated to the City of Manteca (Table 4.10-3).

SSJID's water supply source for the project is the Stanislaus River, based on pre-1914 rights for direct diversion and diversion to storage. Total water deliveries to the participating cities at full project buildout, and during normal precipitation years, would be approximately 43,090 AFY. Maximum deliveries to each City under normal precipitation conditions are shown in Table 4.10-3. During drought conditions deliveries would be reduced.

City Receiving SCSWSP Deliveries	Maximum Annual Delivery (AFY) ¹
Manteca	18,500
Escalon	2,799
Lathrop	11,791
Tracy	10,000
Total	43,090

¹ Normal precipitation year delivery at full project buildout
Source: ESA 1999

The EIR prepared for the SCSWSP describes the environmental impacts associated with the project and mitigation measures to address significant impacts. A copy of the EIR is available for review at the City of Manteca Community Development Department, 1001 West Center Street, Manteca, California 95337. According to the SCSWSP EIR, the project would result in the following significant environmental effects, summarized by issue area:

Land Use

- ▶ Farmland or adjacent agricultural activities could be affected due to siting and operation of project facilities.
- ▶ Sensitive land uses, primarily residences, may incur short-term disturbance due to construction of proposed project facilities.

Hydrology, Flooding, and Water Quality

- ▶ Use of Woodward Reservoir as a drinking water supply source would increase its sensitivity to water quality degradation issues within the watershed.
- ▶ Local storm runoff volumes may have minor increases due to increased impervious surface area at the WTP.
- ▶ Increased sedimentation in the stream channel may result from possible creek bed erosion during the pipeline installation or proposed project construction.
- ▶ Potential damage to structures in the project area may result from inundation due to the remote chance of dam failure at Woodward Reservoir.
- ▶ Increased erosion and sedimentation, with subsequent impacts to water quality and/or storm drain capacity, may result from construction of the proposed facilities.
- ▶ Surface water quality may be affected due to discharge from dewatering activities during construction.

Air Quality

- ▶ Temporary increases in air pollutant emissions will occur during construction.
- ▶ Operational, equipment, and vehicular air emissions will result at the WTP.

Geology, Soils, and Seismicity

- ▶ Potential seismic activity and resulting hazards in the region could affect the project facilities and its users.
- ▶ Underlying soil properties may cause damage at the proposed facilities.

Biological Resources

- ▶ Jurisdictional wetlands and annual grasslands may be removed during construction of the project facilities.
- ▶ Temporary and permanent impacts on special-status plants and animals, supported by wetlands and annual grasslands, may result from construction of the project facilities.
- ▶ Sensitive tree resources would be removed during construction of the water transmission lines and Tracy Pump Station.
- ▶ Temporary impacts to riparian habitats, and associated special-status plants and animals, may result during construction of the water transmission lines.

Noise

- ▶ Noise levels will be temporarily increased during construction.
- ▶ Increased noise will be generated from operation of the WTP and Tracy Pump Station.

Hazardous Materials / Public Health

- ▶ Workers, the public, and the environment could be affected by hazardous materials stored and used at the WTP.
- ▶ Pre-existing hazardous materials could contaminate construction workers, the public, and the environment during construction of the proposed project components.

Visual Resources

- ▶ Visual quality in the project area could be adversely affected by project facilities.

Transportation and Traffic Circulation

- ▶ Public roads in the construction zone may experience short-term traffic delays during construction of the water transmission lines.
- ▶ Vehicle trips by workers will be increased during construction.
- ▶ Access to adjacent land uses, on streets, and for bicycles/pedestrians will be adversely affected by the proposed project.
- ▶ Transit service will be disrupted on pipeline alignment routes due to construction of the proposed project.
- ▶ Vehicular, bicycle, and pedestrian traffic safety hazards on public roadways will increase due to construction of the proposed project.
- ▶ Designated haul routes will incur increased wear-and-tear during construction of the proposed project.
- ▶ Newly repaved streets would be disrupted due to construction of the proposed project.
- ▶ Use of some existing agricultural dirt roads could be prohibited or limited due to construction and operation of the pipeline alignments.

Public Service and Utilities / Energy

- ▶ Utility services may be disrupted during pipeline construction.
- ▶ Utility conflicts may result from construction of specific segments of the water transmission lines.
- ▶ Access for local emergency services may be temporarily blocked during pipeline construction.
- ▶ Short-term police and fire protection services will be required for traffic management and accidents during construction activities.

Cultural Resources

- ▶ Within the project area, damage to known and/or unknown prehistoric archeological, historical, or paleontological resources may result during construction.

Recreation

- ▶ Use of Woodward Reservoir as a drinking water supply may place restrictions on current recreational activities to comply with public health regulations for drinking water and to protect water quality.

As indicated in the SCSWSP EIR, each of the above impacts would be reduced to less-than-significant levels with implementation of adopted mitigation measures. As noted above, maximum deliveries to the City of Manteca (18,500 AFY) constitute approximately 42.9% of the total water deliveries associated with the SCSWSP in normal precipitation years, while the URSP project (6.6 AFY) constitutes approximately 1% of the total SCSWSP deliveries. Thus, both buildout of the City and development of the URSP would contribute to the overall impacts assessed in the SCSWSP EIR.

Impact
4.10-3

Interim Wastewater Conveyance Facilities. *Implementation of the URSP project would result in increased generation of wastewater. Because concurrence on the adequacy of the proposed wastewater conveyance facilities has not been made by the City, adequate facilities may not be available to serve the project. This would be a **significant** impact.*

Implementation of the project would result in increased generation of wastewater. The City is currently updating the sewer master plan, and the URSP project would be included in the updated plan. The master plan has identified wastewater conveyance facilities required to serve the City. It is anticipated that improvements identified in the updated master water plan would not be available for several years. Until master plan improvements are completed, an interim solution for conveying wastewater generated by the URSP project to the City's collection system would be required. The URSP proposes a temporary pump station that would be sized to serve the project. This pump station would be constructed at the southwest corner of the project along the Airport Way frontage. It would pump wastewater via a 12-inch force main to the City's collection system at the intersection of Airport Way and West Yosemite Avenue. The temporary pump station and force main would be abandoned after completion of master plan improvements. Because concurrence on the adequacy of the size of the temporary pump station and force main proposed wastewater conveyance facilities has not been made by the City, adequate facilities may not be available to serve the project. This would be a significant Impact.

Impact
4.10-4

Increased Demand for Permanent Wastewater Treatment and Conveyance Facilities. *Implementation of the URSP project would increase demand for wastewater treatment and conveyance facilities. Existing wastewater treatment facilities and the City's proposed permanent wastewater conveyance improvements would be adequate to serve the proposed project. This would be a **less-than-significant** impact.*

The estimated wastewater flow generated by the project was calculated using the City of Manteca Standard Plans and Specifications. An average flow of 100 gallons per person per day was used for the low-density and high-density residential units, which is equivalent to 325 gallons per household per day, and 10,000 gallons per acre per day for commercial development and the private recreation facility. Based on an estimated population of 5,150 residents at build out, the residential component of the project would generate 0.52 mgd of wastewater. The project also consists of 25.3 acres of commercial development and a 13.5-acre

private recreation facility. If these areas were to fully buildout, these uses would result in the generation of a maximum 0.39 mgd of wastewater. Final wastewater demands would be determined once specific details are available. In total, the project (residential and commercial mixed-use) would generate approximately 0.91 mgd of wastewater at full buildout (estimated in 2011).

The City of Manteca WQCF has a current capacity of 6.95 mgd, and would be expanded to a capacity of 9.87 mgd by December 2005. The wastewater generated by the project, in combination with the average 6.0 mgd wastewater flows currently being treated at the WQCF, would not exceed the plant's permitted capacity. The URSP project would be developed in seven phases from 2005 to 2011. Wastewater flows would initially be less than 0.91 mgd, and it is expected that the WQCF expansion would be completed and capable of treating wastewater flows before full project buildout. Wastewater generated by the URSP project could be accommodated by this treatment plant and would not result in exceedance of the plant's permitted design capacity.

Additional wastewater conveyance facilities would be required to connect the project to the City sewer mains. As described by the City General Plan, the project proponent would be responsible for paying the required sewer connection and capacity fees. The project's internal wastewater conveyance system would be developed in phases. Each phase would discharge into the internal collection lines extending to the 15-inch diameter trunk line that would terminate at Airport Way. Ultimately, these lines would connect to a larger sewer trunk line constructed as part of the City's Sewer Master Plan improvements. Internal project conveyance facilities would be designed and constructed in conformance with the City's standards for materials and installation.

Existing wastewater treatment facilities, the project's internal wastewater conveyance facilities, and the City's permanent wastewater conveyance improvements would be adequate to serve the proposed project; therefore, the impacts on wastewater treatment and conveyance would be less than significant.

Impact
4.10-5

Increased Generation of Solid Waste. *Although the project would substantially increase solid waste generation, Forward Landfill, which would receive solid waste from the project site, has sufficient available capacity accommodate the project's solid waste demands over the next 40 years. Therefore, this would be a **less-than-significant** impact.*

The California Integrated Waste Management Board (CIWMB) provides an average per-capita solid waste disposal rate for San Joaquin County of 0.36 tons per resident per year (CIWMB 2004b). The estimated total population for the URSP project at buildout is 5,150 residents; therefore, solid waste generation from project residents would be approximately 1,854 tons per year. In addition, approximately 551 workers are expected to be employed on the project site. The URSP provides for several types of commercial development, including commercial and office uses, as would normally occur in a large mixed-use development. Business waste disposal rates are calculated by CIWMB to range from 0.3 tons per year for

general merchandise stores to 3.1 tons per year for restaurants (CIWMB 2004c). The majority of employees at the project site are likely to be working in jobs within waste categories such as finance/insurance/real estate/legal (0.3 ton per employee per year), other professional services (1.2 tons per employee per year), communications (1.5 tons per employee per year), and business services (1.7 tons per employee per year). To estimate a single business waste disposal rate for the project, the two anticipated extremes among the categories (0.3 and 1.7 tons per employee per year) were averaged, resulting in a generation rate of 1.0 tons per employee per year. Using the average business waste disposal rate of 1.0 tons per employee per year results in 551 tons of waste generated annually by employees on the URSP project site.

Combining residential and business solid waste generation, the total solid waste generation for the URSP project is approximately 2,405 tons per year or approximately 7 tons per day. This rate would not be reached until full buildout of the project in 2011. Much lower generation rates would occur at project initiation in 2005, with gradual increases in the rate until full buildout. The Forward Landfill has capacity to accept approximately 8,668 tons per day and at this rate would have capacity for the next four decades or more. This landfill has sufficient permitted capacity to accommodate the project's solid waste disposal needs. The URSP project would also comply with all federal, state, and local statutes and regulations related to solid waste reduction and recycling. Therefore, this impact would be a less-than-significant impact.

Impact
4.10-6

Increased Demand and Required Extension of Electrical and Natural Gas Infrastructure. *Implementation of the URSP project would increase demand for electricity and natural gas. PG&E is able to provide electricity and natural gas to the project, and the increase in demand for electricity and natural gas would not be substantial in relation to the existing electricity and natural gas consumption in PG&E's service area. This would be a less-than-significant impact.*

Buildout of the URSP project would increase electricity and natural gas demand in the City. PG&E has acknowledged that it has adequate electricity and natural gas supplies to support the project without adversely affecting service to current users (Lang, pers. comm., 2004). The energy demands created by the proposed project are not considered "substantial" in relation to the total amount of energy supplied by PG&E in its northern and central California service area (estimated in 2000 to be 81,923 million kW per day of electricity and 887 million cf per day of natural gas) and available energy expected in the future.

Electricity would be provided to the project site via connections to existing main electrical feeder lines in the developed portion of the City on the south side of Lathrop Road. As the plan area is developed, some existing aboveground electrical lines would be relocated underground or replaced with new underground lines. All new power lines in the specific plan area would also be installed underground. PG&E would determine the precise locations and types of connections during design of the project. As the plan area is developed, new underground supply pipelines would be installed in the neighborhood street right-of-ways.

Because the proposed electrical and natural gas utility improvements would be required to comply with all existing City, PG&E, and applicable Uniform Building Code requirements, it is anticipated that the proposed electricity and natural gas utility improvements would be sufficient to serve the proposed project. The impact would be less than significant.

Impact
4.10-7

Required Extension of Telephone Infrastructure. *Implementation of the URSP project would require the extension of telephone infrastructure and Verizon Communications has indicated that it has the ability to serve the project. This would be a **less-than-significant** impact.*

Telephone infrastructure is currently located throughout the City and on the south side of Lathrop Road south of the project site. Verizon Communications would provide services to the project. Verizon Communications could serve and would augment its existing facilities in the project vicinity and extend service into the project site. All new infrastructure would be installed underground, in conformance with City General Plan standards. This would be a less-than-significant impact.

Impact
4.10-8

Increased Demand for Fire Protection Facilities and Services. *Development of the URSP project would result in increased demand for fire protection services. However, the project would provide adequate land area for the siting of a new fire station within the URSP site. In addition, the project would be required to pay development fees to cover the costs of equipment and facilities, and streets would be designed to allow access for fire engines and emergency response. This would be a **less-than-significant** impact.*

The project site is located within the service area of the MFD. The estimated residential population of the proposed project would be 5,150 at full buildout. The City would provide fire protection services to this projected population. As stated in the City's General Plan, minimum feasible response times for fire and emergency calls would be maintained through staffing and station locations. To ensure adequate fire protection and response time to the plan area, adequate land area for the siting of a new fire station would be provided as part of the URSP project in the northern most portion of the project site, west of Union Road. The City requires new development to pay its fair share of all costs for required public services, which would ensure funding for any additional necessary facilities or equipment. In addition, residential street patterns would be reviewed by the City's Planning Commission and City Engineers to evaluate accessibility for fire engines and emergency response.

Given that the project would provide an adequate site for a new fire station, would be required to pay development fees to cover the costs of equipment and facilities, and streets would be designed to allow access for fire engines and emergency response, impacts on fire protection would be less than significant.

**Impact
4.10-9**

Increased Demand for Fire Flow. *The URSP project would include the development of residential and commercial uses that would require adequate available water flow for fire suppression. The project would incorporate fire flow requirements into project designs. This would be a **less-than-significant** impact.*

Minimum requirements for available fire flow at a given building are dependent on standards set in the California Fire Code. Generally, fire flow requirements for the type of development associated with the URSP project are 1,250 gpm for low-density residential, 2,500 gpm for commercial, and 3,500 gpm for industrial development (measured at 20 psi) with a minimum 2-hour duration. The URSP project would incorporate fire flow requirements into project designs; therefore, this impact would be less than significant.

**Impact
4.10-10**

Increased Demand for Police Protection Facilities and Services. *Development of the URSP project would increase demand for police protection facilities and services. The project would pay development fees to provide police equipment and facilities, and neighborhoods, streets, and open spaces would be designed to allow surveillance and access. This would be a **less-than-significant** impact.*

Police services would be provided to the URSP project site by the Manteca Police Department, which is composed of more than 70 sworn staff, 30 civilian support staff, and more than 200 volunteers. The police department is located approximately 2.3 miles south of the project site. The department uses a staffing ratio of one patrol officer to every 1,000 residents.

The estimated residential population of the project would be 5,150 persons at full buildout. The City would provide police services to this projected population which would require 5 officers at buildout. As stated in the City's General Plan, minimum feasible police response times for police calls would be maintained through staffing and patrol arrangements to projected populations. The City requires new development to pay its "fair share" of all costs associated with the provision of required public services, which would provide funding for any additional necessary facilities or equipment.

Neighborhood and commercial areas would be designed to facilitate surveillance and access by law enforcement equipment and personnel. Residential street patterns would be reviewed by the City's Planning Commission and City Engineers to evaluate accessibility for police patrols. In addition, residential-based surveillance and law enforcement notification programs, such as Neighborhood Watch, would be strongly encouraged.

Based on conversations with staff of the police department, no new police stations would need to be constructed as a result of the project (Manteca Police Department 2004). Because the project would pay development fees to provide necessary police facilities and equipment, and neighborhoods, streets, and open spaces would be designed to allow surveillance and access, impacts on police protection would be less than significant.

Impact
4.10-11

Increased Demand for Public School Facilities and Services. *Implementation of the URSP project would increase demand for elementary schools (K-8) and high schools in the MUSD. Elementary and high schools in the project area have sufficient available capacity to meet projected demand throughout project development. Therefore, this impact would be a **less-than-significant** impact.*

The project site is located in the MUSD. Enrollment at nearby schools includes 810 students at Neil Hafley Elementary School (K-8) and 2,200 students at East Union High (9-12). Neil Hafley Elementary School has capacity to accept new students; however, East Union High is at capacity. Senior housing typically does not generate students; therefore, those dwelling units are not included in calculations of student generation for the project. Based on student generation rates of 0.534 student per dwelling unit (s/du) for elementary school (K-6), 0.147 s/du for middle school (7-8), and 0.267 s/du for high school (9-12), the remainder of proposed URSP housing (535 low-density and 341 high-density residential units) is expected to generate approximately 598 elementary school students (K-8) and approximately 235 high school students (9-12). Neil Hafley Elementary School would have the capacity for the some of the students generated by the project. Because East Union High School is at enrollment capacity, MUSD has opened new high schools in recent years, which has drawn large numbers of students away from East Union High (MUSD 2003). Additionally, new elementary schools and a high school are planned for in the approved Central Lathrop Specific Plan area near the URSP project site, and these schools would have capacity to accommodate students from new development.

As required by state law, the project applicant would pay the state-mandated school impact fees to the appropriate school districts. As prescribed by Government Code §65996(a) and (h), payment of fees would fully mitigate the project's impacts on school facilities. Currently, the developer is charged \$3.90 per square foot for residential development and \$0.34 per square foot for commercial development in the district boundaries. The active adult community would be assessed a school impact fee of \$0.34 per square foot. Because the project developer would pay appropriate school impact fees, this would be a less-than-significant impact.

Impact
4.10-12

Increased Demand for Recreational Facilities. *Although development of the URSP project would increase the demand for recreational facilities, the project would include adequate facilities to meet anticipated demands. This would be a **less-than-significant** impact.*

The URSP project would include approximately 32 acres of open space and 37 acres of parks. As shown in Exhibit 3-3, Parks A and B would be located in active adult community and would be developed to meet the needs of that community. Park A, to be developed in the western portion of the project site, would encompass a total of 5.9 acres with a detention capacity of 8.8 acre-feet. Facilities in Park A would include picnic areas, walking trails, bike trails, turf areas, and a dog park. Park B, to be developed in the northern portion of the project site, would

encompass a total of 8.9 acres with a detention capacity of 16.4 acre-feet. Facilities in Park B would include a tot lot, adventure play equipment, picnic areas, walking trails, and turf areas. Parks A and B would be constructed by the developer and maintained by a Home Owner's Association. Fees for the maintenance of these facilities would be the responsibility of the Home Owner's Association. Although these parks would be private, the general public would have access to Parks A and B.

Park C would be located in the eastern portion of the project site within the Union Ranch East housing development. This park would encompass 9.5 acres with a detention capacity of 14.3 acre-feet. Facilities in Park C would include basketball courts, tot lot, adventure play equipment, picnic areas, walking trails, bike trails, and turf areas. Park C, the open space trail system in the park, and the Tidewater Trail right-of-way would be dedicated to the City for access by all City residents.

Open space and greenbelt areas would be provided along the eastern and southern edges of the project site and around the commercial mixed use areas. A pedestrian and bike trail system would link the neighborhoods within the specific plan area. Open space trails and pathways would include picnic tables, bike trails, benches, and trash receptacles. The City's Tidewater Bike Trail would be improved and extended to connect to the existing corridor south of Lathrop Road. The general public would have access to the open space and trail system.

The recreation needs of an active adult community differ from those of a conventional community. A 13.5-acre private recreation facility would be provided in the active adult community. The site would include a recreation lodge with swim facilities, social rooms, workout facilities, a library, and craft rooms. Active recreational opportunities would include a softball field, bocce courts, tennis courts, and gardens. Fees for maintenance of these facilities would be the responsibility of the Home Owner's Association. The general public would not have access to these facilities.

The proposed recreational facilities (32 acres of open space and 37 acres of parks) would result in the provision of approximately 7.2 acres of open space per 1,000 persons and 6.2 acres of parks per 1,000 persons, which would exceed the City General Plan park facility standards of 3.5 acres of neighborhood park and 1.5 acres of community park per 1,000 persons. Fees for maintenance of Parks A and B would be the responsibility of the Home Owner's Association established by the project. Therefore, this would be a less-than-significant impact.

4.10.4 MITIGATION MEASURES

No mitigation measures are necessary for the following less-than-significant impacts including less-than-impacts summarized from the SSJID SCSWSP EIR.

- 4.10-1 Increased Demand for Water Supply, Treatment, Storage, and Distribution.
- 4.10-2 Environmental Impacts Associated with the SSJID SCSWSP
- 4.10-4 Increased Demand for Permanent Wastewater Treatment and Conveyance Facilities
- 4.10-5 Increased Generation of Solid Waste

- 4.10-6 Increased Demand and Required Extension of Electrical and Natural Gas Infrastructure
- 4.10-7 Required Extension of Telephone Infrastructure
- 4.10-8 Increased Demand for Fire Protection Facilities and Services
- 4.10-9 Increased Demand for Fire Flow
- 4.10-10 Increased Demand for Police Protection Facilities and Services
- 4.10-11 Increased Demand for Public School Facilities and Services
- 4.10-12 Increased Demand for Recreational Facilities

Although some of the specific impacts associated with Impact 4.10-2, as described above are significant, no mitigation measures are required of the URSP for those impact because the responsibility for mitigation, where it is feasible, lies with the agencies that are the proponents of the projects at issue (the City for the SCSWSP), which are separate from the URSP.

The following mitigation measures are provided for significant impacts:

4.10-3: Interim Wastewater Conveyance Facilities.

An interim solution for conveying wastewater generated by the project to the City's collection system shall be designed and prepared in consultation with the City Public Works Department prior to construction of the project. Exclusive of model homes, no element of the project shall be occupied until adequate conveyance facilities are in place to serve the development, as deemed by the City. The proposed system shall comply with the City's requirements for wastewater infrastructure facilities. Specific details on the sizing of proposed pipelines shall be determined in consultation with the City and shall provide sufficient capacity to meet project-related wastewater conveyance demands.

4.10.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the mitigation measures identified above, no significant and unavoidable impacts related to public services and utilities would result from implementation of the project.

4.11 TRANSPORTATION AND CIRCULATION

The following section describes the transportation and circulation impacts associated with implementation of the project. The results of this analysis are based on Transportation Impact Analyses prepared by kdAnderson in November 2004 and April 2004, which are included in Appendix G and H respectively.

Development within the URSP site would not be completed until 2011, 7 years from today. The URSP, other areas of the Manteca, and cities and communities throughout San Joaquin County are expected to experience significant growth over this period. Major projects have been entitled for development throughout the region, and more are expected. As projects develop, traffic would increase on local and regional roadways and freeways. As regional development proceeds, transportation system improvements would be provided through local and regional funding programs, individual project mitigation, and improvements funded by the California Department of Transportation (Caltrans).

Although there is a reasonable expectation that future roadway system improvements would be provided as planned, they remain largely dependent on fees generated by the development that would affect the roadways. The likelihood that planned developments would proceed can be forecasted but not predicted with certainty. The same is true of the timing of these developments. Consequently, this traffic analysis evaluates development impacts under two conditions:

1. The URSP is evaluated against a backdrop of existing environmental conditions; that is, the impacts and mitigation measures for the project are evaluated against the existing roadway system with existing traffic volumes. This is referred to as the existing condition scenario.
2. The project is evaluated against a backdrop that assumes an improved roadway system and increased traffic volumes, based on projected regional growth, regional traffic plans, traffic fee programs, and known network improvement commitments. For this analysis, future traffic volume forecasts were developed using the Circulation Element of the 2003 Manteca General Plan (City of Manteca 2003), the Transportation and Circulation element of the Central Lathrop Specific Plan Draft EIR (EDAW 2004), and the current San Joaquin Council of Governments traffic model. Year 2025 forecasts were used for roadways within the City of Manteca, year 2020 forecasts within the City of Lathrop, and year 2030 forecasts were used for the intersections under San Joaquin County jurisdiction.

These two conditions represent the reasonably foreseeable range of possible roadway scenarios that could be in place as the project develops over time.

The project site is not located near an airport and would not change existing air traffic patterns. Therefore, this issue is not addressed further in this Draft EIR.

4.11.1 ENVIRONMENTAL SETTING

REGIONAL TRANSPORTATION NETWORK

The URSP project site is located in northern Manteca north of Lathrop Road and bounded by Airport Way to the west. The project includes about 130 acres east of Union Road and about 420 acres between Airport Way and Union Road. Traffic conditions on roadways in the vicinity of the URSP project site are influenced by commuter travel patterns. The regional circulation system in the area consists of north-south freeways (SR 99 and I-5) east and west of the project site and several north-south and east-west surface street facilities. Detailed descriptions of the key roadway facilities are presented below.

Interstate 5

I-5, one of the major freeways in the state of California, is approximately 1.7 miles west of the URSP project site. In San Joaquin County, I-5 connects Stockton to Tracy and passes through Manteca and Lathrop. Given its location, I-5 would serve as one of the primary routes for traffic entering and exiting the URSP area. The section of I-5 in the vicinity of the URSP site currently has three to four lanes in each direction. The I-5/Lathrop Road interchange is the closest to the project site and would provide the primary freeway access (Exhibit 4.11-1). The I-5/Roth Road and I-5/Louise Avenue interchanges could also provide site access from the north and south, respectively.

State Route 120

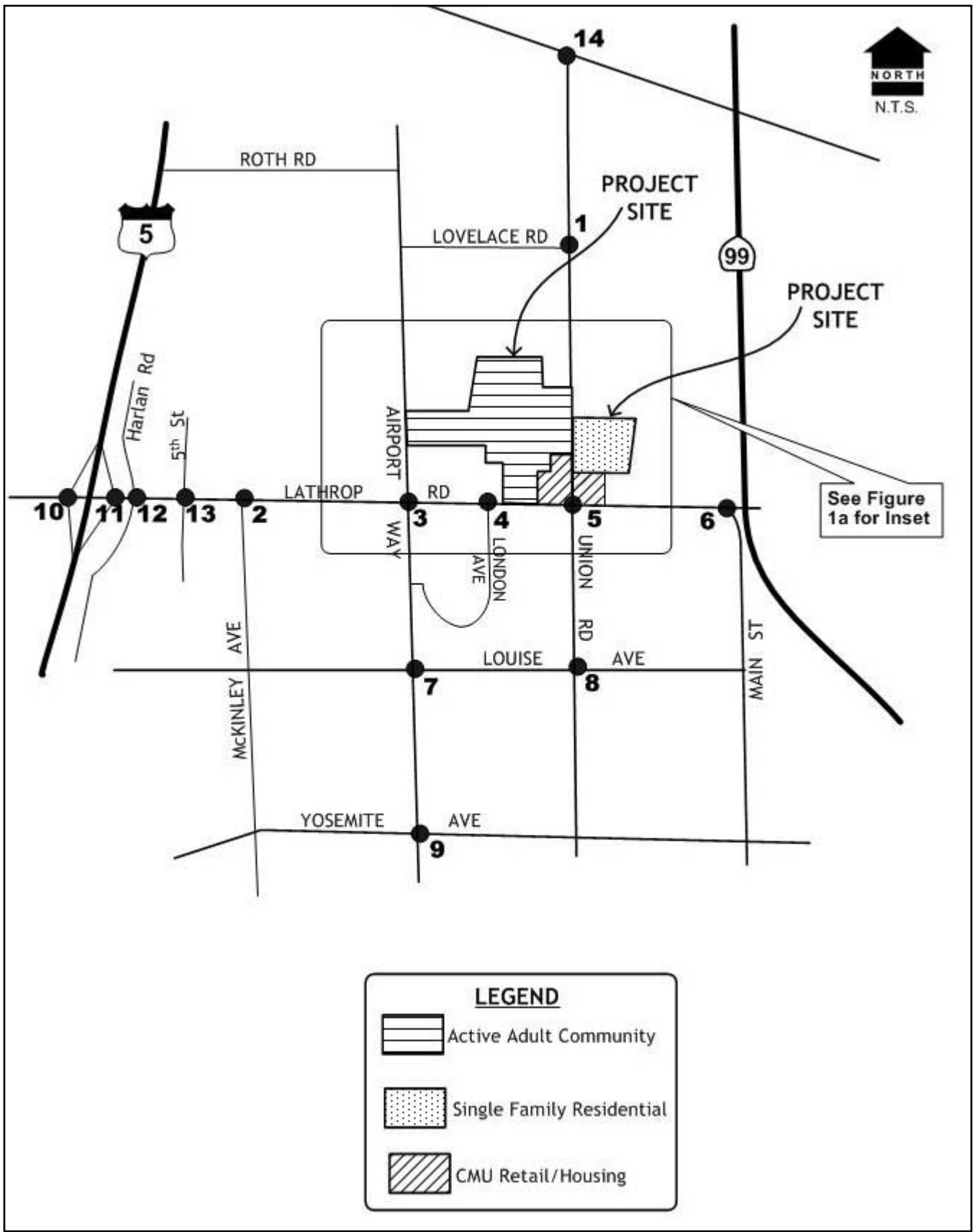
SR 120, approximately three miles south of the project site, is considered a major regional roadway in San Joaquin County and provides a connection from I-5 and I-205 to SR 99. It also extends east of SR 99 to Yosemite National Park as a two-lane undivided road. This roadway currently has two travel lanes in each direction. The I-5/SR 120 interchange provides a connection between these two roadways through a system of ramps.

State Route 99

SR 99, approximately ½ mile east of the project site, serves as one of the major north-south routes in San Joaquin County and provides a connection between Sacramento and Stockton in the north and Manteca, Modesto, and Merced in the south. SR 99 continues south through Stanislaus County and parallels I-5 throughout much of California.

Interstate 205

I-205 lies to the south of Manteca and provides a connection to Tracy and the San Francisco Bay Area from other areas of San Joaquin County. This roadway currently has two lanes in each direction. I-205 connects to I-5 south of the URSP project site in a system level interchange with directional ramps.



Source: KD Anderson 11/04

Vicinity Map and Project Study Area Intersections

EXHIBIT 4.11-1

Lathrop Road

Lathrop Road is an east-west surface street that extends through the City of Manteca into the City of Lathrop and provides regional circulation between I-5 to the west and SR99 to the east. Lathrop Road provides a primary east-west travel corridor across north Manteca. Adjacent to the project site, Lathrop Road is generally a 2-lane and 3-lane roadway. Near the Union Road intersection, Lathrop Road consists of two eastbound lanes and a single westbound lane. Near the Airport Way intersection, Lathrop Road consists of single lanes east and westbound. Left turn lanes are provided at both signalized intersections.

Union Road

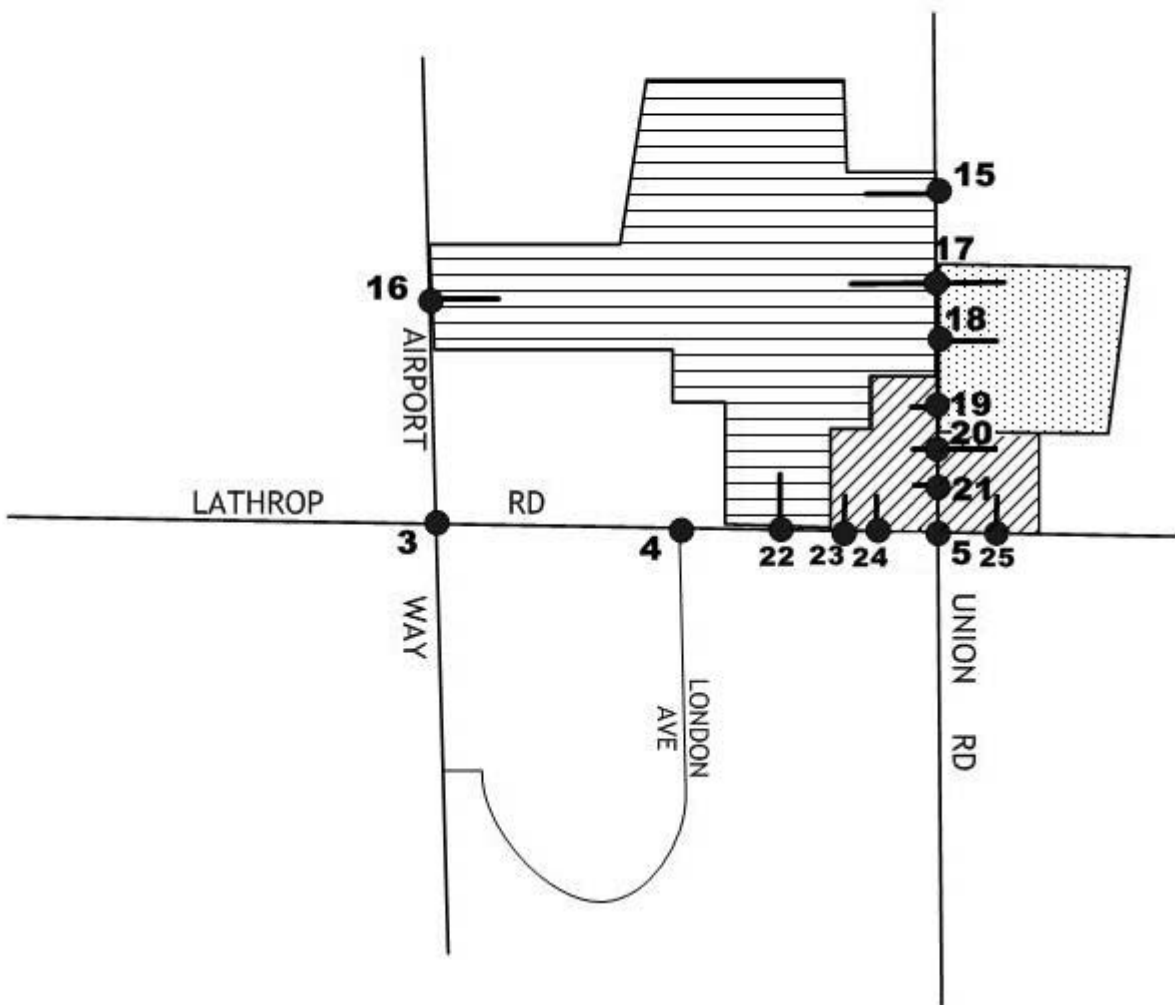
Union Road is a primary north-south surface street through Manteca and provides access to SR120 in the south. In the vicinity of Lathrop Road, Union Road provides four travel lanes with a center turn lane south of Lathrop Road; a two-lane section exists north of the intersection. An 84-foot street right-of-way is planned by the City for Union Road at Lathrop Road. This will accommodate a 4-lane divided arterial street section.

Airport Way




Airport Way is a 2-lane surface street that extends south of SR120 in the south and past Stockton Metropolitan Airport in the north. Access is provided to SR120 via the Airport Way interchange. The current westerly city limit is approximately the east side of Airport Way. In the vicinity of Lathrop Road, Airport Way provides two travel lanes. Left turn lanes are provided at the Lathrop Road intersection and a separate right turn lane is also provided for the southbound approach. A 110-foot street right-of-way is planned by the City for Airport Way at Lathrop Road. This will accommodate a 6-lane divided arterial street section.

PROJECT AREA INTERSECTIONS

After a preliminary investigation of the existing traffic circulation patterns and discussions with City of Manteca staff, it was determined that the traffic analysis should investigate the operational characteristics of the first 9 intersections listed below on the streets serving the URSP project. In response to comments from the City of Lathrop following publication of the City's Notice of Preparation for the project, four additional intersections in the City of Lathrop (nos. 10-13) and one additional intersection under San Joaquin County jurisdiction (no. 14) were added to the traffic study area, bringing the total to 14 intersections (kdAnderson 2004). An additional 11 intersections that would be constructed as part of the URSP project to provide access specifically to the project site (nos. 15-25) were also analyzed. The numbers of these intersections correspond to the vicinity maps and existing roadway network shown in Exhibits 4.11-1 and 4.11-2.



LEGEND

-  Active Adult Community
-  Single Family Residential
-  CMU Retail/Housing

Source: KD Anderson 11/04

Vicinity Map Inset and Proposed Project Access Intersections

EXHIBIT 4.11-2



Study Area Intersections

1. Union Road/Lovelace Road
2. Lathrop Road/McKinley Avenue
3. Lathrop Road/Airport Way
4. Lathrop Road/London Avenue
5. Lathrop Road/Union Road
6. Lathrop Road/Main Street
7. Louise Avenue/Airport Way
8. Louise Avenue/Union Road
9. Yosemite Avenue/Airport Way
10. I-5 Southbound Ramps/Lathrop Road
11. I-5 Northbound Ramps/Lathrop Road
12. Lathrop Road/Harlan Road
13. Lathrop Road/5th Street/Woodfield Drive
14. Union Road/French Camp Road

Proposed Project-Specific Access Intersections

15. Union Road/Adult Housing North Access
16. Airport Way/Adult Housing Access
17. Union Road/Adult Housing Main Access/Single Family Residential North Access
18. Union Road/Single Family Residential South Access
19. Union Road/Commercial Mixed-Use (CMU) Housing Access
20. Union Road/CMU Retail North Access
21. Union Road/CMU Retail South Access
22. Lathrop Road/Adult Housing Access
23. Lathrop Road/CMU Retail West Access
24. Lathrop Road/CMU Retail Main Access
25. Lathrop Road/CMU Retail East Access

LEVELS OF SERVICE

The quality of traffic service provided by an intersection is measured by its level of service (LOS). This method uses a letter rating to describe the peak-period driving conditions for a particular facility. The letters A through F represent the best to worst driving conditions, respectively. Generally, LOS A indicates free-flow operation with little or no delay, and LOS F denotes jammed flow with substantial delay. Table 4.11-1 presents a description of the six LOS categories and their operating conditions.

Table 4.11-1 Level of Service Definitions for Intersections			
Level of Service	Type of Flow	Delay	Maneuverability
A	Free flow	Very slight or no delay. If signalized, conditions are such that no approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.	Turning movements are easily made, and nearly all drivers find freedom of operation.
B	Stable flow	Slight delay. If signalized, an occasional approach phase is fully utilized.	Vehicle platoons are formed. Many drivers begin to feel somewhat restricted in groups of vehicles.
C	Stable flow	Acceptable delay. If signalized, a few drivers arriving at the end of a phase must wait through one signal cycle.	Backups may develop behind turning vehicles. Most drivers feel somewhat restricted.
D	Approaching unstable flow	Tolerable delay. Delays may be substantial during short periods, but excessive backups do not occur.	Maneuverability is severely limited during short periods because of temporary backups.
E	Unstable flow	Intolerable delay. Delay may be great, up to several signal cycles.	There are typically long queues of vehicles waiting upstream of the intersection.
F	Forced flow	Excessive delay.	Jammed conditions. Backups from other locations restrict or prevent movement. Volumes may vary widely, depending primarily on downstream conditions.

Source: Transportation Research Board 2000

Peak hour traffic counts were conducted in September and October 2004 and were used to quantify the traffic volumes at the 14 subject intersections in the project study area . Table 4.11-2 presents the existing a.m. and p.m. peak hour traffic levels of service at the 14 existing study intersections.

The results of the LOS calculations indicate that overall levels of service during peak hours are at acceptable levels at all but three intersections: Lathrop Road / I-5 southbound ramps, Airport Way / Louise Avenue, and Lathrop Road / Main Street. These intersections currently operate at LOS F, LOS F, and LOS E, respectively, in the p.m. peak hour.

**Table 4.11-2
Existing Study Area Intersection Levels of Service¹**

Intersection	Control ²	A.M. Peak Hour		P.M. Peak Hour	
		Average Delay (seconds)	Level of Service	Average Delay (seconds)	Level of Service
1. Union Road / Lovelace Road Overall NB left EB	EB Stop	8.5 7.6 9.7	A	9.9 7.8 10.8	A
2. Lathrop Road / McKinley Avenue Overall NB WB left	NB Stop	14.4 16.9 8.7	B	21.6 23.0 9.5	C
3. Lathrop Road / Airport Way	Signal	28.1	C	27.5	C
4. Lathrop Road / London Avenue	Signal	15.5	B	13.1	B
5. Lathrop Road / Union Road	Signal	32.1	C	33.6	C
6. Lathrop Road / Main Street Overall NB SB EB WB	All way Stop	17.6 12.6 12.5 17.0 22.0	C	40.8 17.6 24.5 44.1 53.7	E
7. Louise Avenue / Airport Way Overall NB SB EB WB	All way Stop	24.8 23.4 20.6 15.2 33.5	C	135.0 196.9 84.1 135.9 104.7	F
8. Louise Avenue / Union Road	Signal	29.9	C	34.0	C
9. Yosemite Avenue / Airport Way	Signal	30.6	C	32.6	C
10. I-5 SB Ramps / Lathrop Road Overall SB WB left	SB Stop	34.9 65.6 8.0	D	133.3 179.7 7.8	F
11. I-5 NB Ramps / Lathrop Road Overall NB EB left	NB Stop	11.3 11.3 9.7	B	19.4 20.1 9.0	C
12. Lathrop Road / Harlan Road	Signal	21.3	C	21.8	C
13. Lathrop Road / 5th Street - Woodfield Drive	Signal	18.4	B	20.0	C
14. Union Road / French Camp Road	Signal	12.7	B	10.1	B
¹ Because the remaining 11 intersections would not be constructed unless the project was approved, there are no existing conditions to evaluate for these intersections, and therefore they are not included in this table.					
² EB – eastbound; SB – southbound; NB – northbound.					
Source: kdAnderson 2004					

EXISTING TRANSIT SYSTEM

There are no existing transit facilities that serve the URSP project site, with the exception of the Hopper bus service for certified elderly and disabled passengers. However, there are several transit routes that provide service to the City of Manteca, as described below. These routes include fixed route inter-city bus service, commuter bus service and commuter rail service. The San Joaquin Regional Transit District (SJRTD) operates the bus routes while Altamont Commuter Express (ACE) operates the commuter rail service.

SJRTD Hopper Bus Service

The SJRTD Hopper is a fixed route bus service connecting Ripon, Escalon, Manteca, Lathrop, Thornton, Woodbridge, Acampo, Victor, Lockeford, Morada, and Linden, with the cities of Stockton, Tracy, and Lodi. The Hopper replaces SJRTD Countywide General Public Dial-A-Ride (DAR), Rural Elderly & Disabled DAR, and County Area Transit (CAT) Fixed Route during Hopper service hours, in the areas covered by the Hopper service. Most SJRTD Hopper Routes will deviate up to 3/4 of a mile for ADA certified Elderly & Disabled passengers not able to reach the fixed route stops. The closest stop to the project site is located at the intersection of Northgate Road and Union Road, approximately three-quarters of a mile south. Thus, limited service for elderly and disabled passengers could be provided at the southern end of the project site, along Union Road.

Route 91 connects Stockton, Manteca, and Ripon. From the Stockton airport, the bus travels on French Camp Road onto Union Road and then to South Main, SR120, and SR99 to Ripon. Passengers can obtain Hopper rides by making a reservation 1-2 days in advance of their intended trip.

SJRTD Fixed Route Inter-City Bus Service

The SJRTD operates one fixed-route bus line (Route 21) that serves the City of Manteca. This line connects Stockton, Manteca, and Ripon. From Arch-Airport Road, the bus travels south on North Main to Louise, Cottage, Yosemite, and thence to South Main, SR120 and SR99 to Ripon. This route operates Monday through Friday from 6:30 A.M. to 10:30 P.M., but does not operate on weekends or holidays.

SJRTD Commuter Bus Service

The SJRTD operates a number of commuter bus lines that connect cities in San Joaquin County with major employment locations in the San Francisco Bay Area, including Pleasanton, Dublin, Livermore, Mountain View, Palo Alto, and Sunnyvale. Commuter Bus service Routes 53, 54, and 55 connect Manteca to Tracy and Livermore. The pick-up times vary from 4:00 A.M. to 6:00 A.M. with drop-offs ranging from 4:00 P.M. to 6:00 P.M. Commuters access the bus service at the Lathrop Park and Ride Lot, which is located between Lathrop Road and Louise Avenue on 5th Street.

Altamont Commuter Express (ACE) Rail Service

ACE is a passenger rail service connecting Stockton to San Jose. The closest ACE station to the URSP area (the Lathrop/Manteca Station) is located at the northeast corner of the McKinley Avenue/Yosemite Avenue intersection. There are currently three ACE trains per day, which arrive at this station between 4:00 A.M. and 7:00 A.M. These trains then return to the Lathrop/Manteca station between 5:00 P.M. and 7:00 P.M.

EXISTING BICYCLE AND PEDESTRIAN NETWORK

Bicycle facilities include bike paths (Class I), lanes (Class II), and routes (Class III). Bike paths are paved trails that are separated from roadways. Bike lanes are lanes on roadways designated for bicycle use by striping, pavement legends, and signs. Bike routes are roadways designated with signs for bicycle use only.

The City of Manteca Bicycle Master Plan was completed in 2003 and identifies the existing bicycle system and future needs for completing a citywide network. The existing bicycle route system in the project vicinity is limited and includes Class 2 bike lanes on Airport Way north of Lathrop Road and along London Avenue.

One of the City's popular recreational features is the Tidewater Bikeway, a "Rails to Trails" project, encompassing 3.5-miles of a former railroad right-of-way. This bicycle and pedestrian trail includes a 35-acre urban greenbelt running from the south side of Lathrop Road (across the street from the eastern URSP project boundary) to a portion of Moffat Boulevard. The bicycle trail includes a 4-foot-wide granite jogging path.

Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals. Dedicated non-automotive transportation facilities are generally lacking in the rural area of Manteca.

4.11.2 REGULATORY SETTING

SAN JOAQUIN COUNTY PUBLIC WORKS DEPARTMENT

The San Joaquin County Public Works Department, Road and Traffic Maintenance Division, is responsible for the operation and maintenance of the expressways and roads in its jurisdiction.

SAN JOAQUIN COUNTY GENERAL PLAN

The San Joaquin County General Plan (County General Plan) addresses transportation in the Community Development section, which addresses the county's development pattern, economic development, housing, and infrastructure. Relevant policies are documented below:

Roadways

Policy 1: The County shall plan for a road system of adequate capacity and design to provide reasonable and safe access by vehicles with minimum delay. The road system shall be based on functional classification and shall contain the following types of roads:

- ▶ Freeway, designed as the primary facility for intercity and regional traffic.
- ▶ Expressway, designed for high-speed intercommunity traffic between important centers of activity or employment, may be a two lane undivided highway in rural areas or a multi-lane divided roadway in urban areas. Access in areas of development should be limited to freeways, arterials, and rural roads.
- ▶ Major Arterial, designed: 1) as the highest type of road carrying local traffic in urban communities; provided access routes to shopping areas, places of employment, community centers, recreational areas, and other places of assembly and freeways; and 2) as a principal carrier of traffic between communities, providing access routes to places of employment, recreation areas, and freeways. Access should be limited to that from commercial and industrial areas and should generally be no closer together than one-quarter mile.
- ▶ Minor Arterial, designed as a second type of facility carrying local through traffic to areas similar to those served by Major Arterials and feeding the Major Arterials. Access should be limited to that from commercial, industrial, and multi-family properties.
- ▶ Collector, designed to provide principal access to residential areas or to connect streets of higher classifications to permit adequate traffic circulation.
- ▶ Local residential, designed to provide access to adjacent residential lots and to feed traffic to collectors.
- ▶ Local Commercial and Industrial, designed to provide access to adjacent commercial and industrial properties and to feed to Minor Arterials.
- ▶ Rural Residential, designed to provide local access in rural residential areas.
- ▶ Rural, designed to provide access in agricultural areas.

Policy 2: The road system design shall consider the function of each road and include an adequate number of roads, properly spaced and functionally related.

Policy 3: The use of freeways for local commute traffic in communities shall be minimized.

Policy 4: Roadway improvements shall be coordinated with regional plans. Roadway improvements shall be guided by the countywide Regional Transportation Plan and Regional Transportation Improvement Plan Program, the Congestion Management Program, and the Measure K Strategic Plan Funding Program.

Policy 5: Variations in the alignment of designated roadways shall be considered in conformity with the Plan if the alignment does not result in traffic safety problems or reductions in needed capacity, does not constrain the proper development of contiguous properties, and does not conflict or preempt other Plan-specified uses or facilities; or if the alignment is in conformance with an adopted Special Purpose Plan or Specific Plan.

Policy 6: Parcels to be developed in communities shown on the General Plan Map shall have frontage on roads built to County standards.

Policy 7: Development shall provide all right-of-way and onsite road improvements necessary to serve the development and mitigate offsite traffic impacts triggered by the development.

Policy 8: On minor arterials and roadways of higher classification, the County shall maintain a Level of Service (LOS) no lower than “D” at all intersections and the following on the throughway:

- ▶ On State Highways, LOS D.
- ▶ Within a city’s sphere of influence, LOS D, or LOS C when the city plans for that level of service or better.
- ▶ On Mountain House Gateways, as defined in the Master Plan, LOS D.
- ▶ On other roads, LOS C.

Transit

Policy 1: The County shall promote public mass transit as an alternative to the automobile.

Policy 2: The County shall advocate commuter transit service.

Policy 3: The County shall support public transit service to meet the transportation needs of non-drivers by:

- ▶ Concentrating on serving those who have no other reasonable alternatives for transportation;
- ▶ Providing access to required medical, social service, and personal business destinations;

- ▶ Encouraging the use of existing public and private transit systems to those able to use such systems; and
- ▶ Supporting and promoting accessibility in public transit to the greatest extent feasible.

Policy 4: The County shall support park and ride lots and other transit-related facilities that promote transit use.

Policy 5: All major developments shall have provision for transit.

Policy 6: Abandoned railroad rights-of-way shall be considered for acquisition by the County for use in County's circulation system.

Policy 7: Increased passenger rail service to the County shall be supported.

Policy 9: The County shall support Amtrak stations in all cities of the County.

Policy 10: The County shall support the concept of developing passenger service along existing rail corridors to Sacramento and the Bay area to a capability of 79 miles-per hour in the short term. In the longer term, the County supports upgrading rail service to a capability of 125 miles-per-hour along existing or new alignments.

Policy 11: In the short-term, the County shall support the concept of development of multi-modal rail stations in Stockton, Lodi, Manteca, and Tracy that could initially be used as park and ride facilities coupled with commuter bus and express bus service. The multi-modal stations in each City of San Joaquin County should be upgraded to eventually provide cross-platform transfer capabilities.

Bicycles

Policy 1: The bike route system shall:

- ▶ Provide for inter- and intra-county bicycle circulation;
- ▶ Connect residential areas with commercial areas, employment centers, educational facilities, local and regional recreational facilities, and other major attractions;
- ▶ Interface with city bicycle routes;
- ▶ Be constructed to acceptable standards;
- ▶ Be physically separated from automobile traffic when warranted because of traffic or safety concerns.

Policy 2: New development shall include appropriate bicycle facilities:

- ▶ Adequate bicycle access shall be provided.
- ▶ Off-street shared pedestrian/bicycle paths shall be considered in large developments.
- ▶ Bicycle parking and/or storage facilities shall be provided in the following areas: convenience, neighborhood, and community commercial; employment centers; educational facilities; recreational facilities, and park and ride lots.

Policy 3: Bicycle use shall be included in a trail system.

Policy 4: Roads planned as part of bicycle route system shall:

- ▶ Be constructed with bicycle safety considered;
- ▶ Have bridges of adequate width for bicycles;
- ▶ Have adequate width to accommodate bicycle travel without the necessity of traveling in a gutter or on an unimproved shoulder; and
- ▶ Have traffic sensors that respond to bicycles.

Policy 5: Roads identified as scenic routes, with the exception of freeways, shall be considered part of the bicycle route system.

SAN JOAQUIN COUNTY REGIONAL TRANSPORTATION PLAN

San Joaquin County, through the San Joaquin Council of Governments (SJCOG), periodically updates the Regional Transportation Plan, which outlines countywide transportation expenditures based on funding from sources like the Federal government, the State of California, and locally collected funds. The recently updated SJCOG Regional Transportation Plan (2001) contains several proposed improvements that would benefit the regional roadway network in the project region. These improvements include:

- ▶ Widening SR 99 from four lanes to six lanes adjacent to the City of Manteca.

SAN JOAQUIN COUNTY REGIONAL TRAFFIC IMPACT FEE

The SJCOG has investigated the implementation of a regional traffic impact fee that would be assessed on developments throughout San Joaquin County. An Assembly Bill (AB) 1600 nexus study was conducted to determine the cost of needed improvements and the level of contribution required from types of development and different areas of the county. However, the Regional Traffic Impact Fee has not been adopted.

MEASURE K 2003 STRATEGIC PLAN

Measure K is a County measure that funds transportation projects through sales tax revenue. The planned expenditures under the measure are provided in the Measure K Strategic Plan. The latest version of this plan was published in 2003. One relevant improvement described in the plan is the widening of Lathrop Road west of I-5 to 4 lanes in the City of Lathrop, as well as east of I-5 in the City of Manteca. Approximately 95% of the south side of Lathrop Road, in the City of Manteca, has been improved to ultimate width by the adjacent developments (Vickers, Pers. Comm., 2004).

SAN JOAQUIN COUNTY CONGESTION MANAGEMENT PROGRAM (CMP)

Proposition 111 and 116, passed by voters in June 1990, triggered state legislation requiring urban counties to designate a countywide public agency, known as a Congestion Management Agency (CMA), to create, manage, and update a countywide CMP. The purpose of a CMP is: (1) to establish level of service standards for designated freeways, state highways, and local arterials; and (2) to maintain or achieve those standards by increasing capacity of designated roads and/or managing travel demand. Incentives for incorporated cities and towns to take part in the CMP include the receipt of additional Proposition 111 gas tax revenue, Proposition 116 bond funds, and State Transportation system management funds, as well as eligibility for state and federal funds under the Regional Transportation Improvement Program (RTIP), as managed by the Metropolitan Transportation Committee (MTC). If a local government fails to comply with the CMP, the CMA may direct the state to withhold funds and declare local projects ineligible for state or federal funding.

For CMP intersections, MTC determined that significant traffic impacts would occur when the addition of project traffic causes:

- ▶ operations to deteriorate from LOS E or better under Background Conditions to LOS F under Project Conditions, or
- ▶ exacerbation of unacceptable operations (LOS F) by increasing the critical delay by four seconds or more and increasing the volume-to-capacity (V/C) ratio by 0.01 or more, or
- ▶ an increase in the V/C ratio by 0.01 or more when the change in critical delay is negative at an intersection projected to operate unacceptably under Background and Project Conditions.

CITY OF MANTECA GENERAL PLAN

The City of Manteca General Plan (City General Plan) includes the following policies related to transportation and circulation that are relevant to this analysis:

Street System

Policy C-P-1: The City shall strive to attain the highest possible traffic levels of service (LOS) consistent with the financial resources available and the limits of technical feasibility. The impact of new development and land use proposals on LOS should be considered in the review process.

Policy C-P-2: Manteca's target for transportation LOS is to provide Citywide average LOS of C or better, and a minimum of LOS D at any individual location. LOS C, LOS D and the other Level of Service ratings as defined in current traffic engineering standards. This "C average, D minimum" shall be accomplished by attempting to provide LOS C at all locations, but accepting LOS D under the following circumstances:

- a. Where constructing facilities with enough capacity to provide LOS C is found to be unreasonably expensive. This applies to facilities, for example, on which it would cost significantly more per dwelling unit equivalent (DUE) to provide LOS C than to provide LOS D.
- b. Where it is difficult or impossible to maintain LOS C because surrounding facilities in other jurisdictions operate at LOS D or worse.
- c. Where free-flowing roadways or interchange ramps would discourage use of alternate travel modes.
- d. Where maintaining LOS C will be a disincentive to use of existing alternative modes or to the implementation of new transportation modes that would reduce vehicle travel.

Policy C-P-3: Streets shall be dedicated, widened, extended, and constructed according to the Street cross-section diagrams established in the City Improvement Standards. Dedication and improvement of full rights-of-way as shown in the Street Standards shall not be required in existing developed areas where the City determines that such improvements are either infeasible or undesirable.

Policy C-P-4: Major circulation improvements shall be completed as abutting lands develop or re-develop, with dedication of right-of-way and construction of improvements, or participation in construction of such improvements, required as a condition of approval.

Policy C-P-5: Development that would necessitate roadway improvements prior to the development of lands abutting those roadway improvements shall be required to make such improvements, or participate in such improvements, as a condition of approval.

Policy C-P-6: New development will pay a fair share of the costs of street and other traffic and transportation improvements based on traffic generation and impacts on levels of service in conformance with the standard and policies established in the Public Facilities Implementation Plan.

Policy C-P-7: The street system shall be expanded in a contiguous and concentric manner to serve new development areas and to provide improved circulation for existing residents.

Policy C-P-8: Street improvements will be designed to provide multiple, direct and convenient traffic routes.

Policy C-P-9: Residential and collector street intersections with collector and arterial street shall be aligned with other residential and collector streets, where feasible, to allow light electric vehicles (NEVs), bicyclists, and pedestrians to travel conveniently and safely from one neighborhood to another without using major streets.

Policy C-P-10: Signals, roundabouts, traffic circles and other traffic management techniques shall be applied at residential and collector street intersections with collector and arterial streets in order to allow light electric vehicles (NEVs), bicyclists, and pedestrians to travel conveniently and safely from one neighborhood to another.

Policy C-P-12: The City shall promote development of a perimeter road system along Lathrop Road, Austin Road, Woodward Avenue, and Airport Way.

Policy C-P-13: The City may allow development of private streets in new residential projects that demonstrate the ability to facilitate police patrol, emergency access, and solid waste collection and fund on-going maintenance to the satisfaction of the Community Development Director.

Policy C-P-15: Residential subdivisions with lots fronting on an existing freeway or arterial street shall provide for a separate frontage road. Developers shall build frontage roads per City improvement standards.

Policy C-P-17: Residential subdivisions backing onto a freeway are discouraged. Where subdivisions back on to an arterial street or collector street, the developer shall have the option to build a masonry wall or a combination wall and berm. The top of walls along freeways shall be at least eight-feet above the elevation of the freeway travel lanes. Walls and berms shall be attractive and developed for low maintenance. All such berms and walls shall be approved by the City.

Policy C-P-18: In accord with the PFIP the City shall assess development fees for traffic signals and highway interchanges sufficient to fund system wide improvements. The development fee schedule for these traffic improvements shall be periodically reviewed, and revised as necessary.

The City also requires new development to participate in funding and construction of collector and arterial street improvements identified in the City's Street Master Plan.

Traffic Safety

Policy C-P-21: The creation or continuance of traffic hazards shall be discouraged in new development and other proposals requiring the City to exercise its discretionary authority.

Policy C-P-22: In the development of new projects, the City shall give special attention to maintaining adequate corner-sight distances at city street intersections and at intersections of city streets and private access drives and roadways.

Policy C-P-23: The City shall identify and remove, as feasible, obstacles limiting corner-sight distances at city street corners.

Parking

Policy C-P-26: The City shall require all new development to provide an adequate number of off-street parking spaces to accommodate the typical parking demands of the type of development on the site...

Policy C-P-29: Ensure that there is adequate parking for normal commercial activities.

Policy C-P-30: Ensure that there is adequate parking for special events.

Policy C-P-31: Coordinate the parking area locations with the roadway, transit, pedestrian, and bikeway systems.

Bikeways and Pedestrian Paths

Policy C-P-33: The City shall establish a safe and convenient network of identified bicycle routes connecting residential areas with recreation, shopping, and employment areas within the city.

Policy C-P-34: Provide spur or branch walkways connecting to the residential neighborhoods and primary public destinations.

Policy C-P-35: Route sidewalks so that they connect to major public parking areas, transit stops, and intersections with the bikeway system.

Policy C-P-36: Provide adequate bicycle parking facilities at commercial, business/professional, and light industrial uses.

Policy C-P-37: Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians. Provide shade and/or protection from wind and other weather conditions when possible.

Policy C-P-38: Wherever possible, bicycle facilities should be separate from roadways and walkways.

Policy C-P-39: The City shall limit on-street bicycle routes to those streets where the available roadway width and traffic volumes permit safe coexistence of bicycle and motor vehicle traffic.

Policy CD-P-23: Provide pedestrian systems that connect the center of the adjacent neighborhoods.

Policy CD-P-31: The pedestrian and bikeway system shall be linked to other pedestrian and bikeways in adjacent neighborhoods and ultimately, to the City-wide Pedestrian and Bikeway Trail System to provide a continuous interconnected system.

Policy CD-P-37: Commercial centers should provide for convenient, attractive pedestrian access from street fronts and from adjacent commercial, office, and residential land uses.

Policy CD-P-38: Commercial centers should provide for convenient, attractive pedestrian access within the center with dedicated pedestrian ways between all buildings and pedestrian spaces such as plazas, courtyards, and terraces at natural gathering areas within the site.

Policy CD-P-39: Integrating the pedestrian elements (walkways, plazas, and terraces) with the buildings will enhance the pedestrian experience. The pedestrian relationship to buildings should be comfortable, convenient, and protected from extremes of sun and wind.

Policy CD-P-40: Outdoor plazas or other common areas that provide space for special landscaping, public art, food service, outdoor retail sales, or seating areas for patrons are encouraged in retail settings appropriate to such pedestrian activity. The plaza or other common area shall be appropriately scaled to the retail use and shall be directly connected to the primary walkway.

Policy CD-P-41: Buildings adjoining public spaces, including pedestrian ways shall be designed to allow the sun to reach sidewalks and plazas in the winter.

Policy CD-P-42: Building configurations that provide “outdoor rooms,” courtyards, paseos, and promenades are encouraged.

Policy CD-P-43: Where practical, and in compliance with ADA standards, common areas that provide seating should be separated from the primary walkway by informal barriers, such as planters, bollards, fountains, low fences and/or changes in elevation.

Public Transportation

Policy C-P-42: The City shall work with San Joaquin Regional Transit District to determine the needs for additional bus service within the Manteca City limits.

Policy C-P-43: The City shall encourage the maintenance and expansion of interstate bus service in the Manteca Area.

Policy C-P-44: The City shall consider alternatives to conventional bus systems, such as small, shuttle buses that connect neighborhood centers to local activity centers.

Policy C-P-46: The City shall encourage Amtrak/ACE operations and commuter and passenger rail service that will benefit the businesses and residents of Manteca.

Policy C-P-47: The City shall identify and implement means of enhancing the opportunities for residents to commute from residential neighborhoods for the ACE station or other transit facilities that may develop in the City.

Policy C-P-49: The City shall encourage the use of local transportation services, such as jitneys, local shuttles, and commuter buses.

Policy C-P-50: Establish a plan of primary locations where the transit systems will connect to the major bikeways and pedestrian ways and the primary public parking areas.

Policy C-P-51: Encourage programs that provide ridesharing and vanpool opportunities and other alternative modes of transportation for Manteca residents.

Policy C-P-52: The City shall promote the development of park-and-ride facilities near I-5, SR 120, and SR 99.

Transportation Demand Management

Policy C-I-15: The City shall establish a requirement for a transportation demand management program in any business park, industrial or commercial land use that employs more than 50 full time equivalent employees.

CITY OF MANTECA ZONING ORDINANCE

Chapter 17.15, Parking and Loading, of the City of Manteca Zoning Ordinance sets forth City requirements for both on and off-street parking associated with residential, commercial, and industrial housing.

4.11.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

The volume of traffic associated with the project was estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In the first step, the traffic volumes entering and exiting the project site were estimated. In the second step, the directions the trips use to approach and depart from the site were projected. Finally, the trips were assigned to specific street segments and intersection turning movements. Table 4.11-3 presents the projected trip distribution by land use type for the URSP. Please refer to Appendix G for a detailed description of methodology and background conditions assumed for the project.

Table 4.11-3 Projected Trip Generation for the URSP								
	Trip Generation Parameters							
	Quantity	Trip Generation						
		Daily	A.M. Peak Hour			P.M. Peak Hour		
			Inbound	Outbound	Total	Inbound	Outbound	Total
Low Density Single Family Residential	535 units	5,120	96	305	401	351	189	540
Low Density Residential - Active Adult Community	1,425 units	6,612	65	206	271	241	130	371
CMU – Commercial	385.9 ksf	16,571	242	155	397	695	753	1,447
CMU – High Density Housing	273 units	1,835	28	111	139	110	59	169
Total (All Trips)		30,138	431	777	1,208	1,397	1,131	2,528
Internal Trips: Single Family Residential ²		<410>	<7>	<25>	<32>	<28>	<15>	<43>
Internal Trips: Active Adult Residential ²		<992>	<10>	<31>	<41>	<36>	<20>	<56>
Internal Trips: CMU Residential		<183>	<3>	<11>	<14>	<11>	<6>	<17>
Pass-By Trips - Shopping Center ³		<5,634>	<82>	<53>	<135>	<236>	<256>	<492>
Total External Trips		22,919	329	657	986	1,086	834	1,920
¹ ksf = thousand square feet ² Internal trip reduction: Active adult community = 15%, single family residential = 8%, CMU residential = 10% ³ Pass-by rates from Trip Generation handbook, October 1998, ITE: shopping center (assumed) = 34%								

THRESHOLDS OF SIGNIFICANCE

The project would have a significant transportation impact if it would:

- ▶ cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system;
- ▶ exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- ▶ substantially increase hazards because of a design feature or incompatible uses;
- ▶ result in inadequate emergency access;
- ▶ result in inadequate parking capacity; or
- ▶ conflict with adopted policies, plans, or programs supporting alternative transportation.

Caltrans freeways and associated ramps, including I-5, I-205, SR 99, and SR 120, require operation at LOS D or better.

Along San Joaquin County roadways, an impact is considered significant if the project causes the intersection to change from LOS D to LOS E on minor arterial or higher classified roadways, and from LOS C to LOS D on other roadways in rural locations.

The City of Lathrop uses LOS D as the threshold level of service at signalized and all-way stop intersections to determine whether an impact is considered significant. At intersections with side street stop control, an impact is considered insignificant if the level of service is LOS E or better.

According to the City of Manteca's General Plan Transportation Analysis, the City of Manteca uses a two-tier approach in assessing level of service. First, every intersection must meet LOS D as a minimum. Second, one-half of the study area intersections must operate at LOS C or better. Further, at unsignalized intersections, a traffic impact is considered "adverse but not significant" if the City of Manteca LOS standard is exceeded but the projected traffic does not satisfy traffic signal warrants. Under these conditions, the only means to completely alleviate delays to stop controlled vehicles would be to install a traffic signal. However, the unmet signal warrants would imply that the reduction in delay for the stop-controlled vehicles may not justify the new delays that would be incurred by the major street traffic (which is not currently not stopped). Under these circumstances, installation of a signal would not be recommended and the substandard LOS for stop-controlled vehicles would be considered an "adverse but not significant" impact.

IMPACT ANALYSIS

Impact
4.11-1

Increases in Peak Hour Traffic Volumes on Regional Roadways Resulting in Unacceptable Levels of Service. *The URSP project would cause an increase in P.M. peak hour traffic volumes at the Lathrop Road/I-5 southbound ramp intersection, resulting in unacceptable levels of service and warranting the need for improvements such as traffic signals. Although mitigation is available in the form of roadway improvements that would improve intersection levels of service, these improvements are dependent on fair-share participation in City of Lathrop and San Joaquin County roadway improvement programs, which are not subject to the control of the City of Manteca. Because it is unknown whether these improvements would be implemented and the project would contribute to an unacceptable condition based on applicable standards, this impact would be **significant**.*

The volume of traffic generated by the single-family subdivision and the commercial mixed uses was estimated based on rates in the Trip Generation published by the Institute of Transportation Engineers (ITE) (Seventh Edition). This document includes trip rates for various land uses and is a standard tool used for estimating traffic volumes. Trip generation rates for active adult communities were derived from a study conducted by kdAnderson in July 2001 at the Del Webb Sun City Lincoln Hills active adult community. That study determined that trip generation rates for adult communities are about 50% lower than rates for single-family homes, and peak hour rates are about 25% of single-family homes.

The project is estimated to generate 22,919 daily vehicle trips, 986 A.M. peak-hour trips (329 inbound/657 outbound), and 1,920 P.M. peak-hour trips (1,086 inbound/834 outbound). Please refer to Appendix G of this Draft EIR for a breakdown of project-generated trips by land use type.

During the public scoping period for the Notice of Preparation (NOP) of the EIR, the City of Manteca received a comment letter from the City of Lathrop requesting consideration of project impacts along Lathrop Road and Louise Avenue. These two streets are regional roadways that carry traffic through Lathrop as well as Manteca, and are designated as Major Arterials in the City of Lathrop General Plan.

As shown in Table 4.11-4, the results of traffic modeling indicate that the Lathrop Road/I-5 southbound ramp intersection currently operates at an unacceptable level of service, LOS F, during the p.m. peak hour. Traffic from the URSP project would contribute to existing LOS F conditions at both intersections. In the absence of the project, a traffic signal is warranted to correct existing roadway deficiencies at this intersection and is proposed in the City of Lathrop's Transportation Improvement Plan. With implementation of the project and identified signal improvements, this intersection would operate at LOS C under 2011 URSP buildout conditions (Table 4.11-4). Although installation of a traffic signal would improve the LOS at this intersection to satisfactory conditions, construction of this improvement is dependent on participation in the following City of Lathrop and San Joaquin County fair-share funding programs.

Table 4.11-4 Peak Hour Intersection Levels OF Service											
Location (Agency Jurisdiction)	Existing		Existing + Project		Cumulative		Cumulative Plus Project				
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.			
1. Union Road / Lovelace Road (Manteca)	8.5 / A	9.9 / A	8.6 / A	10.6 / B	9.8 / A	8.8 / A	10.1 / B	9.5 / A			
2. Lathrop Road / McKinley Avenue (Manteca)	14.4 / B	21.6 / C	16.5 / C	35.6 / E*	>999 / F*	42.5 / E	>999 / F	136.3 / F			
3. Lathrop Road / Airport Way (Manteca)	28.1 / C	27.5 / C	30.3 / C	37.9 / D	48.0 / D	34.3 / C	51.3 / D	45.6 / D			
4. Lathrop Road / London Avenue (Manteca)	15.5 / B	13.1 / B	14.4 / B	19.3 / B	27.2 / C	13.9 / B	29.3 / C	17.6 / B			
5. Lathrop Road / Union Road (Manteca)	32.1 / C	33.6 / C	49.5 / D	154.0 / F**	33.3 / C	29.1 / C	51.2 / D	50.3 / D			
6. Lathrop Road / Main Street (Manteca)	17.6 / C	40.8 / E*	25.3 / D	123.3 / F	42.7 / D	29.5 / C	45.9 / D	31.9 / C			
7. Airport Way / Louise Avenue (Manteca)	24.8 / C	135.0 / F*	33.7 / D	181.0 / F	29.5 / D	35.8 / D	50.9 / D	36.0 / D			
		21.9 / C		24.1 / C♦							
8. Union Road / Louise Avenue (Manteca)	29.9 / C	34.0 / C	29.5 / C	37.1 / D	49.7 / D	44.3 / D	54.0 / D	50.1 / D			
9. Airport Way / Yosemite Avenue (Manteca)	30.6 / C	32.6 / C	31.0 / C	33.2 / C	86.3 / F	41.2 / D	87.8 / F	43.5 / D			
10. Lathrop Road / I-5 SB Ramps (Lathrop)	34.9 / D	133.3 / F*	83.1 F	301.0 / F	24.8 / C	29.4 / C	25.4 / C	33.3 / C			
		21.5 / C	29.6 / C♦	23.3 / C♦							
11. Lathrop Road / I-5 NB Ramps (Lathrop)	11.3 / B	19.4 / C	11.9 / B	33.7 / D	27.7 / C	35.2 / D	29.8 / C	43.4 / D			
12. Lathrop Road / Harlan Road (Lathrop)	21.3 / C	21.8 / C	19.9 / B	21.3 / C	37.9 / D	21.8 / C	42.0 / D	22.4 / C			
13. Lathrop Road / 5th Street-Woodfield Drive (Lathrop)	18.4 / B	20.0 / C	16.7 / B	18.6 / B	28.8 / C	32.0 / C	32.7 / C	39.1 / D			
14. French Camp Road / Union Road (County)	12.7 / B	10.1 / B	13.8 / B	12.1 / B	17.7 / B	15.2 / B	18.5 / B	16.8 / B			
15. Union Way / AAC North Access (Manteca)	N/A	N/A	9.4 / A	9.4 / A	N/A	N/A	9.8 / A	8.8 / A			
16. Airport Way / AAC Access (Manteca)	N/A	N/A	12.2 / B	12.1 / B	N/A	N/A	698.0 / F*	23.1 / C			

Table 4.11-4 Peak Hour Intersection Levels OF Service										
Location (Agency Jurisdiction)	Existing		Existing + Project		Cumulative		Cumulative Plus Project			
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		
17. Union Road 28 / AAC Main Access-- SFR North Access(Manteca)	N/A	N/A	20.8 / C	25.9 / D	N/A	N/A	15.3 / C	15.6 / C		
18. Union Road / SFR South Access(Manteca)	N/A	N/A	22.2 / C	28.1 / D	N/A	N/A	14.7 / B	17.0 / C		
19. Union Road / CMUR Access(Manteca)	N/A	N/A	14.3 / B	11.7 / B	N/A	N/A	14.3 / B	10.5 / B		
20. Union Road / CMU North Access(Manteca)	N/A	N/A	17.1 / C	274.2 / F*	N/A	N/A	18.8 / C	193.3 / F*		
21. Union Road/CMU South Access(Manteca)	N/A	N/A	12.9 / B	18.4 / C	N/A	N/A	11.4 / B	12.1 / B		
22. Lathrop Road / AAC Access(Manteca)	N/A	N/A	12.3 / B	13.7 / B	N/A	N/A	18.6 / C	12.1 / B		
23. Lathrop Road/CMU West Access(Manteca)	N/A	N/A	11.5 / A	116.7 / F*	N/A	N/A	47.7 / E*	325.6 / F		
24. Lathrop Road/CMU Center Access(Manteca)	N/A	N/A	11.9 / B	13.4 / B	N/A	N/A	17.4 / C	12.1 / B		
25. Lathrop Road / CMU East Access(Manteca)	N/A	N/A	13.0 / B	53.9 / F*	N/A	N/A	42.7 / E*	400.5 / F		

Bold denotes unacceptable LOS
 ◆ LOS value calculated after agency traffic mitigation implemented
 N/A - not applicable
 * add traffic signal
 ** add SB left turn lane, SB right turn lane, WB right turn lane
 Source: kd Anderson 2004

The City of Lathrop Capital Facilities Fee (CFF) program identifies 31 individual transportation improvements, including intersection widening road widening, new roads, traffic signals, and freeway interchange improvements. The CFF applies to projects in the City of Lathrop both east and west of I-5, including improvements to the Lathrop Road/I-5 interchange, Louise Avenue/I-5 interchange, and the Roth Road/I-5 Interchange.

In 1997, the San Joaquin SJCOG, Caltrans, and the City of Lathrop developed the West Lathrop Specific Plan (WLSP) Regional Transportation Fee. This regional fee was adopted as a mitigation program to calculate new development's fair share of regional improvements needed in San Joaquin County, including improvements to mainline freeways, freeway interchanges, regional streets, the regional bicycle system, the bus transit system, and rail corridor improvements. Caltrans determined the improvements needed in the County to provide acceptable operation of regional facilities. These improvements include the Lathrop Road/I-5 interchange, the Louise Avenue/I-5 interchange, funding for more than 70 bus routes, and railway improvements, among others. However, many cities have elected not to participate in this program.

Although this intersection would operate acceptably with implementation of the project and identified signal improvements, it is unknown whether identified improvements would be implemented because funding depends in part on participation by other developers in the City of Lathrop CFF and the WLSP Regional Transportation Fee "fair-share" improvement programs. These programs are not under the control of the City of Manteca. Therefore, the project would contribute traffic to an intersection that is currently operating at unacceptable conditions. This would be a significant impact.

Impact
4.11-2

Increases in Peak Hour Traffic Volumes on Local and Project-Specific Roadways

Resulting in Unacceptable Levels of Service. *The URSP project would result in an increase in a.m. and/or p.m. peak hour traffic volumes at local study intersections and at intersections that would be constructed as part of the project, resulting in the degradation of these intersections to unacceptable levels of service. Because the addition of project-generated traffic to local roadways would result in the exacerbation of already unacceptable levels of service of some local intersections, or would degrade currently acceptable LOS intersections to unacceptable conditions based on City of Manteca significance thresholds, this would be a **significant** impact.*

As discussed above, previous studies have determined that trip generation rates for adult communities are about 50% lower than rates for traditional single-family homes, and peak hour rates are about 25% lower than rates for traditional single-family homes. This data was factored into the projected trip distribution as described above: the URSP project is estimated to generate 22,919 daily vehicle trips, 986 a.m. peak-hour trips (329 inbound/657 outbound), and 1,920 p.m. peak-hour trips (1,086 inbound/834 outbound).

The results of the LOS analysis for existing plus project traffic volumes during the a.m. and p.m. peak hours are shown in Table 4.11-2. Unsatisfactory traffic conditions are projected at

four local roadway intersections and three project-specific roadway intersections under full project buildout conditions (in 2011):

- ▶ Lathrop Road/Main Street
- ▶ Airport Way/Louise Avenue
- ▶ Lathrop Road/McKinley Avenue
- ▶ Lathrop Road/Union Road
- ▶ Union Road/CMU north retail access
- ▶ Lathrop Road/CMU west retail access
- ▶ Lathrop Road/CMU east retail access

The Lathrop Road/Main Street intersection is currently operating at LOS E during the p.m. peak hour and would operate at LOS F with implementation of the project (Table 4.11-4).

The Airport Way/Louise Avenue intersection is currently operating at LOS F during the p.m. peak hour and would continue to operate at LOS F with implementation of the project. In the absence of the project, a traffic signal is warranted to correct existing roadway deficiencies at this intersection and is proposed in the City's transportation plan. With implementation of the project and identified signal improvements, this intersection would operate at LOS D during the p.m. peak hour with implementation of the project (Table 4.11-4).

Although the Lathrop Road/McKinley Avenue and Lathrop Road/Union Road study intersections are currently operating at acceptable levels of service (LOS C and D, respectively), the addition of project-generated traffic would decrease the levels of service of these roadways to LOS E and F, respectively (Table 4.11-4).

Three of the new intersections that would be constructed as part of the URSP project, the Union Road/CMU north retail access, the Lathrop Road/CMU west retail access, and the Lathrop Road/CMU east retail access would operate at LOS F, LOS E, and LOS E, respectively, under 2011 URSP buildout conditions (Table 4.11-4).

Because the addition of project-generated traffic to local roadways would result in the exacerbation of already unacceptable levels of service at some local intersections, or would degrade currently acceptable LOS intersections to unacceptable conditions based on City of Manteca significance thresholds, this would be a significant impact.

Impact
4.11-3

Increased Traffic Resulting from Vehicle Trips under Cumulative (Future Plus Project) Traffic Conditions (2025). *Operational traffic conditions for cumulative conditions at most intersections in the project study area would be acceptable. However, the project would result in LOS levels at the intersection of Yosemite Avenue/ Airport Way, Lathrop Road/McKinley Avenue, and Airport Way/AAC access that would exceed the City of Manteca's LOS thresholds under cumulative conditions. This would be a **significant** impact.*

To forecast future (year 2025) traffic volumes, traffic projections were obtained from the May 2003 General Plan Transportation Analysis (GPTA) for the 2025 horizon year for roadways within the City of Manteca. Projections for Lathrop and San Joaquin County were obtained

from the Central Lathrop Specific Plan EIR (EDAW 2004) and from the San Joaquin Council of Governments most recent traffic model. (Please see Appendix G for additional details.) Projected lane configurations on Lathrop Road, Airport Way, and Union Road were based on those identified in the GPTA; roadways north of Lathrop Road were assumed to mimic the land configuration to the south (see figure 6A in Appendix G for details on future roadway lane configurations).

As shown in Table 4.11-4, the Lathrop Road/McKinley Avenue intersection would operate at unacceptable levels of service, LOS F, during the a.m. peak hour and LOS E during the p.m. peak hour, under cumulative conditions without implementation of the project. The addition of project-generated traffic would cause this intersection to degrade to LOS F during both the a.m. and p.m. peak hours under buildout conditions.

Under cumulative conditions without implementation of the project, the Airport Way/Yosemite Avenue intersection would operate at an unacceptable level of service, LOS F, during the a.m. peak hour. The addition of project-generated traffic to this intersection would exacerbate the already unacceptable conditions at this intersection (Table 4.11-4). Under the City's General Plan, the Airport Way/Yosemite Avenue intersection would be widened to 6 lanes. However, the City has determined that it would be infeasible to obtain roadway easements for installation of additional traffic lanes along this roadway. Therefore, under cumulative conditions, the project would contribute traffic volumes that would exacerbate already unacceptable conditions at this intersection.

Under cumulative conditions, the project would result in the proposed intersections of Airport Way/AAC access, Union Road/CMU north access, and the Lathrop Road/CMU center access to operate unacceptably during a.m. and p.m. peak hours (Table 4.11-4). Mitigation has been recommended as a condition of approval for the project in Impact 4.11-2 above that would improve operations of the intersections of Union Road/CMU north access and the Lathrop Road/CMU center access to acceptable levels under existing plus project conditions. These intersection improvements would also improve the operations of these intersections to acceptable levels under cumulative conditions. Therefore, with implementation of recommended mitigation, the project would result in less-than-significant impacts to these intersections.

Because the project would result in LOS levels at the intersection of Yosemite Avenue/ Airport Way, Lathrop Road/McKinley Avenue, and Airport Way/AAC access that exceed the City of Manteca's LOS thresholds under cumulative conditions, this would be a significant impact.

Impact
4.11-4

Increased Roadway Congestion from Construction Traffic. *It is estimated that approximately 150-200 construction workers could access the project site on a daily basis during peak construction periods. This could result in adverse effects on the operation of area roadways during the peak commute periods. In addition, construction traffic, particularly truck traffic, could degrade pavement conditions along roadways used for access. This would be a **significant** impact.*

Construction of the project would result in short-term increases in traffic on local roadways. Construction activities would require the hauling of equipment and materials to the project site and transportation of employees to and from offsite locations. Construction activities would require up to 150 to 200 construction workers that would commute to the site during each phase of construction over a period of 6 years (2005 through 2011). These construction workers would generate 300 to 400 one-way daily trips to and from the project site. Assuming a worst-case scenario, all of these workers could access the project site on a daily basis during peak construction periods. In addition, material deliveries and occasional movement of heavy equipment would occur on local roadways. If a large proportion of the construction-related vehicle trips were to occur during peak a.m. and p.m. commute periods, construction traffic could substantially degrade operation of local roadways. In addition, construction traffic, particularly truck traffic, could degrade pavement conditions along roadways used for access to the project site. The project's impacts related to construction traffic would be significant.

Impact
4.11-5

Vehicular Site Access and Onsite Circulation Impacts. *Proposed vehicular circulation routes for the URSP project would adequately serve the active adult and traditional single-family housing developments and would meet the City's design standards for internal circulation roadways. Substantial increases in hazards as a result of design features or incompatible land uses within these two housing development areas are not expected. However, circulation patterns within the CMU areas are not currently known and if not properly designed could result in increased hazards or safety concerns with onsite and adjacent land uses. Further, the Union Ranch development does not provide vehicular connectivity with proposed development to the north and west. This would be a **potentially significant** impact.*

As described in Chapter 3, Project Description, Airport Way, Lathrop Road, and Union Road would provide access to the project site from the surrounding area. The proposed internal circulation plan includes construction of a 120-foot-wide residential collector roadway within the URSP site to prioritize traffic flow between the active adult community and the traditional single-family development community. In general, this collector roadway would be oriented in an east-west direction. A network of smaller local neighborhood streets ranging from 44 feet to 60 feet wide would provide access to residential areas within both communities. Access to the commercial/mixed use development area would be provided from Lathrop Road and Union Road. The URSP's proposed roadway circulation network is shown in Exhibit 3-4. Proposed circulation routes would adequately serve the onsite active adult housing and traditional single-family housing areas. The location of proposed multi-use pedestrian and bicycle trails, as shown on Exhibit 3-4, would not result in substantial increases in hazards to vehicular, pedestrian, or bicycle traffic as a result of project design. Therefore, substantial increases in

hazards as a result of a design feature associated with the active adult community and traditional single-family residential community are not anticipated.

As identified in Exhibit 4.11-2, access to the CMU area would be provided by construction of six new intersections as part of the URSP project. Direct access from either the active adult housing community or the traditional single-family housing development would not be provided. Additional details on the internal circulation routes within the CMU areas are not currently known and could result in significant vehicular, pedestrian, and bicycle circulation impacts. If not properly designed, significant hazards could result between incompatible uses. This would be a potentially significant impact.

As currently designed, the Union Ranch project does not provided vehicular connectivity with proposed development to the north and west, as specified in General Plan policies C-P-4 through C-P-9. This would be a significant impact.

Impact
4.11-6

Impacts to Emergency Vehicle Access. *The project would provide adequate emergency access to the project site. However, construction vehicles could temporarily obstruct local roadways, which could impair the ability of local agencies to respond to an emergency in the project area. This would be a **potentially significant** impact.*

Under the URSP project, emergency vehicular access to both housing developments would be provided via the 120-foot-wide major residential collector streets from Union Road. Emergency access to the CMU areas would be provided from Lathrop Road and from Union Road. Two emergency vehicle access points would be maintained at all times.

Design and siting of all roadways and driveways would be done in consultation with the City of Manteca Public Works Department, City Fire Department, and City Police Department staff to ensure that the roadways and driveways provide adequate access for emergency vehicles (i.e., turning radii, lane width). Because the developers would be required to coordinate with the City Public Works Department, Fire Department, and Police Department to ensure adequate emergency access is provided, this would be a less-than-significant impact.

The majority of project construction would occur in the footprint of the project site; however, construction of proposed intersection improvements and offsite utility infrastructure, could partially obstruct roadways in the project vicinity. Obstruction of these roadways could block or slow emergency response vehicles traveling on Union Road, Lathrop Road, or Airport Way, and could adversely affect the response times of emergency response agencies depending on the time of day (i.e., peak hours). This would be a potentially significant impact.

Impact
4.11-7

Conformity with City Parking Requirements. *The URSP project would provide adequate parking for proposed residential development in the active adult housing and traditional single-family housing areas in conformance with City parking standards. However, the CMU areas have not yet been designed and specific parking plans for these areas are not available. If not properly designed, development of the CMU areas could result in the provision of inadequate parking onsite. This would be a **potentially significant** impact.*

The City of Manteca Zoning Code requires the provision of two covered parking spaces for each dwelling. The URSP would meet this requirement. As part of the URSP, additional on-street parking lanes, between 7 and 8 feet wide, would also be provided on all of the internal residential area roadways except the 120-foot major residential collector.

The proposed CMU areas have not yet been designed and specific plans for parking in these areas are not currently known. If not properly designed, development of the CMU areas could result in the provision of inadequate parking onsite. This would be a potentially significant impact.

Impact
4.11-8

Pedestrian and Bicycle Circulation Impacts. *The project's proposed network of pedestrian and bicycle trails does not conform to the City's General Plan policies requiring connectivity between residential, shopping, and employment centers, and thus could result in potential bicycle and pedestrian circulation hazards. Further, the URSP does not include some bicycle facilities that were identified in the City of Manteca Bicycle Master Plan. This would be a **significant** impact.*

The City of Manteca Bicycle Master Plan was completed in 2003 and identifies the existing bicycle system and future needs for completing a citywide network. One goal of the master plan is to include bicycle facilities in all new development projects in the City. In addition, a “city-loop” bike path is identified that links major roadways in the city; this includes links to the Tidewater Bikeway.

The City’s proposed bicycle route system includes development of Class 2 bike lanes along Lathrop Road from about McKinley Avenue, west of the URSP project site, extending east of SR 99. A bike path north of Lathrop Road and traversing a northwest-southeast direction is also identified from the Union Pacific Railroad to the Tidewater Bikeway extension at the San Joaquin Delta College Farm Laboratory east of Union Road.

During development of the City’s Bicycle Master Plan, several roadways were identified or perceived as problem areas mainly because of high speeds and/or narrow widths. Airport Way and Union Road are two of the roadways identified as such. The City’s Bicycle Master Plan has identified that bicycle lane striping along the east side of Airport Way should be provided.

As shown on Exhibit 3-4, the applicant has proposed a multi-use pedestrian and bicycle trail system parallel to and north of Lathrop Road, adjacent to the active adult community. The path winds eastward between the active adult community, the properties abutting Lathrop Road, and the CMU area, crosses Union Road, and ties into another proposed pathway that

would pass through the Union Ranch East residential subdivision. This second path would connect to the Tidewater Bikeway.

The URSP would conform to the following elements of the City's Bicycle Master Plan:

- ▶ The goal of including bicycle facilities in all new City development projects would be met.
- ▶ Connectivity between major City roadways and the Tidewater Bikeway would be provided.
- ▶ East-west connectivity in the area west of the Union Pacific Railroad to the Tidewater Bikeway would be provided.
- ▶ Union Road would be widened to its full right-of-way width of 84 feet and would include a bicycle/pedestrian path in the landscape easement on both sides of the street, south of the two housing community entries.
- ▶ Class II bicycle lanes along Lathrop Road would be provided.

However, the following components of the City's Bicycle Master Plan would not be implemented under the URSP:

- ▶ Bicycle lane striping along the east side of Airport Way
- ▶ Bicycle lane striping along Union Road, north of the two housing community entries

Further, the City's General Plan includes policies requiring bicycle and pedestrian connectivity between residential, shopping, and employment centers. The project does not include connectivity between the housing developments and the commercial mixed-use centers, nor does it include connectivity between the housing developments and proposed development to the north and west. Because of this lack of connectivity, the project could result in increased safety hazards (i.e., bicycles and vehicles sharing the roadways).

Because the project would not provide the level of connectivity required by the General Plan, would not implement all of the facilities required by the City's Bicycle Master Plan, and could result in increased hazards associated with bicycle and pedestrian movement, this would be a significant impact.

Impact
4.11-9

Bus Transit Services. *Implementation of the URSP project would generate a need for public bus transportation services. Because limited bus services for only the elderly and disabled are currently available to serve the southern end of the project and none are proposed under the URSP, this would be a **significant** impact.*

Although the SJRTD operates a number of bus routes in San Joaquin County, there is no existing bus transportation that would serve all passengers throughout the URSP project site. The Hopper bus service operated by the SJRTD will deviate up to ¾ mile for passengers not on the direct service route. Thus, service for elderly and disabled passengers could be

provided at the southern end of the URSP project site. The City is currently in process of developing its own bus transportation system, which is expected to be operational in 5 years (Cantu, pers. comm. 2005). However, it is unknown whether bus service routes would be provided to the URSP by the City. Therefore, this impact would be a significant.

4.11.4 MITIGATION MEASURES

Mitigation is recommended for the following potentially significant and significant impacts.

4.11-1: Increases in Peak Hour Traffic Volumes on Regional Roadways Resulting in Unacceptable Levels of Service.

The installation of a traffic signal at the Lathrop Road/I-5 intersection has been identified in the City of Lathrop CFF and would improve the operation of this intersection to acceptable levels, LOS C, with implementation of the project. The project applicant shall pay its fair share of the cost of these identified improvements through payment of traffic impact fees to the City of Lathrop CFF program. Based on Caltrans methodology to determine fair share costs, which divides project-generated traffic by the difference between the cumulative traffic and the existing plus approved projects traffic, the URSP fair share for this intersection would be 2.2% of the total cost for signalization. The total dollar amount shall be determined in consultation with the appropriate agencies when final project approvals are sought.

Because implementation of this mitigation measure is dependent on circumstances beyond the applicant's and the City's control and would be subject to the control of the City of Lathrop, it is unknown whether this mitigation would be implemented by the time the URSP builds out. Therefore, for purposes of CEQA, this would be a significant and unavoidable impact.

4.11-2a: Operation of LOS E at the Lathrop Road/Main Street Intersection Under Existing Conditions and LOS F under Existing Plus Project Conditions.

The project applicant shall pay its fair share of the cost for installation of a traffic signal at the Lathrop Road/Main Street intersection. Because this mitigation measure cannot be implemented until the interchange configurations for Lathrop Road and Main Street are finalized as part of the SR 99 widening to six lanes, the applicant shall coordinate with the City as to timing of implementation of this mitigation measure. Implementation of this measure would improve the operations of this intersection to LOS D. Using Caltrans methodology to determine fair share costs, the URSP project would be responsible for approximately 15.8% of the total cost of this improvement. The total dollar amount shall be determined in consultation with the appropriate agencies when final project approvals are sought. Payment for improvements will occur as part of the collection of Public Facilities Improvement Program (PFIP) fees at the issuance of building permits.

4.11-2b: Operation of LOS F at the Airport Way/Louise Avenue Intersection Under Existing Conditions and LOS F under Existing Plus Project Conditions.

The project applicant shall pay its fair share of the cost for installation of a traffic signal at the Airport Way/Louise Avenue intersection. Implementation of this measure would improve operations at this intersection to LOS C. Using Caltrans methodology to determine fair share costs, the URSP project would be responsible for approximately 3.0% of the total cost for this improvement. The total dollar amount shall be determined in consultation with the appropriate agencies when final project approvals are sought. Payment for improvements will occur as part of the collection of Public Facilities Improvement Program (PFIP) fees at the issuance of building permits.

4.11-2c: Operation of LOS E at the Lathrop Road/McKinley Avenue Intersection Under Existing Plus Project Conditions.

The project applicant shall pay its fair share of the cost for installation of a traffic signal at the Lathrop Road/McKinley Avenue intersection. Implementation of this measure would improve operations at this intersection to LOS B. Using Caltrans methodology to determine fair share costs, the URSP project would be responsible for approximately 28.6% of the total cost for this improvement. The total dollar amount shall be determined in consultation with the appropriate agencies when final project approvals are sought. Payment for improvements will occur as part of the collection of Public Facilities Improvement Program (PFIP) fees at the issuance of building permits.

4.11-2d: Operation of LOS F at the Lathrop Road/Union Road Intersection Under Existing Plus Project Conditions.

The project applicant shall pay its fair share of the cost for construction of southbound left turn and right turn lanes along Union Road at the Lathrop Road/Union Road intersection. The project applicant shall also pay its fair share of the cost for construction of a right turn lane along westbound Lathrop Road at this intersection. These improvements shall be constructed concurrently with Union Ranch development. Implementation of these measures would improve operations of this intersection to LOS D. Using Caltrans methodology to determine fair share costs, the URSP project would be responsible for approximately 35.6% of the total cost for this improvement. The total dollar amount shall be determined in consultation with the appropriate agencies when final project approvals are sought. Payment for improvements will occur as part of the collection of Public Facilities Improvement Program (PFIP) fees at the issuance of building permits.

4.11-2e: Operation of LOS F at the Union Road/CMU North Access Intersection Under Existing Plus Project Conditions.

The project applicant shall construct northbound and southbound left turn lanes along Union Road at the Union Road/CMU North access intersection to provide access to the CMU site. The northbound left turn lane shall provide 225 feet of storage, and the southbound left turn lane shall provide 125 feet of storage. The project applicant shall also install a traffic signal at

this intersection. Implementation of these measures would improve operations of this intersection to LOS C.

4.11-2f: Operation of LOS F at the Lathrop Road/CMU West Access Intersection Under Existing Plus Project Conditions.

The project applicant shall construct an eastbound left turn lane along Lathrop Road at the Union Road/CMU West Access intersection to provide access to the CMU site. The left turn lane shall provide 275 feet of storage. The project applicant shall also install a traffic signal at this intersection. This signal shall be placed no closer than 1,200 feet from the existing traffic signal at the Lathrop Road/Union Road intersection. Implementation of these mitigation measures would improve operations of this intersection to LOS B.

4.11-2g: Operation of LOS F at the Lathrop Road/CMU East Access Intersection Under Existing Plus Project Conditions.

The project applicant shall construct an eastbound left turn lane along Lathrop Road at the Union Road/CMU East Access intersection to provide access to the CMU site. The left turn lane shall provide 175 feet of storage. The project applicant shall also install a traffic signal at this intersection. Implementation of these measures would improve operations of this intersection to LOS A.

4.11-3a: Operation of LOS F at Airport Way/Yosemite Avenue Under the 2025 No Project and Cumulative Plus Project Scenario.

Mitigation for this impact would require the construction of additional lanes at this intersection above and beyond those already called for in the City of Manteca General Plan. Roadway easements that would accommodate additional lanes are not available and/or feasible to obtain. Therefore, no feasible mitigation measures are available to reduce this impact to a less-than-significant level. This would be a significant and unavoidable impact.

4.11-3b: Operation of LOS F at the Airport Way/AAC north access Intersection Under the 2025 Cumulative Plus Project Scenario.

The project applicant shall install a traffic signal at this intersection. Implementation of this measure would improve operation of this intersection to LOS A.

4.11-4: Increased Roadway Congestion from Construction Traffic. Before project construction activities begin, the project applicant shall prepare a construction traffic control plan that shall be applied to all construction activities associated with the URSP project. The plan shall include, at a minimum, the following conditions:

- ▶ Local roadways will be jointly monitored by the City and project applicant every six months to determine whether project related construction traffic is degrading roadway conditions. Roadways with potential to be damaged by construction traffic and included in the monitoring effort shall be agreed to by the City and the project

applicant. All degradation of pavement conditions because of URSP-related construction traffic will be fully repaired by the project applicant to the satisfaction of the City of Manteca.

4.11-5: Vehicular Site Impacts and Onsite Circulation Access. The CMU developer shall work with the City to design vehicular, pedestrian, and bicycle access within the Union Ranch CMU areas, and between the Union Ranch development and proposed development to the north and west, that meets both City of Manteca General Plan standards and URSP standards.

4.11-6: Impacts to Emergency Vehicle Access.

The project applicant shall prepare a Construction Management Plan and submit the plan to the City of Manteca Public Works Department for review and approval. The Construction Management Plan shall identify the timing of construction and the timing of elements that would result in the full or partial blockage of local roadways. The plan shall specify the measures that would be implemented to minimize traffic-related impacts including construction parking during construction, which shall be limited to onsite areas or facilities designated for parking uses (i.e., parking garage). These measures could include, but are not limited to the following: use of signage notifying travelers that they are entering a construction zone, and use of cones, flaggers, and guide-vehicles to direct traffic through the construction zone. A copy of the plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct local roadways.

4.11-7: Conformity with City Parking Requirements in the CMU Areas.

The CMU developer shall coordinate with the City of Manteca to identify the required number of parking spaces for both CMU areas. The developer shall design the CMU areas to provide the appropriate number of spaces, and shall design the commercial parking areas in accordance with the City's zoning code as far as stall size, aisle size, and access driveways.

4.11-8: Pedestrian and Bicycle Circulation Impacts.

The project applicant shall coordinate with the City of Manteca Public Works Department to identify the necessary facilities that would be required to provide the following:

1. Connect the project's proposed bicycle lanes and/or multi-use trail to the existing London Avenue bicycle lanes;
2. Add bicycle lanes along the east side of Airport Way as part of project-related Airport Way road improvements;
3. Add bicycle lanes along both sides of Union Road to the northern edge of proposed development;

4. Provide bicycle and pedestrian connectivity between the two Union Ranch housing developments and the planned commercial centers; and
5. Provide bicycle and pedestrian connectivity between the two Union Ranch housing developments and proposed development to the north and west.

4.11-9: Bus Transit Services.

The City is currently developing a citywide bus transportation system. The project developers shall coordinate with the City to ensure that bus transportation services are provided to the project in accordance with City standards.

4.11.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the above mitigation, the project's impacts to local area roadways under existing plus project conditions (Impact 4.11-2), construction traffic (Impact 4.11-4), vehicular circulation and on-site access in the CMU areas (Impact 4.11-5), emergency vehicle access (Impact 4.11-6), parking (Impact 4.11-7), bicycle and pedestrian impacts within the CMU areas (Impact 4.11-8), and bus transit services (Impact 4.11-9) would be reduced to a less-than-significant level because project developers would be required to pay required fees and install roadway modifications, and prepare appropriate plans and project designs to avoid these impacts.

However, mitigation improvements recommended to reduce the project's impacts to the Lathrop Road/Southbound I-5 intersection (Impact 4.11-1) are under the jurisdiction of San Joaquin County, Caltrans, and the City of Lathrop and not under the control of the City of Manteca. It is uncertain at this time whether the mitigation improvements would be implemented. If recommended measures were not implemented, this would be a significant and unavoidable impact of the project.

No feasible mitigation measures are available to reduce the project's impacts to the Airport Way/Yosemite Avenue intersection under future 2025 no project and cumulative plus project conditions (Impact 4.11-3). Therefore, this impact is significant and unavoidable.

4.12 CULTURAL RESOURCES

This section describes known archaeological and historic resources at the project site as well as the potential for previously unidentified cultural resources. This analysis includes a description of the existing environmental conditions, the methods used for evaluation, the impacts associated with implementing the URSP project, and the measures necessary to mitigate project-related impacts.

The information presented here is based upon previous work completed by EDAW and others in the project vicinity, as well as a review of historic maps and photographs, an archaeological field inventory, and a review of tax assessor information.

Given the confidentiality requirements of the state and the California Historical Resources Information System (CHRIS), references to the locations of cultural resources sites in this Draft EIR are provided in general rather than specific terms. The cultural resources report, which identifies specific locations of archaeological sites in or near the project area, has been placed on file for review by authorized individuals with the Central California Information Center (CCIC) of the CHRIS.

4.12.1 ENVIRONMENTAL SETTING

REGIONAL ARCHAEOLOGICAL SETTING

The earliest well documented entry and spread of humans into California occurred at the beginning of the Paleo-Indian Period (10,000–6000 before Christ [B.C.]). Social units are thought to have been small and highly mobile. Known sites have been identified in the contexts of ancient pluvial lake shores and coast lines evidenced by such characteristic hunting implements as fluted projectile points and chipped stone crescent forms (Moratto 1984).

Little has been found archaeologically that dates to the Paleo-Indian (10,000–6000 B.C.) or the Lower Archaic (6000 B.C.-3000 B.C.) time periods; however, archaeologists have recovered a great deal of data from sites occupied by the Middle Archaic period. The lack of sites from earlier periods may be attributable to high sedimentation rates that left the earliest sites deeply buried and inaccessible. During the Middle Archaic Period (3000–1000 B.C.), the broad regional patterns of foraging subsistence strategies gave way to more intensive procurement practices. Subsistence economies were more diversified, possibly including the introduction of acorn-processing technology. Human populations were growing and occupying more diverse settings. Permanent villages that were occupied throughout the year were established, primarily along major waterways. The onset of status distinctions and other indicators of growing sociopolitical complexity mark the Upper Archaic Period (1000 B.C. to after death [A.D.] 500). Exchange systems become more complex and formalized. Evidence of regular, sustained trade between groups was seen for the first time.

Several technological and social changes characterized the Emergent Period (A.D. 500–1800). The bow and arrow were introduced, ultimately replacing the dart and atlatl. Territorial boundaries between groups became well established. It became increasingly common that

distinctions in an individual's social status could be linked to acquired wealth. Exchange of goods between groups became more regularized with more goods, including raw materials, entering into the exchange networks. The clamshell disk bead became a monetary unit for exchange, and increasing quantities of goods moved greater distances.

Three sub-patterns were well represented in archaeological assemblages in the general vicinity of the project area. These assemblages are discussed in detail in Moratto (1984) and summarized here.

The Windmill Pattern (3000–500 B.C.) of archaeological assemblages included an increased emphasis on acorn use as well as a continuation of hunting and fishing activities. Ground and polished charmstones, twined basketry, baked clay artifacts, and worked shell and bone were hallmarks of Windmill culture.

The Berkeley Pattern (500 B.C. to A.D. 700) represented a greater reliance on acorns as a food source than was seen previously. Distinctive stone and shell artifacts distinguished it from earlier or later cultural expressions. The Berkeley Pattern appears to have developed in the Bay Area and was spread through the migration of Plains Miwok Indians.

The Augustine Pattern (A.D. 700 to 1800) may have been stimulated by the southern migration of Wintuan people from north of the Sacramento Valley. Their culture was marked by increasing populations resulting from more intensive food procurement strategies, as well as a marked change in burial practices, increased trade activities, and a well defined ceramic technology.

ETHNOGRAPHIC SETTING

Ethnographically, the Northern Valley Yokuts occupied the project vicinity—that is, the land on either side of the San Joaquin River from the Delta to south of Mendota. The Diablo range probably marked the Yokuts' western boundary (Wallace 1978); the eastern edge would have lain along the Sierra Nevada foothills. Yokuts occupation of the northern parts of the range may be relatively recent, as linguistic evidence points toward an earlier Miwok occupation. The Yokuts gradually expanded their range northward and clearly occupied the area during the Spanish Colonial period, as evidenced by mixed historic and prehistoric artifact assemblages. The late prehistoric Yokuts may have been the largest ethnic group in pre-contact California.

Euroamerican contact with the Northern Valley Yokuts began with infrequent excursions by Spanish explorers traveling through the Sacramento San Joaquin Valley in the late 1700s to early 1800s. Many Yokuts were lured or captured by missionaries and scattered among the various missions although many escaped and returned to the valley. Yokut raiding parties targeting the Spanish (and later Mexican) cattle herds became prevalent, leading to retaliatory action by the settlers. The malaria epidemic of 1833 decimated the Yokut population, killing thousands of the tribesmen. The influx of Europeans during the Gold Rush era further reduced the population through disease and violent relations with the miners. Although there

was no gold in the Yokuts territory, miners passing through on their way to the diggings caused a certain amount of upheaval. Many former miners who had seen the richness of the San Joaquin Valley on their way east later returned to settle and farm the area (Wallace 1978).

HISTORIC SETTING

The earliest known European settlers in the San Joaquin County area were trappers with the Hudson's Bay Company, many of whom were of French descent. Several of these early settlers inhabited the area still known today as French Camp. While early European trappers and explorers may have paved the way for future non-Indian settlement of the project area and its vicinity, the establishment of the Spanish land grant *ranchos* had a lasting impact on the cultural, social, economic and physical landscape.

The project area is situated just south of the *Campo de los Franceses* land grant. This grant was made to Guillermo Gulnac in 1843. The grant consisted of over 48,000 acres near French Camp (Beck and Haase 1974). Gulnac entered into a partnership with Captain C.M. Weber, a German immigrant. Weber moved to Stockton in 1847, after receiving a half interest in the rancho from Gulnac. He later purchased the other half interest in the rancho and encouraged settlement in the region by offering new emigrants plots of land (Cook 1975).

One of the early settlers in the area, Joshua Cowell, became known as the "Father of Manteca", arriving in 1862. Cowell is credited with having established dairying in the region. Once the Central Pacific Railroad built a line through the area, it became known as Cowell Station. In 1897, Cowell Station was renamed Manteca (Spanish for "lard"). The origin of the city's present name is debatable; one popular explanation lies in the fact that many of California's early dairymen were Portuguese, and their word *manteiga* (butter), could easily have been corrupted to the present spelling (Hillman and Covello 1985). Development in Manteca followed soon after.

The first organized Manteca-area government consisted of a board of trade, which was a cross between a city council and a chamber of commerce. Under its direction, a volunteer fire department was organized in 1912. The early town government was disbanded when the failure of a local septic tank system resulted in a quarantine imposed by the California Department of Health in 1918. To fund a bond issue for the installation of a sewer system, the town was incorporated. The new city council approved several projects for the area, among them a new jail, street signs, purchase of a fire bell, and street curbs for Yosemite Avenue between Main Street and the Southern Pacific Railroad tracks (Hillman and Covello 1985).

Agriculture and irrigation played a major role in the growth of Manteca. Alfalfa fields, orchards, and large-scale dairy operations were all instrumental in building the local economy. By 1920, dairy farming was the largest enterprise in south San Joaquin County. Over time, the larger farms were divided into smaller plots, usually forty acres in size. The increased number of farms resulted in a rapidly expanding population. Further development and expansion resulted from the creation of the South San Joaquin Irrigation District in 1909.

Beginning in the late 1940s, Manteca became a popular bedroom community because of its proximity to Stockton, Tracy, and Modesto. Its growth and reputation as a burgeoning location for families led to Manteca becoming known as “The Family City” (City of Manteca 2004).

ARCHAEOLOGICAL RESOURCES

Investigation Methods

Before field surveys were conducted, two information requests were submitted by EDAW to the CCIC. The records searches included reviews of sites listed in the National Register of Historic Places (NRHP), California Historical Landmarks, and other government-designated cultural resource sites, as well as a review of information center maps and files of the findings of previous cultural resource surveys conducted in the project area.

The records search indicated that several previous cultural resource investigations have been completed within and in the vicinity of the project area. However, none of those studies resulted in the identification of prehistoric resources. One previously recorded historic railway (CA-SJO-256H), was identified as being at the project area’s eastern boundary. A portion of this linear resource, outside current project boundaries, was previously evaluated and determined ineligible for listing on the NRHP.

The records search information was supplemented with a field survey performed by a team of archaeologists between August 30 and September 7, 2004. The areas surveyed for this project consisted primarily of almond orchards. Areas where proposed infrastructure would be located, such as along county road rights-of-way, were also surveyed. Ground visibility throughout the project area ranged from 60 to 95 %. The archaeologists performed pedestrian transects in approximately 30-meter intervals. No archaeological resources were identified during the survey.

Historic Buildings and Structures

EDAW’s evaluation of historic buildings and structures was initiated by establishing the historic context in which to evaluate potential resources at the project site. Research was conducted at the following libraries and repositories: Manteca Library, the Manteca Historical Society and Museum, and the California State Library, California History Room for books on area history, historic maps, and any other pertinent background information. Parcel research was conducted at the San Joaquin County Assessor’s and Recorder’s offices.

The architectural investigation was undertaken to identify buildings and structures in the project area that are more than 45 years old, and therefore considered potential historic resources. An EDAW architectural historian photographed and recorded these buildings on the appropriate Department of Parks and Recreation (DPR) forms. A map depicting the buildings that were identified as potential historic resources is provided in Exhibit 4.12-1. These older buildings were then evaluated for qualities such as integrity, setting, design,

workmanship, materials, location, feeling and association of the resource, which influence the significance and historic value of the structure.

RESULTS

Archaeological Sites

No new archaeological sites have been identified in the project site.

Historic Buildings and Structures

An architectural inventory of the project area, conducted on September 23, 2004, resulted in the identification of 28 buildings and structures on the project site. Of those, 10 consisted of historic-era dwellings/complexes. Most of the dwellings and outbuildings were constructed between the 1920s and the 1950s. An EDAW architectural historian photographed and recorded these buildings on the appropriate DPR forms. Table 4.12-1 provides a list of the historic resources, a brief description of each, and approximate date of construction. Table 4.12-2 lists the remaining structures in the project area. Exhibit 4.12-1 shows the location of each resource.

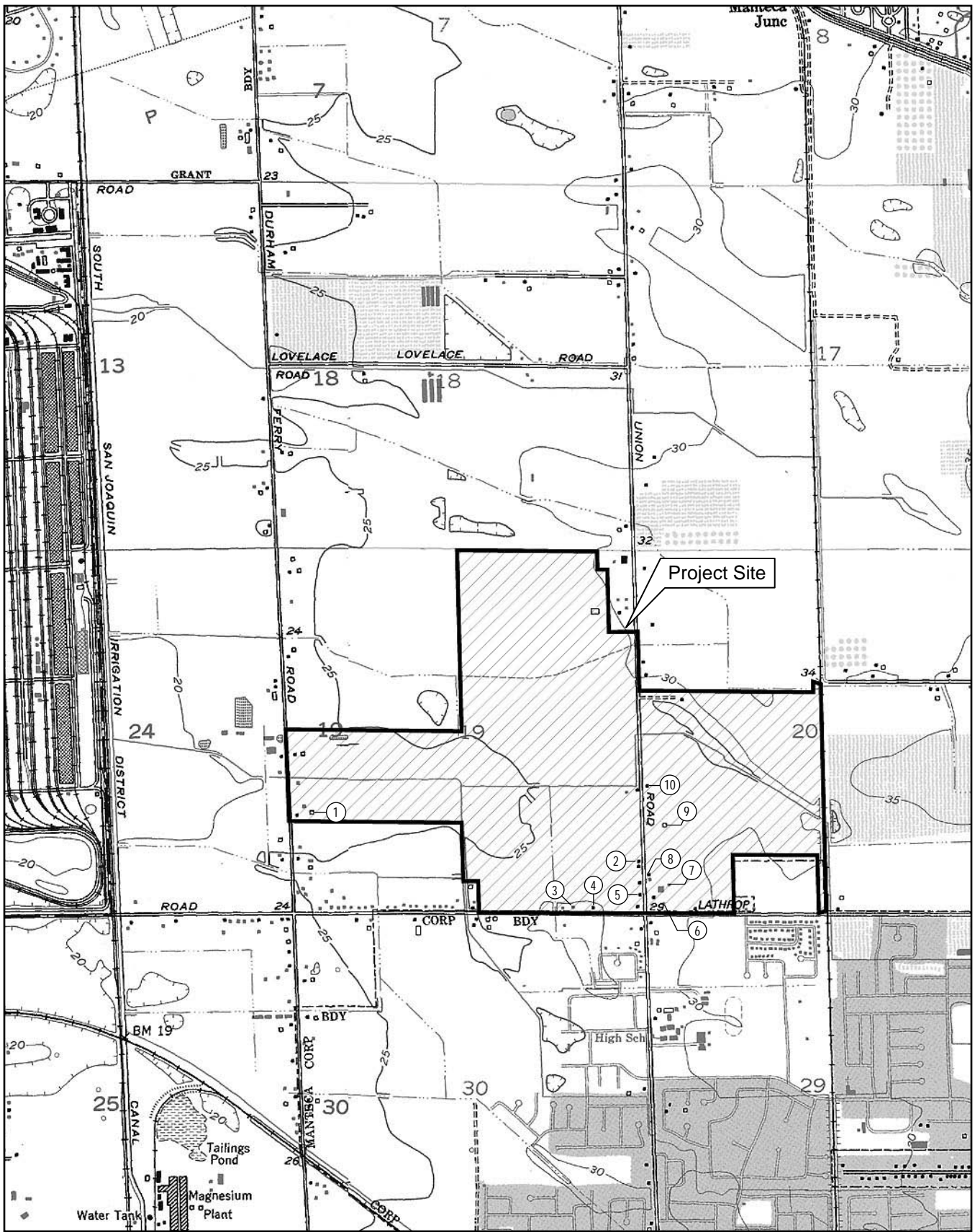
Parcel Number	Address	Description	Construction Date ¹	Map Reference No. ²
204-100-14	14580 Airport Way	Dwelling and barn	ca. 1927	1
204-100-16	14745 S. Union Road	Dwelling and outbuildings	1920s–1940s	2
204-100-21	3833 Lathrop Road	Dwelling	1952	3
204-100-22	3807 Lathrop Road	Dwelling	1953	4
204-100-24	14875 S. Union Road	Dwelling	1947	5
197-020-12	4513 Lathrop Road	Public Service Bldg. (Irrigation)	1950s	6
197-020-14	14842 S. Union Road	Dwelling and outbuildings	1920s	7
197-020-34	14808 S. Union Road	Dwelling and garage	1937	8
197-020-37	14596 S. Union Road	Dwelling and outbuildings	1935	9
197-020-38	14444 S. Union Road	Dwelling and garage	ca. 1930	10

¹ Construction dates were attained from San Joaquin County Assessors Records.
² Corresponds to locations shown on Exhibit 3.12-1.
Source: EDAW 2004

Parcel Number	Address	Description	Construction Date ¹
204-100-09	14051 S. Union Road	Orchard (no buildings)	-
204-100-11	14236 Airport Way	Duplex (moved from another location)	1960s
204-100-13	14502 Airport Way	Dwelling	1975
204-100-15	14455 S. Union Road	Orchard (no buildings)	-
204-100-17	3583 Lathrop Road	No buildings	-
204-100-23	4001 Lathrop Road	No buildings	-
205-100-25	14923 S. Union Road	Dwelling	1960s
204-100-26	14987 S. Union Road	Dwelling	1965
204-100-27 (previously 204-100-02)	13885 S. Union Road	No buildings	-
197-020-13	14954 S. Union Road	Outbuilding	1960s
197-020-16	14704 S. Union Road	Orchard (no buildings)	-
197-020-18	14390 S. Union Road	Orchard (no buildings)	-
197-020-19	14032 S. Union Road	Orchard (no buildings)	-
197-020-33	14824 S. Union Road	Dwelling	1998
197-020-42	No address listed	Abandoned railroad right-of-way	-
197-020-43	No address listed	No buildings	-
197-020-44	No address listed	No buildings	-
197-020-45	No address listed	Abandoned railroad right-of-way	-
¹ Construction dates were attained from San Joaquin County Assessors Records Source: EDAW 2004			

None of the properties recorded at the project site appear to be associated with any events significant to the local area. Although many of these properties were at one time associated with local agricultural uses, today they are only indirectly related to these activities. None of the buildings or other historic resources appear to embody distinctive characteristics of a type, period, region, or method of construction. Further, these buildings do not possess high artistic values, do not appear to serve as a source of important information about historic construction materials or technology, and are unlikely to yield important information to our history.

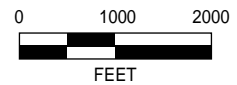
Although many of the houses were identified as being constructed in the Bungalow style, a specific architectural design, they are not significant examples of that style. The bungalow enjoyed the same popularity during the first thirty years of the twentieth century as the cottage had before. In fact, most of the smaller homes constructed during this time period were built in the bungalow style, which included many types and variations. The essence of this style however, is the low profile, the use of materials in their natural colors, and its overall casualness (Lancaster 1987).



Source: U.S.G.S. Lathrop and Manteca Quad 1952 (revised 1994) -- Contour Interval 5 Feet

Historic Buildings at the Project Site

EXHIBIT 4.12-1



The bungalow became a trend of domestic architecture in California. A great number of architects and builders used the simple and economical design to construct affordable houses on modest sized lots. The explosion of bungalows in California was encouraged by their advertisement in home magazines such as West Coast Bungalows, House Beautiful, and Representative California Homes. As a result, California produced the widest range of bungalows of any state in the United States (Lancaster 1987).

The bungalows identified in the project site do not represent architecturally distinctive examples of the style. Furthermore, many have been modified and no longer retain many of the characteristics of their physical identity that existed at their time of construction.

4.12.2 REGULATORY SETTING

CEQA GUIDELINES

The California Environmental Quality Act (CEQA) offers guidelines regarding impacts to historic and prehistoric cultural resources. CEQA states that if implementation of a project would result in significant impacts to important cultural resources, then alternative plans or mitigation measures must be considered. However, only significant cultural resources need to be addressed. State CEQA Guidelines define a significant historical resource as “a resource listed or eligible for listing on the California Register of Historical Resources” (CRHR) (Public Resources Code 5024.1). A historical resource may be eligible for listing on the CRHR if it:

- ▶ is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; or
- ▶ is associated with the lives of persons important in our past; or
- ▶ embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possess high artistic values; or
- ▶ has yielded, or may be likely to yield, information important in prehistory or history.

The State CEQA Guidelines also require the consideration of unique archaeological sites (§15064.5). If an archaeological site does not meet the criteria for inclusion on the CRHR but does meet the definition of a unique archaeological resource as outlined in the Public Resources Code (Section 21083.2), it may be treated as a significant historical resource.

Treatment options under Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation include excavation and curation, or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more criteria for defining a “unique archaeological resource”).

If human remains are found, the California Health and Safety Code (HSC) requires that excavation be halted in the immediate area and that the county coroner be notified to determine the nature of the remains. The coroner is required to examine all discoveries of

human remains within 48 hours of receiving notice of a discovery on private or state lands (HSC 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (HSC 7050.5[c]).

The responsibilities of the NAHC for acting on notification of a discovery of Native American human remains are identified in the California Public Resources Code (PRC) 5097.9. The NAHC is responsible for immediately notifying the person it believes is the Most Likely Descendant (MLD) of the Native American remains. With permission of the legal landowner(s), the MLD may visit the site and make recommendations regarding the treatment and disposition of the human remains and any associated grave goods. This should be conducted within 24 hours of their notification by the NAHC (PRC 5097.98[a]). If an agreement for treatment of the remains cannot be resolved satisfactorily, any of the parties may request mediation by the NAHC (PRC 5097.94[k]). Should mediation fail, the landowner or the landowner's representative must re-inter the remains and associated items with appropriate dignity on the property in a location not subject to further subsurface disturbance (PRC 5097.98[b]).

For historic buildings, Section 15064.5(b)(3) of the CEQA Guidelines indicates that a project that follows the Secretary of the Interior Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (1995), shall mitigate impacts to a level of less than significant. Potential eligibility rests upon the integrity of the resource. Integrity is defined as the retention of the resource's physical identity that existed during its period of significance. Integrity is determined through considering the setting, design, workmanship, materials, location, feeling and association of the resource.

SAN JOAQUIN COUNTY GENERAL PLAN

San Joaquin County contains a number of identified historic and prehistoric resources. The San Joaquin County General Plan 2010, Resource Element, includes the following policies that are applicable to the project to protect and preserve these resources.

Heritage Resources

- (1) The County shall continue to encourage efforts, both public and private, to preserve its historical and cultural heritage.
- (2) Significant archaeological and historical resources shall be identified and protected from destruction. If evidence of such resources appears after development begins, and assessment shall be made of the appropriate action to preserve or remove the resources.
- (3) No significant architectural, historical, archaeological or cultural resources shall be knowingly destroyed through County action.

- (4) Reuse of architecturally interesting or historical buildings shall be encouraged.
- (5) The County shall promote public awareness of and support for historic preservation.

CITY OF MANTECA GENERAL PLAN

The Resource Conservation Element of the City of Manteca General Plan (City General Plan) outlines goals and policies associated with geology and soils. The following policies relate to the proposed project:

Cultural Resources

Policy RC-P-37: The City shall not knowingly approve any public or private project that may adversely affect an archaeological site without consulting the California Archaeological Inventory at Stanislaus State University, conducting a site evaluation as may be indicated, and attempting to mitigate any adverse impacts according to the recommendation of a qualified archaeologist. City implementation of this policy shall be guided by the California Environmental Quality Act (CEQA) and the National Historic Preservation Act (NHPA).

Policy RC-P-38: The City shall require that the proponent of any development proposal in an area with potential archaeological resources, and specifically near the San Joaquin River and Walthall Slough, and on the east side of State Highway 99 at the Louise Avenue crossing, shall consult with the California Archaeological Inventory, Stanislaus State University to determine the potential for discovery of cultural resources, conduct a site evaluation as may be indicated, and mitigate any adverse impacts according to the recommendation of a qualified archaeologist. The survey and mitigation shall be developer funded.

Policy RC-P-39: The City shall set as a priority the protection and enhancement of Manteca’s historically and architecturally significant buildings.

Policy RC-P-40: The City shall work with property owners seeking registration of historical structures as Historic Landmarks or listing on the Register of Historic Sites.

Policy RC-P-41: The City shall prepare and adopt a Historical Preservation Ordinance.

Policy RC-P-42: The City and Redevelopment Agency shall support the efforts of property owners to preserve and renovate historic and architecturally significant structures. Where such buildings cannot be preserved intact, the City shall seek to preserve the building facades.

The City General Plan further requires records searches unless the City determines that the proposed project area has already been sufficiently surveyed, requires archaeological surveys where probable cause exists for discovery of archaeological resources, requires consultation, evaluation and preparation of a monitoring plan if resources are discovered, encourages the

placement of monuments or plaques to recognize historic sites and structures, and requires consultation with the county coroner if human remains are discovered.

4.12.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

The following analysis is based on a combination of background research, archaeological pedestrian surveys, and an assessment of historic structures. Potential effects are evaluated for development in the URSP area.

THRESHOLDS OF SIGNIFICANCE

The URSP project would cause a significant impact on cultural resources if it would:

- ▶ cause a substantial adverse change in the significance of a unique archaeological resource or a historical resource as defined in 21083.2 of CEQA and 15064.5 of the State CEQA Guidelines, respectively, or
- ▶ disturb any human remains, including those interred outside of formal cemeteries.

Section 15064.5 of the State CEQA Guidelines defines “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

Section 21083.2 of CEQA defines “unique archaeological resource” as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria: (1) that it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) that it has a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) that it is directly associated with a scientifically recognized important prehistoric or historic event or person.

Section 15064.5 of the State CEQA Guidelines defines “historical resource” as a resource (1) listed on, or determined to be eligible by the State Historical Resources Commission for listing on, the CRHR; (2) listed in a local register of historic resources or as a significant resource in a historical resource survey, or (3) considered to be “historically significant” by a lead agency as supported by substantial evidence in the record. Generally, a resource shall be considered by the lead agency to be “historically significant” if it meets any of the following criteria for listing on the CRHR: (1) is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage; (2) is associated with the lives of persons important in our past; (3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value; or (4) has yielded, or may be likely to yield, information important in prehistory or history.

To be eligible for listing on the CRHR, a property must have both historic significance and integrity. Integrity is judged by considering the property's retention of location, design, setting, workmanship, materials, feeling, or association.

IMPACT ANALYSIS

Impact
4.12-1

Known Archaeological Resources. *There are no known archaeological resources in the URSP project area. Therefore, this would be a **less-than-significant** impact.*

Records searches conducted by EDAW and the CCIC indicated that several previous cultural resource investigations have been completed within and in the vicinity of the project area. However, none of those studies resulted in the identification of prehistoric resources on the project site. One previously recorded historic railway (CA-SJO-256H), was identified as being at the project area's eastern boundary. A portion of this linear resource, outside current project boundaries, was previously evaluated and determined ineligible for listing on the NRHP.

The records search information was supplemented with a field survey performed by a team of archaeologists between August 30 and September 7, 2004. No archaeological resources were identified during the survey. Because there are no known recorded archeological sites, the project's impact to known archeological resources would be less than significant.

Impact
4.12-2

Known Historic Resources. *Project construction would result in the removal of several existing structures. None of these structures appears to be eligible for listing on the California Register of Historical Resources. This would be a **less-than-significant** impact.*

A total of 28 buildings and structures were examined during the field investigation. Of those, 10 buildings were greater than 45 years old at the time of the investigation. While the properties in the project area can be associated with local agricultural and development trends (CRHR Criterion 1), none is significant within those contexts. Further, none of the properties is associated with any known historic persons (CRHR Criterion 2), and none embody distinctive architectural or engineering qualities (CRHR Criterion 3). Therefore, none of the properties at the project site has yielded, or appears likely to yield, important information on historic construction technology (CRHR Criterion 4). Furthermore, the buildings in the project area have generally undergone extensive modifications that have compromised their original physical features. Therefore, none of the 10 historic-era buildings in the plan area appears to be eligible for listing on the CRHR. The more recently constructed buildings, or buildings built within the last 45 years, would need to be of exceptional historical importance to be considered for potential eligibility (California Code of Regulations 4852[d][2]). However, none of these buildings in the project area meet these criteria. Because none of the properties and buildings on the project site appear to be eligible for listing on the CRHR, the project's impacts to these structures would be less than significant.

Impact
4.12-3

Undiscovered/Unrecorded Archaeological Sites. *Construction of the project may uncover or otherwise disturb previously undiscovered or unrecorded archaeological sites. Potential disturbance of a unique archaeological site would be a **potentially significant impact.***

Previously undiscovered or unrecorded cultural resource sites may be uncovered by project construction activities (i.e., grading, trenching). The potential exists for previously unidentified archaeological sites to be uncovered during pre-construction or construction-related ground disturbing activities. If such resources were to represent “historical resources” or “unique archaeological resources” as defined by CEQA, any substantial change to or destruction of these resources would be a potentially significant impact.

Impact
4.12-4

Undiscovered/Unrecorded Human Remains. *Project-related construction activities could uncover or otherwise disturb previously undiscovered or unrecorded human remains. This would be a **significant impact.***

Although no human remains have been listed or recorded in the project area, they are known to occur in the project vicinity. Previously-undiscovered human remains could be uncovered by project construction activities. Any disturbance of human remains would be a significant impact.

4.12.4 MITIGATION MEASURES

No mitigation measures are provided for the following less-than-significant impacts:

4.12-1: Known Archaeological Resources.

4.12-2: Known Historic Resources.

The following mitigation measures are provided for significant and potentially significant impacts:

4.12-3: Undiscovered/Unrecorded Archaeological Sites.

At the onset of construction, all construction personnel shall be alerted to the possibility of buried cultural resources. If artifacts or unusual amounts of stone, bone, or shell or significant quantities of historic-era artifacts are uncovered during construction activities, work within 50 feet of the specific construction site at which the suspected resources have been uncovered shall be suspended, and the property owner shall be immediately contacted. At that time, the City or the project proponent shall retain a professional archaeologist, who shall conduct a field investigation of the specific site and recommend mitigation deemed necessary for the protection or recovery of any cultural resources concluded by the archaeologist to represent significant or potentially significant resources as defined by CEQA. The City or the project proponent shall implement the mitigation before the resumption of construction activities at the construction site.

4.12-4: Undiscovered/Unrecorded Human Remains.

If human remains are discovered at any project construction sites during any phase of construction, work within 50 feet of the remains shall be suspended immediately, and the City of Manteca, the project proponent, and the county coroner shall be notified immediately. If the remains are determined by the county coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. The City or the project proponent shall also retain a professional archaeologist with Native American burial experience who shall conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD) identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the MLD including the excavation and removal of the human remains. The City or the project proponent shall implement any mitigation before to the resumption of activities at the site where the remains were discovered.

4.12.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the above mitigation, the project's impacts to undiscovered/unrecorded archaeological sites and human remains would be reduced to a less-than-significant level.

4.13 POPULATION AND HOUSING

This section documents the existing population, employment, and housing conditions in the City of Manteca (City) and San Joaquin County (County) and presents estimates of changes to those conditions that could be created with implementation of the project. This section also characterizes the population, employment, and housing changes that could trigger adverse physical effects in the City or the region.

4.13.1 ENVIRONMENTAL SETTING

POPULATION

From 1990 to 2000, the population of the City of Manteca increased from 40,773 to 49,258, or 20.8% over the 10-year period (U.S. Census Bureau 2000). The current population as of January 1, 2004 is estimated to be 59,700 (California Department of Finance 2004). Population growth within the City and its sphere of influence is projected to continue; however, estimates of the future population vary depending on the assumptions used in the projections. Projected population estimates from various sources are presented in Table 4.13-1.

	Projection Year				
	2010	2015	2020	2023	2025
San Joaquin County General Plan	89,500	--	--	--	--
San Joaquin Council of Governments	64,248	71,622	77,699	--	86,370
City of Manteca General Plan	--	--	--	94,378	--
Sources: City of Manteca 2003, County of San Joaquin 1991, SJCOG Research and Forecasting Center 2000.					

Some of the variation among population projections is attributable to the age of the projections. For example, the County General Plan projections were prepared in 1991. As projections age, unforeseen circumstances typically decrease the accuracy of the projections over time. Additional variation results from projection methods. The San Joaquin Council of Governments (SJCOG) estimates (completed in 2000 by the SJCOG Research and Forecasting Center) were based on extrapolations of historic growth trends and did not account for some of the specific projects planned in the City. Projections included in the City General Plan are based on assumptions relating to residential density, average density, efficiency of land use, vacancy factors, and a market reserve for each residential land use type. The City General Plan has projected an average annual growth rate of 2.7 percent (City of Manteca 2003).

HOUSING

The 2000 U.S. Census Bureau statistics reflect Manteca's growing housing values, low vacancy rates, and relatively small households. The number of housing units in the City have increased

from 13,466 in 1990 to 16,937 in 2000 (U.S. Census Bureau 2000). The City's housing growth rate over this 10-year period was nearly 22%. Based on the City General Plan, the number of housing units is anticipated to increase within the City of Manteca sphere of influence boundaries to approximately 31,773 by 2023 at full build out of the general plan (City of Manteca 2003). The number of housing units in the County have increased from 159,156 in 1990 to 189,160 in 2000 (U.S. Census Bureau 2000). The County's housing growth rate over this 10-year period was nearly 15%.

According to the California Department of Housing and Community Development (HCD), a housing vacancy rate of 5% is considered normal (HCD 2000). Vacancy rates below 5% indicate a housing shortage in a community. The U.S. Census Bureau reports that the City had a vacancy rate of 1.1% for owner-occupied units and 3.1% for rental units in 2000. Similarly, the County had a vacancy rate of 1.2% for owner-occupied units and 3.8% for rental units in 2000. These vacancy rates indicate that both the City and County are currently experiencing a tight housing market.

JOBS-HOUSING BALANCE

The concept of jobs-housing balance presumes that the environment and quality of life in a given area benefit when the area has a balance between its housing supply and employment base. An area that has too many jobs relative to its housing supply is likely (in the absence of offsetting factors) to experience relatively rapid escalations in housing prices and intensified pressure for additional residential development. Conversely, if an area has relatively few jobs in comparison to the number of employed residents, many of the workers are required to commute to jobs outside their area of residence (County of San Joaquin 1991).

The simplest measure of jobs-housing balance is an index based on the ratio of employed residents (which is influenced by the number of homes) to jobs in the area, with an index of 1.0 indicating a jobs-housing balance. An index below 1.0 indicates that the area has more jobs than employed residents and may suggest that many employees are commuting into the area from outside the community. An index above 1.0 indicates that the area has more employed residents than jobs and may suggest that many residents are commuting to jobs outside the community.

The anticipated trend in the jobs-housing index for San Joaquin County, based primarily on data from the County, is shown in Table 4.13-2. It should be noted that jobs-housing indices are more useful for examining the potential for "self-containment" at the regional level than in determining whether this self-sufficiency actually exists in a given community. Even if communities have a statistical balance between jobs and housing, they are still very likely to experience in-commuting and out-commuting, given the variety and dispersed nature of employment and residential opportunities elsewhere in the region and the high level of mobility offered by automobiles.

Table 4.13-2 Jobs-Housing Balance for San Joaquin County					
	Year				
	1990	2000	2010	2015	2025
Employment (number of jobs)	182,237 ¹	201,671 ²	234,430 ²	250,810 ²	283,569 ²
Housing units	166,274 ³	189,160 ³	236,422 ²	262,311 ²	297,019
Households	158,156 ³	181,629 ³	226,965 ²	251,819 ²	309,395
Employed residents	214,969 ³	244,277 ³	308,672 ⁴	342,474 ⁴	420,777 ⁴
Jobs-Housing Index ⁵	1.18	1.22	1.32	1.37	1.48
¹ Source: County of San Joaquin 1991. ² Source: San Joaquin Council of Governments Research and Forecasting Center 2000. ³ Source: U.S. Census Bureau 2002. ⁴ Assumes estimated number of employees per household would remain at 1.36 through 2025, as projected household size varies between 2.91 and 3.10. ⁵ Jobs-Housing Index = employed residents/number of jobs.					

As shown in Table 4.13-2, the jobs-housing index for the County has increased from 1.18 in 1990 to an estimated 1.22 in 2000. This indicates that the imbalance between housing (i.e., reflected as employed residents) and jobs in the County increased from 1990 to 2000, with housing growth outpacing employment growth. These indices indicate that San Joaquin County has more employed residents than jobs, that the county supports a net out-commuting population, and that the condition is intensifying. The jobs-housing index for the County is projected to steadily increase to 1.48 in 2025, indicating an increasing imbalance between housing and employment in the future and an increased expectation of residents commuting outside the County for employment. Comparing projections in Table 4.13-2 for numbers of jobs in the County versus employed residents, by 2015 approximately 91,664 residents would be commuting out of the County for employment. This number would increase to 137,208 by 2025.

Table 4.13-3 shows the jobs-housing index for the City has decreased from 1.28 in 1990 to an estimated 1.09 in 2000. This indicates that the imbalance between housing (i.e., reflected as employed residents) and jobs in the City decreased from 1990 to 2000, with housing growth approximately equal to employment growth. Unlike the County jobs-housing balance indices, the City's indices indicate that the number of employed residents is almost equal to the number of jobs within the City. The jobs-housing index for the City is projected to decrease to 0.97 in 2023, indicating an increase in the number of employment opportunities in the future.

	Year		
	1990	2000	2023
Employment (number of jobs)	14,300 ¹	20,561 ²	42,941 ¹
Housing units	13,981 ³	16,937 ³	31,773 ¹
Households	13,466 ³	16,368 ³	30,502
Employed residents	18,314 ³	22,415 ³	41,483 ⁴
Jobs-Housing Index ⁵	1.28	1.09	0.97

¹ Source: County of San Joaquin 1991.
² Source: San Joaquin Council of Governments Research and Forecasting Center 2000.
³ Source: U.S. Census Bureau 2002.
⁴ Assumes estimated number of employees per household would remain at 1.36 through 2025, as projected household size varies between 2.91 and 3.10.
⁵ Jobs-Housing Index = employed residents/number of jobs.

EMPLOYMENT

According to the U.S. Census Bureau there were 14,300 employed residents in the City of Manteca in 1990. In 2000, employment in the City increased to approximately 20,561 jobs, with the most prominent occupations in education, health, and social services (SJCOG 2000). In San Joaquin County as a whole there were 182,237 jobs in 1990 (County of San Joaquin 1991), while in 2000, the number of jobs in the county totaled 244,277 (U.S. Census Bureau 2000).

Similar to the population projections discussed above, estimates of future employment in the City, as forecast during different City planning efforts and by the County, vary widely depending on the age of the projections and the assumptions used. Projected employment estimates from various sources are presented in Table 4.13-4. SJCOG estimates are based on extrapolation of historic growth trends and do not reflect future planned projects in the City. Projections in the City General Plan are based on job generation expected from assumptions relating to population, residential dwellings, and average number of employees per dwelling unit.

	Projection Year			
	2005	2010	2020	2023
San Joaquin County General Plan	--	24,600	--	--
SJCOG Research and Forecasting Center	16,643	17,893	20,394	--
City of Manteca General Plan	--	--	--	42,941

Sources: County of San Joaquin 1991, SJCOG Research and Forecasting Center 2000, City of Manteca 2003.

4.13.2 REGULATORY SETTING

SAN JOAQUIN COUNTY GENERAL PLAN

The San Joaquin County General Plan 2010 (County General Plan) includes the following elements related to employment and housing that are relevant to this analysis:

- ▶ **Housing Policy No. 5:** Public or private projects that displace residents or eliminate neighborhoods shall be rejected unless they would, in balance, contribute to the public's health, safety, and welfare.
- ▶ **Housing Policy No. 7:** The County shall encourage the use of development concepts and techniques designed to reduce housing costs.
- ▶ **Housing Policy No. 9:** The County shall encourage the provision of units available for sale or rent to low and moderate income households.
- ▶ **Housing Policy No. 10:** The County shall encourage the scattering of sites for affordable housing throughout the residentially designated areas of the County.
- ▶ **Housing Policy No. 11:** The County shall encourage the development of affordable housing to large families.
- ▶ **Economic Policy No. 1:** Development of diverse employment opportunities shall be encouraged.
- ▶ **Economic Policy No. 2:** The County shall work to achieve a closer balance between jobs and residents in the County.
- ▶ **Economic Policy No. 5:** The County should actively promote continued industrial growth, increased recreational development, and a regional shopping center site adequate to serve the region's future population.

CITY OF MANTECA GENERAL PLAN

The City of Manteca General Plan (City General Plan) includes the following policies related to employment and housing that are relevant to this project:

- ▶ **ED-P-2:** Designate land in sufficient quantities to provide for a community with adequate jobs for all its residents. The goal of a ratio of jobs to employed residents should be 1 job for each employed resident.
- ▶ **ED-P-6:** Expand job opportunities available in Manteca so that residents may choose to work locally instead of commuting.
- ▶ **ED-P-7:** Attract and retain a broad base of businesses and industries to provide a variety of jobs allowing career growth potential.

- ▶ **ED-P-17:** Plan for a broad range of housing types and densities to accommodate all income levels and job classifications.
- ▶ **ED-P-18:** Plan for a balanced community where the Manteca workforce will be able to afford housing within the city of Manteca.
- ▶ **H-P-10:** The City shall encourage mixed use development opportunities, residential development in mixed-use neighborhoods, development that combines residential with service commercial and office uses, and the construction of secondary units (granny flats, carriage houses and similar small dwellings intended for one or two residents) in appropriate zoning designations.
- ▶ **H-P-11:** The Commercial Mixed Use (CMU) zone designation shall allow residential uses. Commercial Mixed Use (CMU) zones within infill areas may develop with High Density Residential (HDR) land use.
- ▶ **H-P-12:** The City shall strive to ensure that affordable units are distributed in suitable locations throughout the city that are proximate to retail services, parks, schools, public facilities and public transit.
- ▶ **H-P-42:** The City shall encourage the development of new housing units designed for the elderly and disabled persons to be in close proximity to public transportation and community services.
- ▶ **H-P-47:** The City shall give special attention in housing programs to the needs of special groups, including the disabled, large families, the elderly, and families with lower incomes.
- ▶ **H-P-48:** The City shall encourage housing construction or alteration to meet the needs of residents with special needs.
- ▶ **H-P-49:** The City shall promote the use of energy conservation features in the design of all new residential structures.
- ▶ **H-P-50:** The City shall encourage residential construction of durable materials and designs suited to the local conditions that will contribute to reduction of the life-cycle cost of the dwelling.
- ▶ **H-P-51:** The City shall encourage innovative building construction techniques and materials to reduce initial and ongoing housing costs and provide superior housing.

4.13.3 ENVIRONMENTAL IMPACTS

ANALYSIS METHODOLOGY

The examination of population, employment, and housing conditions in this section of the Draft EIR is based on information obtained from review of the plans for the project; review of available population, employment, and housing projections from the City, the County, and the

U.S. Census Bureau, and other sources; and review of applicable elements and policies from the City and County General Plans.

A project-level analysis of population, employment, and housing was conducted for the project. The proposed project includes approximately 167 acres, or 78% of the project area, as low-density residential (LDR) development (1,960 units); approximately 39 acres as commercial/mixed development (CMU), which would include 25.3 acres of commercial uses (275,600 square feet) and 13.6 acres of high-density residential development (341 units); and approximately 37 acres of open space, 32 acres of parks, and 9 acres for major rights-of-way. For purposes of this analysis, construction is assumed to be completed in 2011.

THRESHOLDS OF SIGNIFICANCE

The project would result in significant population, employment, and housing impacts if it would:

- ▶ induce substantial unplanned population growth in an area, either directly (by proposed new homes and businesses) or indirectly (through the extension of roads or other infrastructure);
- ▶ generate a substantial demand for new housing outside the project boundaries, the construction of which could cause significant environmental impacts;
- ▶ displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere; or
- ▶ result in employment or housing conditions inconsistent with goals, policies, or objectives in the City General Plan.

IMPACT ANALYSIS

Impact
4.13-1

Population Growth and Housing Demand during Construction. *The project would result in a temporary increase in employment in the City, related to construction jobs, during the peak construction period. The number of existing construction personnel in the region is considered sufficient to meet demand associated with the project; therefore, this temporary increase in employment is not expected to generate any substantial new population growth in the area or generate the need for substantial additional housing for construction workers. This would be a **less-than-significant** impact.*

Project construction activities would occur at intervals throughout the planning horizon of the project. A greater number of construction workers would be employed during peak construction periods (determined by market demand and overall economic conditions), while fewer construction workers would be employed during nonpeak periods. According to the latest labor data available from the U.S. Census Bureau (2000), 2,686 residents in the City and 16,190 residents in the County are employed in the construction industry (U.S. Census Bureau

2002). These existing residents in the City and County who are employed in the construction industry would likely be sufficient to meet the demand for construction workers that would be generated by the project. Because construction workers serving the project can be expected to come from the City itself and from nearby communities in San Joaquin County, substantial population growth or increases in housing demand in the region as a result of these jobs is not anticipated. Furthermore, even if some construction workers from outside the region were employed at the project site, construction workers typically do not change residences when assigned to a new construction site, and substantial permanent relocation of these workers to the area is not anticipated. Therefore, the project would not be expected to generate the need for substantial additional housing in the City during construction. Because of these conditions, the impact related to population growth and housing demand associated with project construction would be less than significant.

Impact
4.13-2

Population Growth. *The project would develop new homes, which would result in direct increases in population. The project-related estimated increases in population are roughly comparable to and consistent with the increases in population that would have resulted from the planned residential growth in the project area for which provision is made in the City and County General Plans. Direct impacts that would occur with development and associated population growth are evaluated in appropriate sections of this Draft EIR (e.g. air quality, transportation). This would be a **less-than-significant** impact.*

The project includes new housing that would result in direct increases in population at the project site. The project would develop 1,960 low-density residential units and 341 high-density residential units. As shown in Table 4.13-5, these homes are estimated to generate 5,150 new residents in the City by 2011.

The City General Plan projects that by 2023 at full buildout of the general plan area, the population of the City would be approximately 94,378 residents (Table 4.13-1), which is 34,678 more than in 2004. As shown in Table 4.13-5, the project is estimated to generate 5,150 new residents in the City by 2011. Therefore, the 5,150 residents projected for the URSP area would not exceed the maximum population allowed by the General Plan.

Table 4.13-5 Residential Population Projections for the URSP			
	Dwelling Units	Persons per Dwelling Unit	Residents
Woodbridge by Del Webb	1,425	1.8	2,565
Union Ranch East	535	3.11	1,664
High-density residential	341	2.7	921
Total (2011)	2,301	--	5,150

Source: City of Manteca 2003.

The County General Plan includes population estimates for the City to 2010. The County General Plan estimates that the City of Manteca's population would be approximately 89,500 people by 2010. In comparing population projections in the County General Plan to the URSP, the project would be consistent with the General Plan. Development of the project would occur between 2005 and 2011, and is expected to generate 5,150 new residents during this timeframe. Therefore, development of the would not generate population growth exceeding projections for the City.

Population growth by itself is not considered a significant environmental impact. However, development of housing, infrastructure, and facilities and services to serve this growth can have significant environmental impacts on the environment through land conversions, commitment of resources, and other mechanisms. Direct impacts associated with development needed to accommodate increased population are evaluated in appropriate sections in this Draft EIR (e.g., Section 4.1, Land Use and Agricultural Resources; Section 4.10, Public Services and Utilities; Section 4.5, Biological Resources; and Section 4.11, Transportation and Circulation). Inconsistencies between planned and anticipated population growth as described here would not cause significant environmental effects. Therefore, this impact would be less than significant.

**Impact
4.13-3**

Housing Demand from Project Development. *Development of the project would increase the number of housing units and jobs in the City of Manteca. At full buildout, the jobs-housing index for the URSP area would be 2.4, indicating that the proposed development would be housing rich and would not generate demand for new housing in the region for onsite employees. The project is not expected to induce substantial new housing demand. This would be a **less-than-significant** impact.*

The URSP provides for commercial/mixed use (CMU) development on approximately 39 acres, which would include 25.3 acres of commercial uses (275,600 square feet) and 13.6 acres of high-density residential development (341 units). According to the City's General Plan, the proposed commercial uses may include retail uses, office uses, and eating establishments. Development of these commercial uses is estimated to result in the creation of 551 jobs at full buildout. This calculation excludes 90% of the 1,425 active adult housing units because it is assumed these residents are retired. As shown in Table 4.13-6, the overall jobs-housing index would be 2.4. This indicates that at full buildout the URSP would be "housing rich" and would not generate new housing demand because new housing exceeds demand generated by new jobs. This impact would be a less than significant impact.

**Table 4.13-6
Jobs-Housing Balance for the URSP**

	URSP
Total commercial square footage	385,900 ¹
Employment (number of jobs) ²	772
Total housing units ³	1,018
Households ⁴	977
Employed residents ⁵	1,329
Jobs-housing index ⁶	1.7

¹ Total commercial square footage assumes commercial uses, such as retail centers, offices, and eating establishments.
² Assumes 500 square feet = 1 employee.
³ Excludes 90% of 1,425 active adult housing units (assumes these residents are retired).
⁴ Assumes 1 housing unit = 0.96 household (Source: U.S. Census Bureau 2000 data for San Joaquin County) to account for unoccupied housing units.
⁵ Based on the 2000 U.S. Census Bureau ratio of number of employees per household in San Joaquin County (1.36).
⁶ Jobs-housing index = employed residents/number of jobs.

**Impact
4.13-4**

Housing Displacement. Existing dwelling units within the URSP project site consist mainly of agricultural operations interspersed with rural residences and associated outbuildings. All 23 existing residences would be removed from the site, and 2,301 new homes would be constructed onsite. Construction of residential dwelling units would replace the 23 units removed during project construction. Therefore, this would be a **less-than-significant** impact.

Twenty-three rural residences and associated outbuildings are present at the URSP project site. Development of the URSP would require the purchase and removal of all 23 dwelling units resulting in housing displacement for these residences. Implementation of the project would result in the construction of 1,960 low-density and 341 high-density residential dwelling units at the project site. Construction of these residential dwelling units would fully replace the 23 units removed during project construction. Therefore, this would be a less-than-significant impact.

**Impact
4.13-5**

Consistency with Housing Policies. The County General Plan and City General Plan contain various goals, objectives, and policies related to the provision of higher density housing in mixed use neighborhoods; affordable housing, housing for the elderly and handicapped, and non-single-family housing (e.g., apartments); and energy efficient features and durable construction materials. The project would meet the desired availability of these housing types and construction techniques, and the project would be consistent with housing policies in these planning documents. This would be a **less-than-significant** impact.

The URSP project would include approximately 39 acres of commercial/mixed uses (CMU), which would include 25.3 acres of commercial uses (385,900 square feet) and 13.6 acres of high-density residential development (341 units). Construction of higher density housing as a component of this land use would ensure consistency with City General Plan Policies H-P-10 and H-P-11, which encourage residential development in mixed use neighborhoods.

County General Plan housing policies and City General Plan housing policies discuss the provision of affordable housing for low-income households and housing for the elderly and people with disabilities. Approximately 1,435 single-story homes would be constructed for adults 55 and older. Commercial/mixed use development would be adjacent to these homes and accessed by major arterial roads. Within commercial/mixed use development, 341 high-density residential units, such as apartment, townhouses, and condominiums, would be constructed. Development of active adult housing and high-density residential units would be consistent with County General Plan Policies 7, 9, 10, and 11 and City General Plan Policies H-P-12, H-P-42, H-P-45, H-P-47, and H-P-48, which encourage development of affordable housing for large families, disabled persons, senior citizens, and low-income households.

Proposed housing units would be designed and constructed in consideration of the statewide residential new construction energy efficiency program known as California Energy Start New Home Program. In addition, the planned active adult community would participate in the Environments for Living Gold Package Plan that would include fresh-air ventilation, carbon monoxide detectors, sealed furnaces and water heaters, and heating and cooling guarantees. These programs would ensure consistency with City General Plan Policies H-P-49, H-P-50, and H-P-51, which encourage the use of energy conservation features, durable materials, and innovative construction techniques.

The project would be consistent with housing policies in the City General Plan. For these reasons, the project would be consistent with the City's housing policies, and this impact would be less than significant.

4.13.4 MITIGATION MEASURES

No mitigation measures are necessary for the following no impact and less-than-significant impacts.

- 4.13-1: Population Growth and Housing Demand during Construction
- 4.13-2: Population Growth
- 4.13-3: Housing Demand from Project Development
- 4.13-4: Housing Displacement
- 4.13-5: Consistency with Housing Policies

4.13.5 LEVEL OF SIGNIFICANCE AFTER MITIGATION

The project's population and housing impacts would be less than significant. No mitigation is required.

5 CUMULATIVE IMPACTS

5.1 INTRODUCTION

This section provides an analysis of overall cumulative impacts of the URSP project taken together with other past, present, and probable future projects producing related impacts, as required by §15130 of the California Environmental Quality Act Guidelines (State CEQA Guidelines). The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant; and second, to determine whether the URSP itself would cause a “cumulatively considerable” (and thus significant) incremental contribution to any such cumulatively significant impacts. (See State CEQA Guidelines §§15130[a]-[b], §15355[b], §15064[h], §15065[c]; *Communities for a Better Environment v. California Resources Agency* [2002] 103 Cal.App.4th 98, 120.) In other words, the required analysis intends to first create a broad context in which to assess the project’s incremental contribution to anticipated cumulative impacts, viewed on a geographic scale well beyond the project site itself, and then to determine whether the project’s incremental contribution to any significant cumulative impacts is itself significant (i.e., “cumulatively considerable” in CEQA parlance).

Cumulative impacts are defined in State CEQA Guidelines §15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (State CEQA Guidelines §15355[b]).

Consistent with State CEQA Guidelines §15130(a), the discussion of cumulative impacts in this Draft EIR focuses on significant and potentially significant cumulative impacts. State CEQA Guidelines §15130(b), in part, provides the following:

The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

5.2 PROJECTS CONTRIBUTING TO POTENTIAL CUMULATIVE IMPACTS

The State CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and probable future projects or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. For this Draft EIR, both the list and the plan approach have been combined to generate the most reliable future

projections possible. A list approach is used to define the local project environment and includes projects within the City of Manteca (City). Because the project directly influences, and is influenced by, regional development activities, the plan approach is also used, to allow a cumulative analysis on this regional scale. Projects and plans included in these two approaches are described below.

5.2.1 CUMULATIVE CONTEXT

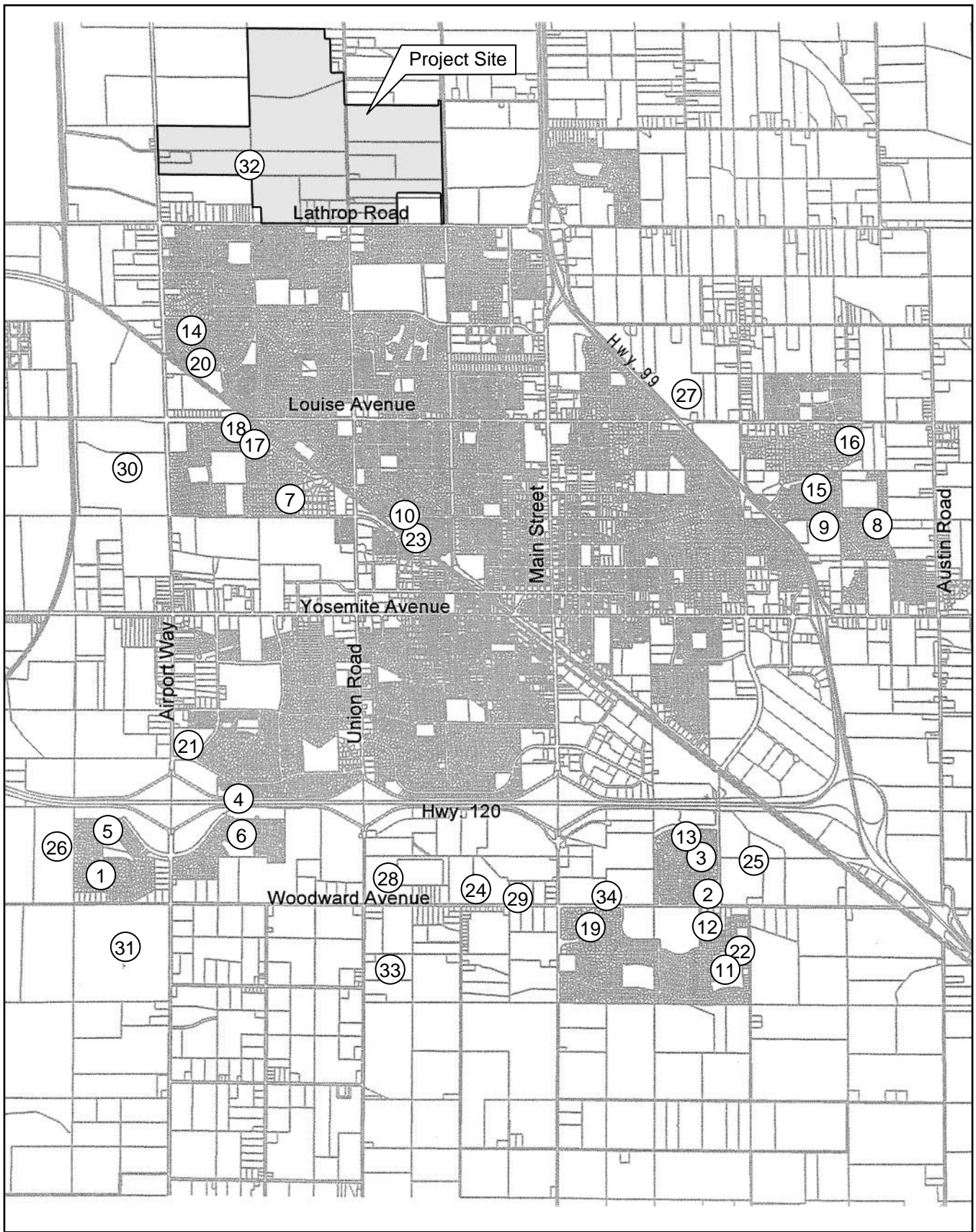
Agriculture has been the driving force over the decades in the conversion of natural lands in Manteca to urban purposes. This conversion of natural land removed biological habitat and has resulted in such environmental effects as air quality degradation (attributable to dust from cultivation and emissions from farm equipment).

According to U.S. Census records, the population in Manteca grew from around 40,800 in 1990 to more than 49,200 in 2000. This increase in population has come as a result of moderate urbanization over the decade, particularly the development of single-family residences and commercial and office buildings. This urbanization has resulted in increased traffic, particularly on increasingly crowded local roadways, increased air pollution (from vehicles and construction), and loss of farmland. Even with this growth, however, Manteca accounted for only 9% of the total San Joaquin County population in 2000 (approximately 563,600).

San Joaquin County (County) has grown substantially in recent years, particularly in the cities of Tracy and Stockton. Between 1990 and 2000, Tracy added more than 23,000 residents and Stockton added 33,000 residents. Together, these two cities represent 69% of the County's population gain between 1990 and 2000; by comparison, Manteca's growth equaled 10% of the total County population gain. This growth in Tracy and Stockton has resulted in environmental changes similar to those occurring in Lathrop, although at more pronounced levels than in Manteca. The County is addressing numerous regional issues pertaining to severe air quality degradation, traffic congestion, biological habitat loss, loss of farmland, and other urban-related environmental changes.

5.2.2 LIST OF RELATED PROJECTS

The list of past, present, and probable future projects used for this cumulative analysis is restricted to those projects that have occurred or are planned to occur within the City. For the purposes of this discussion, these projects that may have a cumulative effect on the resources in the project area will often be referred to as the "related projects." Related residential projects are identified in Exhibit 5-1 and Table 5-1 and related commercial projects are identified in Exhibit 5-2 and Table 5-2; the numbering corresponds to the numbers used in the exhibit and table.

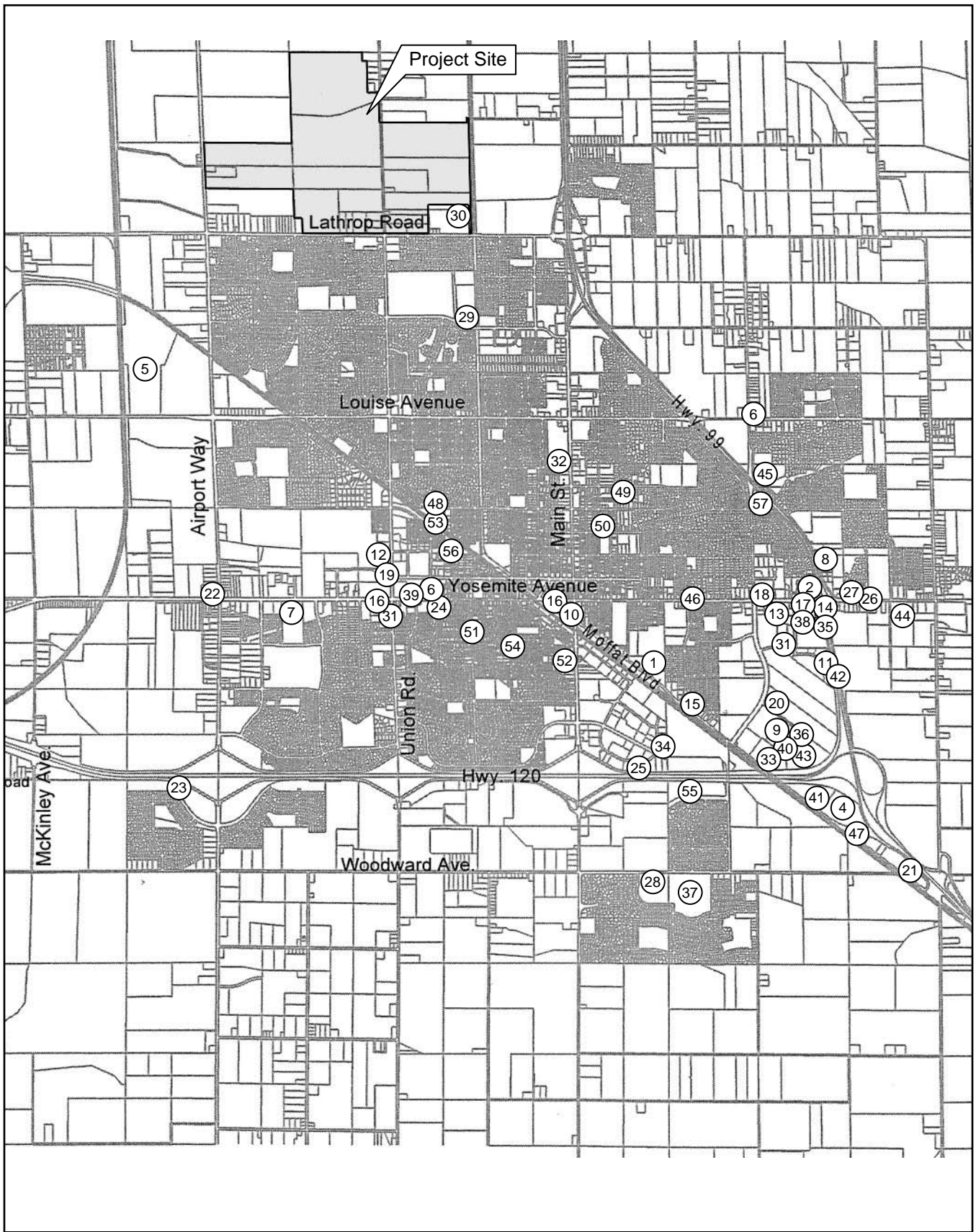


Source: City of Manteca, October 2004

Cumulative Residential Projects

Table 5-1 Related Residential Projects in the City of Manteca				
Project No. in Exhibit 5-1	Project Name	Status	Acreage	Proposed Residential Units
1	Bella Vista	Final subdivision map approved	66.8	113
2	Bianchi Ranch Unit 2	Final subdivision map approved	20.6	90
3	Bianchi Ranch Unit 3	Final subdivision map approved	13.3	54
4	Durta Northeast (Heather Ranch)	Final subdivision map approved	12.4	67
5	Dutra Farms S.W. (DA)	Final subdivision map approved	30.5	104
6	Dutra Farms S.E. (DA)	Final subdivision map approved	76.9	272
7	Eagle Estates	Final subdivision map approved	5	17
8	Eastport	Final subdivision map approved	52.6	200
9	Gnomes Estates	Final subdivision map approved	3.68	15
10	Hunter's Cove (multi-family)	Final subdivision map approved	2.35	10
11	Jasmine Hollow	Final subdivision map approved	61.4	235
12	Morse Estates	Final subdivision map approved	5.5	23
13	Pasco	Final subdivision map approved	26.3	124
14	Primavera Estates	Final subdivision map approved	126	499
15	Sierra Creek	Final subdivision map approved	33.5	85
16	Spring Meadows #2	Final subdivision map approved	40	133
17	Villa Ticino #6	Final subdivision map approved	2.56	12
18	Villa Tuscany	Final subdivision map approved	7.44	32
19	Woodward West (DA)	Final subdivision map approved	38.4	116
20	Primavera #7	Final subdivision map approved	0.84	7
21	Westport	Tentative subdivision map approved	5.27	24
22	Jasmine Hollow #4	Tentative subdivision map approved	0.58	9
23	Erdman Property (multi-family)	Tentative subdivision map approved	2.36	8

Table 5-1 Related Residential Projects in the City of Manteca				
Project No. in Exhibit 5-1	Project Name	Status	Acreage	Proposed Residential Units
24	Terra Bella	Tentative subdivision map approved	42.3	158
25	Tesoro	Tentative subdivision map approved	128	485
26	Dutra Estates	Tentative subdivision map approved	77.3	426
27	Shadowbrook	Pending subdivision map review	122	497
28	Antigua	Tentative subdivision map approved	3.33	120
29	Ken Hill Estates	Pending subdivision map review	4.73	12
30	Villa Ticino West	Tentative subdivision map approved	127	366
31	Machado Estates	Pending subdivision map review	160	564
32	Milner Estates	Pending subdivision map review	59.9	215
33	Paseo West	Tentative subdivision map approved	50.8	191
Project Site	Union Ranch	Pending subdivision map review	552.7	2,301
Source: City of Manteca 2004a				



Source: City of Manteca, August 2004

Cumulative Commercial/Industrial Projects

**Table 5-2
Related Commercial Projects in the City of Manteca**

Project No. in Exhibit 5-2	Project Name	Status	Proposed Land Use	Proposed Commercial/Industrial Square Footage
1	Cold Storage Building	Pending site plan approval	Freezer storage building	22,500
2	Manteca Inn	Pending site plan approval	Addition of a second story and 43 sleeping rooms	--
3	America's Self-Storage	Pending site plan approval	Mini-storage facility	118,750
4	Crossroads Grace Community Church	Pending site plan approval	Church with offices and classrooms	35,000
5	Storage Warehouse	Pending site plan approval	Warehouse building	1,738,230
6	Manteca Auto Mart	Pending revised site plan approval	Auto repair and maintenance	3,150
7	Menucci Yosemite Development	Under construction	Used car and RV sales lot with modular office and storm retention basin	--
8	Button Avenue Self Storage	Pending site plan approval	Mini-storage facility with office	--
9	Manteca III	Pending building permit submittal	Two, multi-tenant, distribution buildings	98,230
10	Distribution Warehouse	Pending building permit submittal	Distribution warehouse	19,000
11	Union Road Tennis Center	Pending building permit issuance	Modular building	1,248
12	Spreckels Park, Phase II	Pending building permit issuance	Nine retail spaces	23,000
13	Spreckels Park, Parcel 5	Under construction	Shell building	5,000
14	Honest Automotive	Pending building permit submittal	Auto repair facility	5,200
15	Retail store	Pending building permit issuance	Retail space	2,400
16	In N Out Burger	Pending building permit issuance	Drive-through restaurant and retail shell building	4,257
17	KFC Restaurant	Under construction	Drive-through restaurant	3,490
18	Hensley Office Building	Pending building permit issuance	Offices	30,799
19	Millard's Refrigeration	Under construction	Cold storage distribution facility	151,977
20	Aqua Pool and Spa	Pending site plan approval	Office and retail space	32,800

**Table 5-2
Related Commercial Projects in the City of Manteca**

Project No. in Exhibit 5-2	Project Name	Status	Proposed Land Use	Proposed Commercial/Industrial Square Footage
21	Smog Shop	Pending annexation and site plan approval	Smog check center, retail shop, and boundary wall	--
22	Dutra Southwest Commercial	Pending building permit issuance	Modular home sales center on 2.95-acre parcel	--
23	Manteca Quality Auto Sales	Pending site plan approval	Sales office	--
24	Team Power	Pending site plan approval	Building	17,000
25	Modular Office Complex	Pending building permit submittal	Office building	5,040
26	North Main Plaza	Pending building permit issuance	Commercial/retail building, parking, and landscape	11,626
27	Oatey Warehouse	Pending building permit issuance	Distribution warehouse	50,000
28	Panda Express Restaurant	Pending site plan approval	Restaurant with drive-thru	--
29	Manteca Business Center	Pending site plan approval	Multi-tenant industrial building	82,672
30	Retail building	Pending site plan approval	Retail	10,800
31	Manteca Business Center	Pending site plan approval	Industrial project of 13 buildings	--
32	Manteca Commerce Park	Pending site plan approval	Mixed-use buildings	172,000
33	Tri Valley Business Park	Pending site plan approval	Office/warehouse business buildings	67,320
34	Dryer's Grand Ice Cream	Pending site plan approval	Warehouse and distribution center	97,200
35	Manteca RV Center	Pending site plan approval	Sales and service RV center	66,577
36	Christian Worship Center	Pending site plan approval	Worship and administrative offices	52,480
37	Bourbeau Enterprises	Pending site plan approval	Addition to an existing retail center	4,900
38	California Welding Supply	Pending site plan approval	Sales and distribution building	12,960
39	A-F, Hunter's Cove	Under construction	Construction of 10 duplex units on 10 lots	--

Source: City of Manteca 2004b

5.2.3 REGIONAL PLANNING ENVIRONMENT

Because the project directly influences, and is influenced by, regional development activities, the “plan” approach was used to evaluate cumulative impacts on a regional scale. The regional cumulative analysis area covers San Joaquin County and included an evaluation of the following plans:

- ▶ San Joaquin County General Plan 2010, adopted in 1992 and as amended;
- ▶ San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) (2000);
- ▶ Manteca General Plan, adopted in 1988 and as amended through 2023;
- ▶ Manteca General Plan 2023 Draft Environmental Impact Report; and
- ▶ 2001 Regional Transportation Plan, prepared by the San Joaquin Council of Governments in 2001.

Much of the information on the overall planning and project environment in the County was found in the SJMSCP, which evaluated current conditions and anticipated future development throughout the County based on the individual City and County General Plan documents listed above. Additional information on conditions in the County was obtained from the San Joaquin Council of Governments (SJCOG) Research and Forecasting Center (RFC). A summary of the cumulative planning environment in the County used for the regional cumulative impact analysis is provided below.

San Joaquin County covers approximately 909,000 acres, with approximately 808,000 acres, or nearly 90% of the County, used or available for agriculture (row and field crops, orchards, vineyards, and grazing lands). The remaining lands are dominated by various types of development (approximately 60,000 acres), natural habitats (woodlands, riparian), and open water (lakes, rivers, Delta waterways). The County population in 2000 was approximately 563,600 (U.S. Census Bureau 2000), with most County residents and development located in the incorporated cities (Escalon, Lathrop, Lodi, Manteca, Ripon, Stockton, and Tracy).

As stated in the SJMSCP, it is anticipated that 147,000 acres of various categories of open space lands (including agriculture, range lands, and natural areas) in the County (including Manteca) will be converted to non-open space uses between 2001 and 2051, based on full buildout of each of the general plans in the County and construction of all anticipated transportation and other public projects. In addition, approximately 59,000 acres of infill of urban lands would occur in this 50-year timeframe. Population in the County is expected to more than double by 2040, increasing to 1.26 million (California Department of Finance 1998).

Residential development constitutes the majority of planned future developed uses in the County. New residential development is expected to occur in four primary areas in the County: the incorporated cities, the unincorporated areas near the cities where services are

available, new communities (e.g., Mountain House, New Jerusalem), and existing unincorporated communities (e.g., Acampo, Banta, Chrisman, Glennwood, French Camp, Lockeford, Linden, Thornton, Vernalis). Commercial development would be concentrated in these same areas as well as along major transportation routes.

5.3 ANALYSIS OF CUMULATIVE IMPACTS

The following sections contain a discussion of the cumulative effects anticipated from implementation of the project, together with the related projects and regional development, for each of the 13 environmental issue areas evaluated in this draft EIR. The analysis conforms with §15130 of the State CEQA Guidelines, which specifies that the “discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great a detail as is provided of the effects attributable to the project alone.”

LAND USE AND AGRICULTURAL RESOURCES

As described in Section 4.1 of this draft EIR, implementing the project would not physically divide a community. Impacts involving land use plans or policies and zoning generally would not combine to result in cumulative impacts. The determination of significance for impacts related to these issues, as considered in Appendix G of the State CEQA Guidelines, is whether a project would conflict with any applicable land use plan or policy adopted for the purpose of reducing or avoiding environmental impacts. Such a conflict is site specific; it is addressed on a project-by-project basis. As described in Section 4.1, implementing the project would not result in significant land use planning impacts, and the project’s ultimate consistency with local land use plans, policies, and zoning is ensured through entitlements to revise the City General Plan. The project is also consistent with the SJMSCP, a regional-scale planning document. Further, related projects in the City are, to the extent that proposed land uses have been identified, apparently consistent with environmental plans and policies. Because no land use impacts would occur on a project-specific basis, the project would not contribute to any potential cumulative land use impacts.

According to the most recent Agriculture Census for San Joaquin County, conducted in 1997, 3,862 farms occupy approximately 809,000 acres of farmland in the County; this is approximately 90% of the County’s 909,000-acre total land area. The percentage of agricultural land has fluctuated, according to recent agriculture censuses, from approximately 824,000 acres (91%) in 1987 to approximately 784,000 acres (86%) in 1992 and then back up again in 1997 to 1987 estimates. In 1997, total cropland in the County was approximately 559,000 acres, and in this area, approximately 519,000 acres were irrigated lands. The California Department of Conservation (CDC) also estimates that in 1999, the County had approximately 548,000 acres of land under Williamson Act contracts (CDC 2001).

Among the agricultural lands in San Joaquin County, the CDC Division of Land Resource Protection estimates that the County has 630,990 acres of Important Farmland, further classified as 423,158 acres of Prime Farmland, 93,846 acres of Farmland of Statewide

Importance, 57,977 acres of Unique Farmland, and 56,009 acres of Farmland of Local Importance (CDC 2001). According to the CDC land conversion tables for the County, 4,665 acres of Important Farmland were converted to other uses between 1992 and 2000 (Table 4.1-1). Lands classified as Unique Farmland and Farmland of Local Importance actually increased during this period (likely attributable more to designation of existing farmland as unique or important rather than to new farmland being put into production). However, an overall loss of Important Farmland occurred as a result of conversions of Prime Farmland (12,845 acres) and Farmland of Statewide Importance (5,702 acres) to other uses. On average, these combined categories lost approximately 2,300 acres per year over the 8-year period. The County reports 8,733 acres of farmland to be slated for nonagricultural use in the near future; more than half of this is Prime Farmland.

The California Department of Finance projects the County's population to grow from 563,600 to 920,900 by 2020, putting continued pressure on agricultural lands for conversion (CDC 2002). The San Joaquin County General Plan 2010 Review (County of San Joaquin 2000) estimates that between 2000 and 2040, 110,000 acres of Important Farmland in the County (17%) could be converted to urban uses. Additional conversions can be expected from implementation of habitat restoration and water storage projects associated with CALFED, the SJMSCP, and other regional efforts.

The loss of an estimated 289 acres of Important Farmland at the URSP site is considered a cumulatively considerable (i.e., significant) impact when considered in connection with the significant cumulative losses that will occur as a result of the project, past farmland conversions, and planned future development proposed in the City, the surrounding cities, and the County as a whole. Further, because of the extension of infrastructure to previously undeveloped area, and the expansion of the urban core of the City, the project could increase pressures for urbanization of areas north of the URSP site and could result in the conversion of additional areas devoted to agriculture to urban land uses. The URSP project applicants would participate in the SJMSCP by contributing fees, on a per-acre basis, for agricultural lands that are developed. The SJCOG would use these fees, in part, to purchase conservation easements on agricultural lands, providing greater protection to these farmlands in the County. However, this measure cannot fully mitigate the project's cumulatively considerable contribution to the loss of agricultural land in San Joaquin County; therefore, cumulative impacts are significant and the project's incremental contribution to them is significant as well.

VISUAL RESOURCES

Past development in the vicinity of the project has increasingly changed the visual character along these corridors from agricultural and open space uses to urban uses, thus altering and limiting the views available to motorists on these roadways. This trend would continue as future projects are implemented in the region, and the project would contribute to this cumulative change in views. As development proceeds in the project region as a whole, substantial changes in visual conditions would continue as agricultural lands and open space are replaced by urban development. Increased urban development would also lead to increased nighttime light and glare in the region and more limited views of the night sky. The

cumulative effect of these changes on aesthetic resources from past and planned future projects, as well as the contribution from the project, is considered significant. Although these cumulative impacts can be minimized to a degree through vegetative and topographic screening of structures, use of outdoor lighting that limits glare, appropriate building design, and other measures, the significant cumulative impact cannot be fully mitigated. Therefore, the cumulative change of agricultural and open space views in the project region to urban land uses and the associated increase in nighttime light and glare are considered significant and unavoidable impacts. In addition, the project's incremental contribution to these impacts is cumulatively considerable.

AIR QUALITY

Past development in the County and throughout the San Joaquin Valley has resulted, in combination with meteorological conditions and transport of pollutants from other air basins, in substantial to severe air quality problems in the San Joaquin Valley Air Basin (SJVAB). As described in Section 4.3, Air Quality, the SJVAB is in severe nonattainment with state and federal ozone standards and nonattainment with state and federal standards for respirable particulate matter 10 microns or less in diameter (PM₁₀). As a consequence, the San Joaquin Valley Air Pollution Control District (SJVAPCD) is required to submit a plan demonstrating reductions in the emissions inventory of 300 tons per day by 2005–2010. However, a voluntary reclassification to extreme nonattainment for ground-level ozone is in process and, if adopted, would allow additional time to implement emission reduction measures.

SJCOG projects population in the County to grow from 563,600 in 2000 to 900,300 in 2025, an increase of 330,700. The City of Manteca is projected to grow by nearly 37,000 people over this same period. SJCOG bases its air quality attainment planning on projections of countywide growth and has indicated (along with SJVAPCD staff) that, in general, higher-than-projected growth in one community, such as Manteca, usually translates to lower-than-projected growth in another and that countywide growth trends would not be likely to change on the basis of development in one community (Klob, pers. comm., 2003). Thus, if Manteca does add more than 8,000 dwelling units (as indicated in Table 5-1) and the City builds out by 2025, Manteca would exceed its projected population growth, but projected growth would likely be commensurately reduced, compared to what has been anticipated, elsewhere in the County. Conversely, if growth occurs throughout the County, by community, as projected by SJCOG, the level of cumulative development shown in Table 5-1 probably would not be achieved in Manteca. In short, SJCOG and the SJVAPCD have assumed a substantial level of cumulative development over the next 25 years in their air quality planning, and individual project development would not alter attainment of air district plans. It is important to recognize that the SJVAPCD has already seen substantial progress in meeting attainment status for ozone; federal ozone standards were exceeded more than 70 days per year between 1980 and 1990, and the number of exceedances has been steadily reduced to an average of approximately 30 days per year over the past 5 years, despite substantial population growth. Still, it is uncertain whether, despite best efforts of regulators and constantly improving control technologies, attainment will be reached on schedule.

Much of the past development in the project region has occurred to meet demands for more affordable housing for people employed in the Bay Area. Increased commuting associated with this development scenario has contributed substantially to existing air quality problems in the SJVAB. Although the URSP includes a number of design features that would help to reduce increases in mobile source emissions attributable to the project, including a network of multiuse trails to connect residential areas to local destinations, it would still result in an individual significant air quality impact with respect to long-term regional emissions. Emissions attributable to the project, along with emissions from other reasonably foreseeable future projects in Manteca and the SJVAB as a whole, would continue to contribute to long-term increases in emissions that would exacerbate existing and projected nonattainment conditions in the SJVAB. Thus, the project would contribute to a significant and unavoidable cumulative air quality impact. The URSP's incremental contribution to that cumulatively significant impact, therefore, is itself cumulatively considerable.

Because of the nonattainment status of the SJVAB and the large disturbance area associated with the URSP project, the project is considered to result in significant and unavoidable construction-related air quality impacts, even with implementation of mitigation measures required by the SJVAPCD, as identified in Section 4.3, Air Quality. Assuming that all related projects also implement all feasible construction emission control measures consistent with SJVAPCD guidelines, construction emissions on a project-by-project basis could be less than significant, or significant and unavoidable, depending on the scale of the project and other factors. Because of the large scale and number of related projects, taken in total and combined with the nonattainment status of the SJVAB for PM₁₀, construction-related emissions would result in a significant and unavoidable cumulative air quality impact. The URSP together with all related projects would cause a cumulatively considerable (significant) incremental contribution to this cumulatively significant impact.

Given that compliance with applicable rules and regulations would be required for the control of stationary-source emissions of toxic air contaminants (TACs), both on and off the site, the project's contribution to long-term cumulative increases in stationary-source TAC concentrations would be considered minor. However, specific stationary-source TAC emissions at a local level are considered a potentially significant impact in this draft EIR because there is a theoretical potential for a sensitive receptor to be located near a stationary TAC source (see Impact 4.3-2). In addition, exposure to TACs from mobile sources, specifically diesel exhaust PM, is of growing concern within the San Joaquin Valley. Although the specific commercial uses that would be developed under the URSP have not been identified, commercial uses may require large delivery and shipping trucks that use diesel fuel. Occupants of nearby residences, particularly those located within the proposed commercial-mixed-use districts, may be exposed to diesel exhaust PM emissions on a reoccurring basis. In addition, construction of land uses that involve extensive use of diesel-powered equipment or vehicles could contribute to an exceedance of the SJVAPCD thresholds at nearby sensitive receptors. Consequently, this cumulative impact is considered significant. The URSP and related projects would result in a cumulatively considerable incremental contribution to this cumulatively significant impact.

Cumulative traffic data (project plus foreseeable future development) were used to specifically evaluate local mobile-source carbon monoxide (CO) concentrations for existing-plus-project and future-plus-project conditions. The analysis was conducted for intersections projected to operate at unacceptable level of service (LOS E or F). Both 1-hour and 8-hour CO concentrations were estimated based on worst-case meteorological conditions, p.m. peak-hour traffic volumes as presented in the traffic analysis, and emission factors modeled using the EMFAC2002 computer model. As indicated in Table 5-3, the estimated maximum 1-hour and 8-hour CO concentrations for the full project buildout plus traffic resulting from regional development would not exceed the significance thresholds of 20 parts per million (ppm) and 9 ppm. Consequently, the cumulative impact of the URSP and related projects is considered less than significant.

Table 5-3 Localized Mobile Source CO Concentrations		
Intersection(s)	Predicted CO Concentrations (ppm) ¹	
	1-Hour	8-Hour
<i>Existing-Plus-Project</i>		
Lathrop Road and Union Road	10.0	7.1
<i>Future-Plus-Project</i>		
Lathrop Road and 5 th Street	9.6	6.8
<i>Significance thresholds</i> ²	<i>20.0</i>	<i>9.0</i>
¹ 1-hour and 8-hour CO concentrations were estimated using the CALINE4 model based on the assumptions outlined above, 2010 composite emission factors from EMFAC2002 and a persistence factor of 0.7 for predicted 8-hour concentrations. To be conservative, background CO concentrations of 8.4 ppm and 6.0 ppm (the highest background concentrations from the Stockton-Hazelton air quality monitoring station during the last three years of available data (2000 to 2003) were used for existing and future conditions. ² Based on the more stringent CAAQS. Source: Ambient Air Quality & Noise Consulting 2004		

NOISE

Implementing the project would result in significant noise impacts before mitigation associated with construction activities. These impacts would be reduced to less-than-significant levels with implementation of the mitigation measures recommended in Section 4.4, Noise. However, impacts associated with onsite exterior noise levels resulting from adjacent land uses, stationary-source noise, and increases in traffic noise levels are considered significant and unavoidable.

The County's and City's noise standards limit construction activities to daytime hours. For the URSP, it was determined that adherence to these noise regulations alone would not be sufficient to avoid significant construction noise impacts. It is similarly anticipated that compliance with these regulations alone would not avoid significant construction noise impacts associated with the related projects. Therefore, significant cumulative noise impacts associated with construction activities could occur. However, as explained in Section 4.4, Noise, noise

levels are not directly additive and attenuate rapidly with distance. Because no related projects would be under construction in the nearby vicinity of the project site concurrently with the project and because the project would not result in significant construction noise impacts after mitigation, it would not cause a cumulatively considerable incremental contribution to any such significant cumulative noise impacts.

Stationary-source noise associated with the proposed and related projects could potentially result in exceedance of the City's noise standards at sensitive receptors. While the noise from any stationary noise sources associated with the related projects could be controlled at the source (by means of noise walls, enclosures, site planning, and so on), there is no guarantee that all the related projects would include such noise controls as part of their proposals. Hence, significant cumulative noise impacts associated with stationary noise sources could occur. However, noise levels are not directly additive and attenuate rapidly with distance. Because no related projects are in close enough proximity to the project site to have an additive affect from stationary noise sources and because the project would not result in significant stationary noise impacts after mitigation, it would not cause a cumulatively considerable incremental contribution to any such significant cumulative noise impacts.

While construction and stationary-source noise can be controlled onsite at the point of origin, traffic noise may extend beyond a project site along existing and proposed offsite roadways and result in significant traffic noise impacts at sensitive uses along these roadways. Because full buildout of the proposed URSP would result in a perceptible increase in traffic noise on several roadways (Impact 4.4-3 in the noise analysis), the proposed URSP would contribute to a cumulative impact. Furthermore, the combined cumulative increase in traffic on local roadways anticipated from the URSP and regional growth would extend the 60-dBA noise contour distances for these roadway segments, resulting in a substantial number of additional existing and proposed sensitive receptors falling within this contour. Thus, the traffic noise impacts from the URSP and related projects, taken together, are considered cumulatively significant. Construction of sound walls and other noise-attenuating features (e.g., berms, dual-pane windows) throughout the region would require a regional program and may not be feasible to implement. Because it is considered infeasible to sufficiently reduce noise at every existing and proposed sensitive receptor that would be affected, this cumulative traffic noise impact is considered significant and unavoidable, and the project's incremental contribution to the significant cumulative impact is itself cumulatively considerable (significant) and unavoidable.

BIOLOGICAL RESOURCES

Most of the native vegetation in the project area and the larger region has been lost in the past 150 years, primarily as a result of conversion to agricultural and urban land uses. This habitat conversion has substantially affected many plant and wildlife species, resulting in various species being listed as threatened or endangered under the California and federal Endangered Species Acts, although some species that use agricultural habitats and others that can thrive in developed areas have benefited. Future conversions of open space lands in the County would primarily consist of converting agricultural lands to residential and urban development.

The SJMSCP anticipates conversion of up to approximately 109,000 acres of open space land to non-open space uses in the County between 2001 and 2051. The project and related projects in the City would contribute to this countywide conversion. The SJMSCP was developed to minimize and mitigate impacts on plant and wildlife habitat (and associated species) resulting from this regional loss of open space lands. The SJMSCP relies, in part, on compensation for such conversion through preservation of agricultural lands and preservation and creation of natural habitats to be managed in perpetuity through the establishment of conservation easements and preserves. The goal of the SJMSCP is to provide approximately 101,000 acres of agricultural and habitat preserve. The SJMSCP concludes that this would adequately compensate for cumulative impacts on plant and wildlife species covered by the plan. Because the SJMSCP potentially provides a streamlined mechanism to mitigate for impacts on resources covered under the plan, it is assumed that most qualifying projects within the County would use the SJMSCP for mitigation. Therefore, cumulative impacts on terrestrial biological resources covered under the SJMSCP are considered less than significant.

Biological impacts resulting from the project that are not expected to be compensated for by coverage under the SJMSCP are the loss of U.S. Army Corps of Engineers (USACE) jurisdictional habitats (wetlands and waters of the United States). Mitigation measures outlined in Section 4.5 are expected to fully compensate for these losses. The USACE requires no net loss of wetland functions and values for impacts on jurisdictional habitats, including waters of the United States. It is assumed that this requirement would be applied to all related projects that may affect wetlands; therefore, no cumulative net loss of wetlands should occur. Therefore, potential cumulative impacts on wetlands are considered less than significant.

Because the project applicant would participate in the SJMSCP and would implement mitigation measures to compensate for wetlands and waters of the United States, the URSP and related projects would not result in cumulative impacts on terrestrial biological resources.

HAZARDS AND HAZARDOUS MATERIALS

The project and related projects would all involve the storage, use, disposal, and transport of hazardous materials to varying degrees during construction and operation. Impacts related to these activities are considered less than significant under the project because the storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, state, and local agencies, and it is assumed that those involved with the project would implement and comply with these existing hazardous materials regulations. Therefore, significant hazards to the public would not occur. Because these laws and regulations would also apply to each related project, this impact would be considered less than significant on both an individual project and cumulative basis.

GEOLOGY, SOILS, AND SEISMICITY

Various areas in the City of Manteca and the project region are subject to ground shaking, liquefaction, lateral spreading, settlement, levee failure, and other seismically induced hazards. Although the City is located in an area of low seismic activity, faults in the greater San Joaquin

Valley could cause moderate ground shaking throughout the region. Implementation of the various related projects could expose additional structures and people to seismic hazards. The potential seismic and soil hazards in the City of Manteca, therefore, could represent a significant cumulative impact if projects are not developed to the latest building standards and do not incorporate recommendations from site-specific geotechnical reports and grading/erosion plans prepared for these projects.

As discussed in Section 4.7, Geology, Soils, and Seismicity, the URSP project site would be exposed to potentially significant seismic hazard impacts. However, these impacts would be mitigated to less-than-significant levels through completion of site-specific geotechnical studies and implementation of construction and design measures developed in response to the studies. Each of the related projects must individually meet building code requirements, and no additive effect would result from the combination of the related projects and the URSP. Implementation of the project, therefore, would not create additional facilities under increased risk of hazards and would not result in any cumulatively considerable incremental contributions to any significant cumulative impacts.

PALEONTOLOGICAL RESOURCES

Results of a paleontological record search at the UC Berkeley Museum of Paleontology indicated no fossil remains within the immediate vicinity of the project site, and no fossils have been observed on surface soils during various field visits. The closest identified Pleistocene-age vertebrate fossils to the project site are located approximately 2.8 miles northeast, at Mormon Slough, and approximately 20 miles southwest of the project site in Tracy.

Important fossil finds in the project region have been isolated and rare. No concentrations of fossils or areas with relatively high densities of fossils have been identified in the project vicinity. Although fossils may have been unknowingly disturbed or destroyed during past projects in the region, no evidence is available of this occurring with any frequency (as is the case with disturbance of many archaeological sites). Often fossil discoveries, and the subsequent opportunities for data collection and study, result from excavations and soil moving associated with development. Because of the low potential for projects to intersect fossils, and the ability to collect data from fossils when they are encountered, development of the related projects and other development in the region is not considered to result in a significant cumulative impact on paleontological resources.

Previously undiscovered subsurface paleontological resources might also underlie the URSP area and related project sites. Mitigation measures are outlined in Section 4.8 of this draft EIR, Paleontological Resources, to reduce impacts on previously undiscovered paleontological resources to less-than-significant levels. Implementing these mitigation measures also would ensure that implementing the project would not incrementally contribute to cumulative impacts on important paleontological resources in the project region.

HYDROLOGY AND WATER QUALITY

The Project Area Storm Drain Master Plan includes permanent water quality features (BMPs) designed in conformance with the standards of the Regional Water Quality Control Board (RWQCB) for the Central Valley Region, the City of Manteca, and the SSJID (Union Ranch/Pulte 2004). These BMPs are described in detail in Section 4.9, Hydrology and Water Quality.

Surface Water Quality

Construction activities within the URSP site and related project sites would be extensive. Grading, earth moving, excavation and utility installation, infrastructure development, and building construction would disturb the existing vegetative cover, soil, and drainage systems. Construction activities could result in substantial soil erosion and stormwater discharges of suspended solids, increased turbidity, and potential mobilization of other pollutants from project construction sites as contaminated runoff or direct discharges to drainage channels. Implementation of Mitigation Measure 4.9-1 would reduce construction-related water quality effects to less-than-significant levels. While there are no assurances that the related projects would incorporate the same degree or methods of treatment as the URSP project, each related project that would discharge stormwater runoff would be required to comply with National Pollutant Discharge Elimination System (NPDES) discharge permits from the RWQCB. Therefore, impacts of related projects on construction-related water quality effects would be expected to be less than significant.

As indicated under Impact 4.9-2 of this draft EIR, the existing agricultural uses at the project site currently discharge stormwater and agricultural runoff from the site. Under the project, implementation of structural and nonstructural best management practices (BMPs) (described in Section 4.9) would substantially improve runoff water quality compared with existing agricultural runoff.

While there are no assurances that the related projects would incorporate the same degree or methods of treatment as the URSP project, several of the related projects would phase out existing agricultural runoff discharges from their respective sites and, similar to the project, could provide some level of water quality improvement. Also, each related project that would discharge stormwater runoff would be required to comply with NPDES discharge permits from the RWQCB, which adjusts requirements on a case-by-case basis to avoid significant degradation of water quality. Therefore, while a greater quantity of urban runoff may be discharged to drainage channels and downstream waterbodies (including the San Joaquin River) with implementation of the related projects because of an increase in impervious surfaces, the associated surface water quality impacts would be expected to be less than significant because of improved or similar quality of runoff compared to existing conditions.

Groundwater Supply and Quality

The project would construct two new groundwater wells that would provide interim water supplies for the project and would ultimately be integrated into the City's overall conjunctive use water supply system. The City is a participant in the SSJID SCSWSP, which will ultimately reduce the City's dependence on groundwater resources. Hence, it is anticipated that less-than-significant impacts to groundwater resources would occur. However, cumulatively significant impacts could occur because of overdrafting or an increase of salinity intrusion resulting from cumulative groundwater usage by entities other than the City. The City would limit its contribution to this impact by limiting its own groundwater usage to what has been determined to be sustainable levels. Despite the City's limitations on its own groundwater usage, its groundwater impacts could be cumulatively considerable because the City cannot be certain that other groundwater users would similarly limit their own groundwater usage to sustainable levels.

Surface Drainage

The URSP project includes an extensive stormwater management system to collect, detain, and discharge stormwater runoff generated in the URSP area. The project's planned stormwater system is sufficient to prevent flooding through detention, and pumping when necessary. As a result, no adverse project-specific impacts, significant or otherwise, would occur. Therefore, the project would not incrementally contribute to any cumulative impacts relating to the provision of stormwater conveyance. In other new developments within the City, stormwater conveyance would also consist of surface runoff to detention ponds or other detention facilities. Such new development, like the URSP, would be required to comply with the policies of the City's drainage master plans. In addition, cumulative impacts of related projects would undergo separate environmental review to ensure that adequate conveyance facilities are included as part of those projects. As such, it is expected that future development would result in less-than-significant cumulative stormwater conveyance impacts.

Flood Control

The project is located outside the 100-year floodplain. Therefore, the project and the related projects could not contribute to a cumulative increase in flood elevations through the removal of areas from the 100-year floodplain.

PUBLIC SERVICES AND UTILITIES

Public Utilities

As indicated in Section 4.10, the project would generate less-than-significant impacts associated with water supply and distribution, permanent wastewater conveyance facilities, and demand for electricity and natural gas. Without mitigation, however, significant impacts could occur with respect to demand for interim wastewater conveyance facilities. This potential impact, however, can be reduced to less-than-significant levels with implementation of the

recommended mitigation measure. Mitigation for significant impacts involves developing interim wastewater conveyance facilities in conjunction with the City.

In terms of cumulative impacts, the City is responsible for ensuring that water and wastewater services are adequately provided within its jurisdictional boundaries and that development within the City can be adequately served by electrical and natural gas providers. The City General Plan identifies goals and policies associated with providing water, wastewater, electricity, and natural gas to new development, including many of the related projects identified in this chapter. The 2000 Urban Water Management Plan and City of Manteca Sewer Master Plan provides for all the water and wastewater needs for cumulative City development (see discussion below).

Water Supply

In 2002, the City completed the 2000 Urban Water Management Plan, which plans for the provision of adequate water supply, storage, and delivery for the City. It is assumed that the development of related projects, and/or the development of the additional utility systems required to serve them, would be preceded by the required CEQA review. However, it cannot be assumed that all potential environmental impacts associated with the development of the additional water capacity and infrastructure required to serve these related projects would necessarily be mitigated to less-than-significant levels. Therefore, potentially significant cumulative utilities impacts could occur related to water supply and treatment capacity.

As indicated in the water supply assessment and Table 4.10-2 of this draft EIR, future water supply for the City would consist of groundwater from the City's existing and planned municipal wells and surface water deliveries from the SCSWSP. Groundwater pumping during normal precipitation years would range from 8,600 AFY from 2005 to 22,400 AFY in 2025. Deliveries from the SCSWSP would begin in 2005 and, assuming normal precipitation years, would range from 11,500 AFY in 2005 to 18,500 AFY after development of a subsequent phase. Of the amount available in 2005 from the SCSWSP, 9,400AFY is anticipated to be required for use by the City. It is projected that future water demand (i.e., project plus existing plus future cumulative development) would range from 15,270 AFY in 2005 to 35,000 AFY in 2025. As indicated in Table 4.10-2, future water supply available to the City from groundwater sources and the SSJID SCSWSP would be adequate to meet future water demand during all horizon (2005, 2010, 2015, 2020, 2025) years. Therefore, the URSP and related projects would not result in a significant cumulative impact related to water supply and the project would not result in any cumulatively considerable incremental contributions to any significant cumulative water supply impacts

Wastewater

The City of Manteca Sewer Master Plan (1993) defines sewer facilities required to meet the City's level of service standard with respect to forecasted development. Currently, the City is updating this plan, and anticipated that improvements identified in the updated master wastewater facilities plan would not be available for several years. The project includes

mitigation to develop interim wastewater conveyance facilities in conjunction with the City. It is assumed that the development of related projects, and/or the development of the additional utility systems required to serve them, would be preceded by the required CEQA review. However, it cannot be assumed that all potential environmental impacts associated with the development of the additional wastewater capacity and infrastructure required to serve these related projects would necessarily be mitigated to less-than-significant levels. Therefore, potentially significant cumulative utilities impacts could occur related to wastewater treatment/disposal capacity and the project's contribution to this significant cumulative impact would be cumulatively considerable.

Electricity and Natural Gas

The City obtains its electrical and natural gas supply from the Pacific Gas and Electric Company (PG&E). As evaluated in Impact 4.10-5, the energy demands to be created by the project would not be considered substantial in relation to the total amount of energy supplied. Cumulative development would increase the amount of demand for electrical and natural gas supply. PG&E has acknowledged that it has adequate electricity and natural gas supplies to support the project without affecting service to existing customers. The total amount of energy supplied by PG&E in its northern and central California service area was estimated to be 81,923 million kilowatts per day of electricity and 887 million cubic feet per day of natural gas in 2000. Additional energy is expected to be available as power plants come on line in the future. Therefore, sufficient electricity and natural gas supplies are available to support cumulative development and cumulative electricity and natural gas impacts from the URSP and related projects are considered less than significant.

Public Services

The project would generate an increased demand for solid waste disposal and fire, police, and school services and facilities. These impacts would be less-than-significant for the project. In terms of cumulative impacts, the City and the appropriate service providers are responsible for ensuring adequate provision of public services within their jurisdictional boundaries. At this time, it is unclear whether sufficient police, fire, and school facilities are planned to serve all of the related projects identified earlier in this chapter. It is a City policy to ensure that balanced fiscal resources are available to fund public services for new development. While some of the related projects include proposals for the construction of service facilities, others do not. However, it is clear that sufficient police facilities, fire stations, and schools would need to be constructed to serve the related projects. State law provides that payment of school impact fees constitutes adequate CEQA mitigation for all project-specific and cumulative effects relating to adequacy of school facilities due to residential development.

Although a cumulative shortage of public services and facilities would not represent a significant environmental impact because these are not, strictly speaking, "environmental effects," such a shortage would lead to the need to develop additional public services facilities, which could lead to significant construction- and operation-related environment effects. It is assumed that the development of the related projects, and/or development of the additional

public service facilities required to serve them, would be preceded by the required CEQA review. However, conducting the required CEQA review would not necessarily guarantee that significant environmental effects associated with construction of new fire, police, and school facilities would not occur. Hence, significant cumulative environmental effects associated with the development of new fire, police, and school facilities could potentially occur associated with the cumulative impacts of related projects.

Although the project would not create a significant demand for public services, and although the development of the project would result in less-than-significant impacts for the majority of environmental issues evaluated in this draft EIR, development of the project would result in significant and unavoidable traffic, visual, air quality, noise, and farmland conversion impacts (see Chapter 7). It would also contribute incrementally to significant and unavoidable cumulative traffic, air quality, public services, visual and noise impacts (see Chapter 7). Therefore, the project would result in cumulatively considerable incremental contributions to significant cumulative environmental effects associated with construction and operation of new public service facilities required to serve the project and cumulative development.

TRANSPORTATION AND CIRCULATION

Section 4.4, Transportation and Circulation, of this Draft EIR evaluates both project-specific and cumulative traffic impacts. Project-specific impacts are addressed in the discussion of Existing plus Project scenario. Cumulative impacts are addressed in the Cumulative plus Project scenario, which assumes buildout of the project in combination with cumulative development in the City and the region. Summarizing from Section 4.4, significant cumulative impacts would occur at the Lathrop Road/McKinley Avenue, Airport Way/Yosemite Avenue, Airport Way/AAC North access, Union Road/CMUC North access, and the Lathrop Road/CMUC Center access intersections. All cumulative intersection impacts would be mitigated to less-than-significant levels with the exception of the Airport Way/Yosemite Avenue intersection. No feasible mitigation is available to mitigate the cumulative condition at the Airport Way/Yosemite Avenue intersection. Therefore, this would be a significant cumulative impact and the project's contribution to this impact would be cumulatively considerable.

CULTURAL RESOURCES

Cultural resources in the project region generally consist of prehistoric sites, isolated artifacts, and agricultural features. During the 19th and 20th centuries, intensive agricultural use of the region resulted in the destruction or disturbance of numerous prehistoric sites while many structures now considered to be historic were erected. From the latter half of the 20th century to the present, prehistoric and historic structures have been disturbed and destroyed. During this period, the creation and enforcement of various regulations protecting cultural resources have substantially reduced the rate and intensity of these impacts; however, even with these regulations, cultural resources are still degraded or destroyed as cumulative development in the region proceeds.

Farmsteads and various agriculture-related historic features in the region are relatively common, and continued removal of some of these features does not significantly reduce or eliminate the resource in the region. Prehistoric sites, however, are relatively rare, and cumulative impacts from the loss of these resources in the region increase proportionately as the resource base dwindles.

The results of the cultural resources record searches conducted for the project indicate that no prehistoric cultural resources were identified on the project site. One previously recorded historic railway (CA-SJO-256H) was identified at the eastern boundary of the project site; however, it was determined ineligible for listing on the NRHP. No new archaeological sites were identified within the current project site during field surveys.

The architectural inventory of the project area resulted in the identification of 10 buildings that are at least 45 years old. None of these structures appears to be eligible for listing in the California Register of Historical Resources. Common structures not eligible for listing in the California Register of Historical Resources would be removed during project construction. However, these less important sites are relatively common in the region, and the cumulative loss from this project and other projects would not adversely affect the ability of archaeologists and historians to study and collect data regarding the history and prehistory of the area.

Cultural resources may be found as surveys are conducted at the locations of future projects. Previously undiscovered subsurface cultural resources including human remains might also underlie the URSP area. Mitigation measures are outlined in Section 4.12 of this draft EIR, Cultural Resources, to mitigate impacts on important cultural resources to less-than-significant levels. Implementing these mitigation measures also would ensure that implementing the project would not incrementally contribute to any significant cumulative impacts on important cultural resources in the project region. These measures are fairly standard to ensure compliance with State CEQA Guidelines Section 15064.5 and related provisions of the Public Resources Code, and it is assumed that similar measures would be applied to related projects as appropriate. Where federal agency approvals are required to implement related projects, moreover, additional protection would also be anticipated under the National Historic Preservation Act, which, as commonly implemented by federal agencies, making measures such as those described herein fairly standard as well.

POPULATION, EMPLOYMENT, AND HOUSING

The City is considered to have a housing shortage (vacancy rates below 5%). The excess of housing associated with the project might be considered as assisting in alleviating a citywide cumulative impact. Although the project would contribute housing in excess of the number of employable residents that would be expected to live at the project site, when looked at in conjunction with related current and future housing projects in the City, overall employment opportunities in the City are anticipated to increase.

Population growth, by itself, is not considered a significant cumulative effect because it is not an environmental impact. However, population growth, and related housing and

infrastructure, does lead to conversion of land to other uses, the impacts of which are considered in the appropriate sections of this document.

6 OTHER CEQA-MANDATED SECTIONS

6.1 SIGNIFICANT UNAVOIDABLE IMPACTS

CEQA §21100(b)(2)(A) provides that an EIR shall include a detailed statement setting forth “in a separate section: any significant effect on the environment that cannot be avoided if the project is implemented.” Chapter 4 of this Draft EIR provides a detailed analysis of all potential significant environmental impacts of the URSP project, feasible mitigation measures that could reduce or avoid the project’s significant impacts, and whether these mitigation measures would reduce these impacts to less-than-significant levels. Chapter 5 identified the significant cumulative impacts of the project. If a specific impact cannot be reduced to a less-than-significant level, it is considered a significant and unavoidable impact. Significant unavoidable environmental impacts of the proposed project and cumulative development include:

Impact 4.1-2: Alteration of Land Use and Potential Conflicts with Existing or Future Land Uses Adjacent To the Project Site. Long-term impacts to adjacent offsite land owners and conflicts associated with noise, odor, and dust from agricultural operations are expected to be minimal because the URSP site is bordered by urban, industrial, and public/quasi-public land uses to the south, west, and east, respectively. However, proposed development could be located adjacent to agricultural operations to the north and within the URSP area and implementation of the project could induce the conversion of adjacent agricultural lands to urban land uses. This would be a significant impact.

Mitigation recommended for the project would require participation in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) or the establishment of conservation easements. Recommended mitigation would either be infeasible (conservation easements) or would only partially offset impacts associated with the conversion of farmland resources (participation on SJMSCP). Therefore, full compensation for increased potential for conversion of adjacent farmland to urban uses would not be achieved, and this impact would remain significant and unavoidable.

Impact 4.1-4: Conversion of Farmland to Non-Agricultural Use. Project implementation would result in direct conversion of 530 acres of important farmland to nonagricultural urban use. Conversion of farmland to urban uses would be a significant impact.

While partial mitigation is available in the form of participation in the SJMSCP, no feasible mitigation is available to fully mitigate the loss of Farmland of Statewide Importance and Prime Farmland or the conversion of farmland to non-agricultural uses. This would be a significant and unavoidable impact.

Impact 4.2-3: Degradation of Visual Character. Implementation of the project would substantially alter the visual character of the project site through conversion of agricultural land to developed urban uses. Assessment of visual quality is a subjective matter and reasonable people can disagree as to whether such an alteration in the visual character of the

project site would also be considered a substantial degradation of the visual character. For this analysis, a conservative approach is taken, and the potential for degradation of the visual character of the project site would be considered a significant impact.

Because of the scale and location of the URSP project, there is no feasible mitigation available to address aesthetic resource impacts associated with the conversion of agricultural land to urban development. Although design, architectural, development, and maintenance standards are included in the URSP to ensure that urban development in the plan area remains within certain aesthetic guidelines, there is no mechanism to allow implementation of the project while avoiding the conversion of the local viewshed from agricultural to urban development. Thus, impacts related to the degradation of the local viewshed through conversion of agricultural lands to urban development are considered significant and unavoidable.

Impact 4.3-1: Increases in Regional Criteria Pollutants during Project Construction.

Construction associated with the URSP would result in the generation of NO_x, ROG, and PM₁₀ emissions. Sufficient emissions could be generated during project construction such that applicable air quality standards could be violated, or emissions would contribute substantially to an existing or projected air quality violation at nearby receptors. This would be a significant impact.

Mitigation recommended for the project requires implementation of San Joaquin Valley Air Pollution Control District (SJVAPCD) Basic, Enhanced, and Additional Control Measures, in addition to consultation with the City to determine the applicability of additional mitigation measures. While these actions would substantially lessen impacts resulting from construction emissions, construction activities on a project site the size of URSP (approximately 553 acres) could result in violations of air quality standards or contribute substantially to an existing or projected air quality violation. No other feasible mitigation measures are available to completely reduce this impact to a less-than-significant level. Therefore, this impact would be significant and unavoidable.

Impact 4.3-2: Exposure of Sensitive Receptors to Toxic Air Contaminants. Commercial land uses proposed under the URSP would have the potential to emit toxic air contaminants (TACs). Because the locations of these facilities in relation to sensitive receptors is not known at this time, there is a potential that sensitive receptors could be located in proximity to stationary- or mobile-source TAC emissions in excess of SJVAPCD significance thresholds. This would be a potentially significant impact.

Mitigation recommended for the project requires implementation of SJVAPCD permitting conditions for stationary TAC sources and this measure would reduce stationary TAC impacts to a less-than-significant level. However, mobile-source TACs are a relatively new concern for the California Air Resources Board (ARB), and specific guidelines and practices regarding assessing impacts and providing mitigation are not available. It is also unclear what effects the ARB's new diesel engine emission standards and diesel particulate matter regulations would have on the level of impact and the necessity for, or type of, mitigation. Therefore, the specific conditions of mobile-source TAC impacts cannot be determined at this time. The only

available mitigation—completely separating emission sources (diesel vehicles) from all sensitive receptors—is not feasible. No other feasible mitigation measures are available to reduce or avoid the impact. Therefore, this would be a significant and unavoidable impact.

Impact 4.3-3: Exposure of Sensitive Receptors to Odorous Emissions. The Lovelace Road Solid Waste Transfer Station, which is located approximately 2,800 feet north of the project site, could be source of frequent objectionable odors to proposed onsite receptors. In addition, the use of agricultural chemicals and fertilizers on nearby parcels may also generate odors that could be detectable for brief periods of time at proposed residential dwellings. This would be a significant impact.

Mitigation recommended for the project would require compliance with SJVAPCD permit and nuisance rules related to odors, which would substantially reduce the project's odor impacts, but not to a less-than-significant level. No other feasible mitigation is available at this time to reduce potential odor impacts to a less-than-significant level. Therefore, potential exposure of sensitive receptors to odorous emissions would be a significant and unavoidable impact.

Impact 4.3-5: Increases in Long-Term Regional Emissions. The URSP includes a number of design features that would help to reduce increases in mobile source emissions attributable to the project, including a network of multiuse trails to connect residential areas to local destinations. Although such features help to reduce overall project-generated emissions, buildout of the URSP over the long term would result in regional emissions that would exceed the SJVAPCD's recommended significance thresholds for reactive organic gases (ROG) and nitrogen oxides (NO_x). In addition, because San Joaquin County is currently designated as a nonattainment area for suspended particulate matter 10 micrometers or less in diameter (PM₁₀) and 2.5 micrometers or less (PM_{2.5}), project-generated PM emissions could contribute to existing nonattainment conditions. Therefore, this would be a significant impact.

Mitigation recommended for the project requires that all feasible emission control measures be incorporated into project design and operation. While this would substantially reduce long-term regional emissions, it would not reduce the project's impacts to a less-than-significant level. No other feasible mitigation measure is available that would reduce these impacts to a less-than-significant level. This would be a significant and unavoidable impact.

Impact 4.4-2: Impacts from Stationary Noise Sources Generated by Onsite Land Uses.

Stationary-source noise levels associated with several proposed land uses would result in noise levels that could exceed County or City noise standards at nearby residences. In addition, increases in single-event noise levels, such as backup alarms from material delivery trucks at commercial land uses or amplified sound systems associated with recreational facilities, could result in increased levels of disturbance and sleep disruption for occupants of nearby residential dwellings, particularly during evening, nighttime, and early morning hours. This would be a potentially significant impact.

While partial mitigation is available in the form of compliance with the County and City noise ordinances and General Plan noise policies, noise levels at some noise-sensitive land uses could

potentially exceed local noise criteria, even with implementation of all feasible mitigation measures. No other feasible mitigation is available. This would be a significant and unavoidable impact.

Impact 4.4-3: Impacts to Existing Residences from Project-Generated Traffic Noise.

Predicted existing traffic noise levels at some nearby existing residences, particularly those located along Airport Way north of Lathrop Road, as well as along Union Road north of Lathrop Road, may approach or exceed applicable County and City noise criteria for land use compatibility. This would be a significant impact.

Mitigation recommended for the project would require the preparation an acoustical noise study to identify appropriate noise attenuation measures for the project. These measures could include construction sound walls and berms, relocation of some land uses, or structural retrofit of onsite buildings. However, it unknown at this time whether recommended measures would reduce noise levels below applicable County and City noise criteria thereby reducing this impact to a less-than-significant level. This would be a significant and unavoidable impact.

Impact 4.4-4: Impacts to Proposed Land Uses from Projected Project Noise Levels. Future plus project traffic noise levels at residences that would be constructed at the project site could exceed the City noise standard for land use compatibility. Agricultural activities near the boundaries of the URSP project site include the use of various types of heavy equipment. Depending on the duration and time of day when these activities occur and distance from the source, the operation of heavy agricultural equipment could result in or contribute to noise levels at nearby noise-sensitive receptors in excess of the County's exterior noise standard for land use compatibility.

Mitigation recommended for the project would require the preparation an acoustical noise study to identify appropriate noise attenuation measures for the project. These measures could include construction sound walls and berms, relocation of some land uses, or structural retrofit of onsite buildings. However, it unknown at this time whether recommended measures would reduce noise levels below applicable County and City noise criteria thereby reducing this impact to a less-than-significant level. This would be a significant and unavoidable impact.

Impact 4.11-1: Increases in Peak Hour Traffic Volumes on Regional Roadways. Traffic modeling results indicate that the Lathrop Road/I-5 southbound ramp intersection currently operates at an unacceptable level of service, LOS F, during the p.m. peak hour and traffic from the URSP project would contribute to existing LOS F conditions at this intersection. This would be a significant impact.

Mitigation recommended for the project requires installation of a traffic signal at this intersection. Although installation of a traffic signal would improve the LOS at this intersection to satisfactory conditions, construction of this improvement is dependent on participation in City of Lathrop and San Joaquin County fair-share funding programs, which

are not subject to the control of the project applicant or the City of Manteca. It is uncertain at this time whether the mitigation improvements would be implemented. If recommended measures were not implemented, this would be a significant and unavoidable impact of the project.

Impact 4.11-3: Increased Traffic Resulting from Vehicle Trips under Cumulative (Future Plus Project) Traffic Conditions (2025). The project would result in LOS levels at the intersection of Yosemite Avenue/ Airport Way that exceed the City of Manteca's LOS thresholds under cumulative conditions. This would be a significant impact.

Mitigation for this impact would require the construction of additional lanes at this intersection above and beyond those already called for in the City of Manteca General Plan. Roadway easements that would accommodate additional lanes are not available and/or feasible to obtain. Therefore, no feasible mitigation measures are available to reduce this impact to a less-than-significant level. This would be a significant and unavoidable impact.

Impact 4.11-9: Impacts to Alternative Transportation – Bus Transit Services. Implementation of the URSP project would generate a need for public bus transportation services. Because no bus routes are currently available to serve the project and none are proposed under the URSP, this would be a significant impact.

Mitigation improvements to provide bus transit services to the URSP project residents are under the jurisdiction of the SJRTD and not under the control of the City of Manteca. It is uncertain at this time whether the mitigation improvements would be implemented. If bus services were not provided to project residents, this would be a significant and unavoidable impact of the project.

6.2 CUMULATIVE IMPACTS

As indicated in Chapter 5, Cumulative Impacts, implementing the URSP would result in direct and indirect cumulatively considerable incremental contributions to significant cumulative impacts related to transportation and circulation, air quality, noise, land use conflicts, conversion of important farmland, aesthetic resources, odor, and cultural resources. No additional feasible mitigation is available for the cumulative impacts identified. Because these impacts are a product of cumulative growth, and because no feasible mitigation is available to reduce these impacts to less-than-significant levels, these significant impacts cannot be avoided and thus represent significant and unavoidable adverse impacts.

6.3 GROWTH-INDUCING IMPACTS

6.3.1 Introduction

According to §15126.2(d) of the California Environmental Quality Act (CEQA) Guidelines, an environmental impact report (EIR) must discuss the growth-inducing impacts of the project. Specifically, CEQA states that the EIR shall:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in any of the following:

- ▶ substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- ▶ a construction effort with substantial short-term employment opportunities that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; and/or
- ▶ removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may foreseeably lead to environmental effects. These environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, or conversion of agricultural and open space land to urban uses.

6.3.2 Summary of City of Manteca General Plan EIR Analysis of Growth-Inducing Impacts

The URSP area was first designated for eventual urban development as part of the City of Manteca 2023 General Plan adopted in 2003. The URSP area is identified as being partially

within the City's sphere of influence, but is outside the city limits and designated for residential and commercial development. The schematic diagram of the City General Plan shows that the project site would consist of low density and commercial mixed use land uses in the same general pattern and areas as what is proposed in the URSP. A maximum of approximately 5,000 housing units could be accommodated in this area under the current general plan residential designations. Development in commercial mixed-use area is intended to consist primarily of high density residential, employment centers, retail commercial, and professional office uses. The Growth-Inducing Impact analysis in the City General Plan EIR considers overall development of the Manteca General Plan, including the area covered by the URSP.

6.3.3 Growth-Inducing Impacts of the Project

The URSP area is identified as being partially within the City's sphere of influence, but is outside the city limits. Project approval and implementation would require annexation of the URSP area into the City. As discussed above, the City General Plan identifies primarily residential and commercial uses in the URSP area. The URSP includes similar land uses as the City General Plan, and the proposed densities are similar to or lower than previously considered uses in the City General Plan. The URSP would allow up to 2,301 dwelling units (approximately 2,699 fewer than the maximum allowed under the City General Plan) and approximately 38 acres of commercial land uses (consistent with City designations),

Although there are differences from the City's General Plan designations for the URSP, many aspects of the URSP project are consistent with the General Plan and other City planning documents and the overall development potential is similar, as discussed below.

Roadways providing access to and throughout the URSP area would consist of existing roads, improved roads along existing roadway alignments, as well as new roads. The project would develop and/or improve the road network in the URSP area. However, these roadways would not provide new access or substantially enhanced access to currently undeveloped areas. Therefore, the URSP roadway network is not considered growth inducing. The project would be served by the I-5/Lathrop Road interchange. Improvements to this interchange and associated underpasses are planned for in the City of Lathrop Capital Facility Fee program. Although these improvements would also serve the URSP area, they would not be considered growth inducing because these roadway and interchange improvements would be constructed to serve development that is already approved by the City of Lathrop or underway.

Currently, there are no public storm drain facilities that serve any properties in the URSP area. A formal stormwater management system is proposed for the URSP area that would include a series of pipes, pumps and detention facilities to serve the project. Construction of the stormwater conveyance facilities serving the URSP area would not be intended to serve other development outside the plan area, and therefore would not be growth inducing.

The URSP area is currently served by domestic wells. The URSP project includes plans for the installation of two municipal groundwater wells that would provide 1,800 gallons per minute capacity and would ultimately be integrated into the City's conjunctive use water supply

system. The capacity of these wells could only serve the proposed URSP development without importation of surface water and therefore would not be able to serve additional growth. Therefore, construction of these facilities would not be growth inducing.

All properties in the URSP area are currently served by septic systems; there are no connections to the municipal wastewater system. The project would construct the necessary facilities to connect development within the URSP to the City's wastewater and conveyance system. The project would not require the expansion of the existing capacity of the City's wastewater system and would not serve development outside the project site. Therefore, construction of these facilities would not be growth inducing.

The project would involve a substantial construction effort over a 7-year period that during peak periods would bring up to 200 construction workers to the project site on a daily basis. Because construction workers typically do not change where they live each time they are assigned to a new construction site, it is not anticipated that there would be any substantial relocation of construction workers to the City of Manteca associated with the project. The existing number of residents in the City and County who are employed in the construction industry would likely be sufficient to meet the demand for construction workers that would be generated by the project. Therefore, no substantial increase in demand for housing or goods and services would be created by project construction workers, and thus no growth inducement associated with these workers would occur.

The URSP project would include the development of up to 2,301 residential units with an estimated population of 5,150. Although the project includes the provision of commercial and retail services, onsite services would meet only some of the needs of the project population. The additional population associated with the project would spur an increase in demand for goods and services in the City and region, which could potentially result in additional development to satisfy this demand. In this respect, the project would be growth inducing. It would be speculative, however, to try to predict exactly where any such new services would locate. The most logical assumption, however, is that they would locate where the existing general plans of Manteca and other nearby jurisdictions currently anticipate them. Those general plans have already undergone environmental review; and any new individual projects requiring discretionary approvals would undergo their own environmental review if of a scale that warrants environmental review.

Land for the development of a fire station has been provided as part of the URSP. The fire stations would be constructed in the northernmost portion of the project site along Union Road when response times reach a level that requires the additional service. Police, animal control, and other City services would be expanded only as necessary to meet project demand. Therefore, with respect to public services, the project would not facilitate additional development because the project would not create additional public service capacity in the City.

The land directly north of the URSP area is outside the City of Manteca's sphere-of-influence boundary and is located in the jurisdiction of San Joaquin County. It is designated in the

County General Plan as an agricultural land use. Because of this designation and its location outside the City's sphere-of-influence, the intended long-term use of this property is for agriculture. As the URSP develops, especially along its northern edge, it would place urban development adjacent to agricultural land. Historically, this type of land use pattern results in conflicts between the ongoing agricultural operations and the urban development uses. Further, economic returns from urban development are typically substantially higher than continued agricultural use of land, and encroaching urban uses typically make attractive the conversion of adjacent agricultural land to urban uses. Thus, it can be expected that the URSP would place pressure on agricultural land to the north of the site to convert to urban uses.

Conversion of these lands to urban uses is not consistent with the long-term planning for the area. This potential conversion of agricultural land to an urban use, and the related loss of agricultural land, loss of biological habitat, additional traffic generation and air and noise impacts is a potential growth-inducing impact of the project. However, development in this area would require the extension of unplanned infrastructure (water, wastewater) which may or may not be available. Further, because it would require San Joaquin County to amend its general plan, such a land use conversion is not assured. Thus, although development of the URSP, despite not providing any direct infrastructure linkages to the area, may contribute to possible long-term economic pressure for the eventual filing of applications for general plan amendments and/or other discretionary approvals in the area north of the URSP, the responses of future elected bodies to such applications cannot be predicted, making it impossible to conclude that the long-term urbanization of this northern area would be a reasonably foreseeable indirect effect of the URSP. (See State CEQA Guidelines §15358 [defines "effects" for purposes of CEQA as including "[i]ndirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still *reasonably foreseeable*"] [emphasis added].) It would therefore be premature to require the proponents of the URSP to bear the burden of attempting to prevent the eventual development of such areas through mechanisms such as the purchase of conservation easements in the northern area, even assuming that the current landowners would be willing sellers. Any such easements, in any event, might have the effect, in the very long term (i.e., beyond current general plan planning horizons), of limiting future elected bodies' options as to how to deal with population growth in the greater metropolitan area of which the City of Manteca is a part. Decades from now, that area might appear to be one of the least environmentally damaging areas into which an expanding population base can be directed.

Overall, the URSP project would be growth inducing because the increased population associated with the project would increase demand for goods and services, thereby fostering population and economic growth in the City of Manteca or nearby communities. It can be expected that a successful URSP project would place pressure on adjacent areas to the north to seek development entitlements. As explained above, however, it would be speculative to assume that these areas would in fact develop with urban uses, and numerous discretionary actions subject to environmental review and political considerations would have to be granted before any such urban uses could materialize. In summary, much of the growth that the

project would induce has been evaluated and provided for in the City General Plan and other city documents.

6.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA §21100(b)(2)(B) provides that an EIR shall include a detailed statement setting forth “in a separate section: any significant effect on the environment that would be irreversible if the project is implemented.” The guidelines offer the following for analyzing the significant irreversible changes of a project:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible because a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The 553-acre URSP development project would consume electricity, gasoline, and water for both residential and commercial project operations. Short-term consumption of electricity and gasoline for operation of stationary equipment and mobile sources (i.e., automobiles, trucks) during construction are also expected. Long-term operational energy and natural resource consumption is expected to be significant, although it would not exceed the capacity of energy suppliers to meet local demand once the new infrastructure is in place. Construction activities would not result in inefficient use of energy or natural resources. Construction contractors selected would use best available engineering techniques, construction and design practices, and equipment operating procedures.

Because implementation of the URSP project would result in substantial long-term consumption of energy and natural resources, these potential irreversible changes would be significant.

Further, the project would result in the conversion of agricultural land to urban residential land uses. As described in Section 6.1, Significant Unavoidable Impacts, this would be a significant and unavoidable irreversible environmental change.

7 ALTERNATIVES TO THE PROJECT

State CEQA Guidelines §15126.6(a) requires an evaluation of “a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects, and evaluate the comparative merits of the alternatives.” The project objectives are stated in Section 3.3, Project Objectives, of this Draft EIR. Alternatives are used to determine whether or not a variation of the project would reduce, or eliminate, significant project impacts, within the basic framework of the objectives. State CEQA Guidelines §15126.6(f) specifies that the range of alternatives is governed by the “rule of reason,” requiring evaluation of only those alternatives “necessary to permit a reasoned choice.” Further, an EIR “need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative” (State CEQA Guidelines §15126.6(f) (3)).

State CEQA Guidelines §15126.6(e) requires that, among other alternatives, a “no-project” alternative be evaluated in comparison to the project. State CEQA Guidelines §15126.6(e) requires that the no-project analysis “discuss the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with the available infrastructure and community services.” Accordingly, a no project alternative that assumes continuation of the existing land uses is analyzed in this Draft EIR.

Other alternatives considered and evaluated in detail include a Mitigated Design Alternative and an Offsite Alternative. Descriptions of project alternatives are provided below. The advantages and disadvantages of each, compared to the project, are presented and an evaluation of each alternative’s ability to meet most of the project’s basic objectives is included. Any significant environmental impacts created exclusively by an alternative are also identified. Finally, a summary of the impacts for each resource area, as compared to the project, is provided at the end of each discussion (i.e., less, greater, or similar).

A more detailed description of the baseline conditions, evaluation methodology, and results are included in Chapter 4 of this Draft EIR and in technical reports prepared as part of the evaluation.

7.1 SUMMARY OF ENVIRONMENTAL CONSTRAINTS

The purpose of this section is to summarize the site-specific environmental constraints, as identified and discussed in Chapter 4, Existing Conditions, Thresholds of Significance, Environmental Impacts, and Mitigation Measures, of this Draft EIR. These site-specific environmental constraints, if not avoided through either project design or mitigation, could result in significant or potentially significant environmental impacts.

Potential site-specific environmental constraints include direct and indirect conversion of important farmland, noise impacts, potential jurisdictional wetlands, sensitive biological species, air quality impacts, impacts to the visual character of the site, traffic impacts, potential

impacts to cultural and paleontological resources, and potential conflicts with adjacent agricultural land uses. These constraints and their effects on the range of alternatives were considered in the analysis of alternatives.

The project would result in the following significant and unavoidable impacts:

- ▶ **Important Farmland.** The project would result in the conversion of 530 acres of important farmland to urban uses and could induce farmland conversion in areas north of the site (discussed in Section 4.1);
- ▶ **Visual Quality.** The project would convert what is currently an agricultural site into an urban development that would substantially change the landscape character (discussed in Section 4.2);
- ▶ **Air Quality.** Project construction-related air emission contributions would exceed the San Joaquin Valley Air Pollution Control District standards, sensitive receptors could be exposed to project-related toxic air contaminants and odorous emissions, and the project would contribute to long-term regional air quality emissions (discussed in Section 4.3);
- ▶ **Noise.** Single-event noise levels at residential uses within the commercial mixed-use (CMU) areas would exceed noise thresholds, existing noise-sensitive receptors would be exposed to project-generated traffic noise impacts, and ongoing continuing adjacent agricultural operations may contribute to excessive noise levels at the project site (discussed in Section 4.4); and
- ▶ **Traffic.** Necessary roadway improvements to the Lathrop Road/I-5 southbound ramp interchange and provision of bus transit services are not under the control of the City of Manteca, and improvements to the Airport Way/Yosemite Avenue intersection above and beyond those already called for in the City of Manteca General Plan are not feasible (discussed in Section 4.11).

The potential for the alternatives to avoid or reduce the project's significant and unavoidable impacts was considered in the analysis of alternatives.

7.2 NO PROJECT ALTERNATIVE—CONTINUATION OF EXISTING CONDITIONS

The No Project Alternative—Continuation of Existing Conditions assumes that existing conditions at the project site remain. This means that the project site would continue existing agricultural operations including grazing, orchards, and row crop farming. No new facilities would be constructed. The project site would remain under the jurisdiction of San Joaquin County, and partially within the Sphere of Influence of the City and County. Although both the City and County General Plans foresee development in this area, this analysis uses existing conditions as the “no project” scenario to allow consideration of a full range of alternatives. Although this alternative is evaluated herein, it is an unlikely long-term alternative for the URSP area because of the urban land use designations in the City and County General Plans. In short, given the City and County General plan designations for urban development, future

development interest in the site is extremely likely. However, it is too speculative at this time to determine and evaluate the types of facilities and operations that could be located on the project site under a different development scenario.

Consistent with CEQA requirements, the No Project Alternative is evaluated in this EIR. The No Project Alternative would not meet any of the objectives of the project and would not be consistent with the intent of the City's General Plan, which calls for development of residential and commercial land uses.

7.2.1 ENVIRONMENTAL ANALYSIS

LAND USE

Under the No Project Alternative the URSP land uses would remain unchanged and land use impacts would be less than significant. Because no new development would occur, this alternative would not require annexation to the City and would continue to be subject to the County's jurisdiction. This alternative would eliminate the project's significant and unavoidable important farmland conversion impact because no development would occur and this alternative would also remove the project's potential to induce farmland conversion in areas north of the project site (also a significant and unavoidable impact). *[Less]*

VISUAL RESOURCES

Under this alternative, no new development would occur. Thus, there would be no alteration in the visual character of the project site, views of the URSP site from surrounding areas would be unchanged, and no new sources of light and glare would be created. By comparison, the project would substantially change the local viewshed. This impact is considered significant and unavoidable, although it is a subjective topic. This impact would not occur under the No Project Alternative. *[Less]*

AIR QUALITY

The No Project Alternative would not include any new development, and thus would not generate new construction or operations-related emissions. The project would result in significant and unavoidable impacts related to construction emissions, increases in stationary and mobile-source toxic air contaminants (TACs), and long-term regional emissions. Implementation of the No Project Alternative would not result in these significant and unavoidable impacts, but would generate dust (PM₁₀) through continued cultivation. Nevertheless, this alternative would result in less air quality impacts than the project. *[Less]*

NOISE

Under the No Project Alternative, no new construction would occur, no new noise-generating land uses would be developed, and no additional traffic would be generated. Therefore, there would be no increase in potential noise conflicts under this alternative. By comparison, the project would result in significant and unavoidable impacts related to single-event noise, traffic

noise, and stationary noise at adjacent land uses. Implementation of the No Project Alternative would not result in these significant and unavoidable impacts; therefore, this alternative would result in less noise impacts than the project. *[Less]*

BIOLOGICAL RESOURCES

This alternative would not include any development in the URSP area or the construction of offsite facilities, and would thus not disturb any existing onsite species or habitat. The URSP would be retained in its existing agricultural uses and would continue to provide the same type, extent, and quality of habitat. By comparison, the project would develop the site with urban uses, resulting in significant and potentially significant impacts on sensitive and special-status plant, invertebrate, and animal species, trees, and waters of the United States. These impacts would be reduced to less-than-significant levels after mitigation. *[Less]*

HAZARDS AND HAZARDOUS MATERIALS

Under the No Project Alternative no new development would occur; therefore, no new facilities that use hazardous materials (e.g., dry cleaners, gas stations) would be located in the URSP area, and no new residents, workers, or visitors would have the potential to be exposed to existing or new sources of hazardous materials on the site. The use of hazardous substances (e.g., herbicides and pesticides) by the existing agricultural operations would continue; however, it is assumed that during the use of these materials, existing application, storage, and disposal regulations would continue to be followed. By comparison, the project would result in increased storage, use, and transport of hazardous materials during construction and operation of project facilities. There would be increased potential for construction workers, residents, and visitors to be exposed to hazardous materials at existing and new contaminated areas in the URSP area. However, all these effects are considered less than significant either before or after mitigation through adherence to applicable regulations and appropriate testing and clean-up of potentially contaminated sites. Because no significant impacts related to hazardous materials and public health were identified for the project, the No Project Alternative would not reduce or avoid any significant impacts related to this issue area.

[Similar]

GEOLOGY, SOILS, AND SEISMICITY

The No Project Alternative would not include any new construction activities and existing buildings and other facilities would remain in their current state in the URSP area. Therefore, there would be no construction-related erosion potential and no potential increase in risk of exposure to injury or property damage because of a seismic event.

By comparison, the project would result in significant impacts related to seismic ground shaking, and soil erosion. However, all impacts would be reduced to less-than-significant levels after mitigation. Because the project would not result in any significant impacts related to geology, soils, and mineral resources after mitigation, the No Project Alternative is considered to have similar impacts to the project. *[Similar]*

PALEONTOLOGICAL RESOURCES

The project has the potential to uncover previously unknown paleontological resources. This impact can be mitigated to a less than significant level. Because the No Project Alternative does not involve any construction activities, no potential impacts to paleontological resources would occur. *[Less]*

HYDROLOGY AND WATER QUALITY

Under the No Project Alternative, no new construction would occur; therefore, there would be no potential construction related releases of sediment and contaminants into surface waters and groundwater. Mitigation is proposed in this Draft EIR to reduce these impacts to a less-than-significant level. Because the URSP area would not be developed under this alternative, existing drainage from agriculture would occur during storm events. As discussed in Section 4.8, existing stormwater runoff from the site results in transport to the San Joaquin River of a variety of pollutants associated with agricultural practices. Under the project, various stormwater pollution prevention devices/best management practices would be implemented, which would result in substantially better overall water quality during storm events than under No Project Alternative conditions. Thus, local waterway (i.e., San Joaquin River) water quality would be improved under the project, in comparison to existing conditions and the No Project Alternative. This alternative also would not require the construction of the two groundwater wells proposed under the project, and would not result in any impacts to groundwater. These impacts are mitigated to less-than-significant levels under the project.

Because the project would not result in any significant impacts related to hydrology and water quality after mitigation, and because beneficial impacts associated with the project would not occur under the No Project Alternative, this alternative is considered to have greater impacts than the project. *[Greater]*

PUBLIC SERVICES AND UTILITIES

The No Project Alternative would not include any new development. Therefore, this alternative would not generate increased demand for fire, police, school, or solid waste disposal services, utilities (i.e., gas, electric, and water), and it would not potentially obstruct access by emergency vehicles because of construction activities. By comparison, the project would include 2,301 new dwelling units. This would create significant demands for fire, police, and school services and facilities. Increased demand for solid waste disposal services was not considered significant for the project because the receiving landfill has ample capacity to support the project. The significant public services impacts associated with the project (i.e., interim wastewater conveyance capacity) would be reduced to less-than-significant levels through implementation of recommended mitigation measures. Because the project would not result in any significant public services impacts after mitigation, the No Project Alternative would not reduce or avoid any significant impacts related to this issue. However, the project would create an incremental increase in service demand that would not occur under the No Project Alternative. *[Less]*

TRANSPORTATION AND CIRCULATION

The No Project Alternative would not include any new development and thus would not generate any new traffic-related impacts. By comparison, the project would generate more than 22,919 daily trips and would significantly affect several intersections and roadways. After mitigation, significant and unavoidable impacts would still occur at some intersections. However, the project with mitigation would improve the operation of some intersections that are currently operating unacceptably. Regardless, implementation of the No Project Alternative would avoid the project's contribution to adverse conditions at these intersections, although cumulative development outside the URSP area also would result in many of these impacts. *[Less]*

CULTURAL RESOURCES

The No Project Alternative would not require any construction activities, thereby avoiding impacts related to the disturbance, destruction, and physical or visual alteration of any previously undiscovered/unrecorded cultural resource sites. Under the project, ground disturbance and development of new structures would occur, resulting in potentially significant impacts related to the potential disturbance of undiscovered/unrecorded subsurface archaeological sites and human remains. These impacts would be reduced to less-than-significant levels after mitigation. However, because the No Project Alternative does not include any new development or ground disturbance, it has a lesser potential to result in the disturbance of previously undiscovered subsurface archaeological resources and/or human remains. Therefore, cultural resources impacts would be slightly less under this alternative. *[Less]*

POPULATION AND HOUSING

The No Project Alternative would not generate any new residents, jobs, or homes in the City of Manteca. By comparison, the project would result in limited population growth associated with construction activities; population growth consistent with what would be expected in the General Plan. No significant impacts related to population and housing were identified for the project, so the No Project Alternative would not reduce or avoid any significant impacts associated with the project. *[Similar]*

7.2.2 SUMMARY

The No Project Alternative would result in greater impacts than the project in one issue area, lesser impacts in 9, and similar impacts in three. Significant unavoidable impacts related to traffic, air quality, noise, agricultural resources, terrestrial biology and aesthetic resources associated with the project would not occur under this alternative.

7.3 MITIGATED DESIGN ALTERNATIVE

The Mitigated Design Alternative is designed to avoid or reduce several of the environmental impacts identified for the project including minimizing impacts to farmland, noise

compatibility, air quality, traffic, sensitive habitats and species, and cultural resources. With this alternative, a reduced density development would be implemented in a reduced portion of the project site.

In general, this alternative would avoid development of the areas of the project site that are west of Union Road (Exhibit 7-1). Based on review of SJVAPCD thresholds, a potential mitigated development option would be to eliminate Commercial Mixed-Use (CMU) areas from the site, and restrict the number of housing units to 460. This would be a substantial reduction in the scope and size of the project. At this level of development, it is anticipated that the project's long-term criteria air pollutants would be below applicable significant thresholds and would eliminate the project's significance and unavoidable air quality impacts. It should be noted that a variety of development patterns (i.e., residential/CMU) could be developed under this alternative; however, the development intensity could only be at a level that would generate emissions comparable to a 460-unit residential development. For purposes of this analysis, a 460-unit residential development is assumed. All development would be concentrated east of Union Road to avoid significant impacts to freshwater marsh. This alternative would result in the development of 460 active adult single-family housing units onsite, 20% of the total proposed. In general, the pattern of land uses under this alternative would be substantially similar to the pattern of land uses proposed for the project east of Union Road.

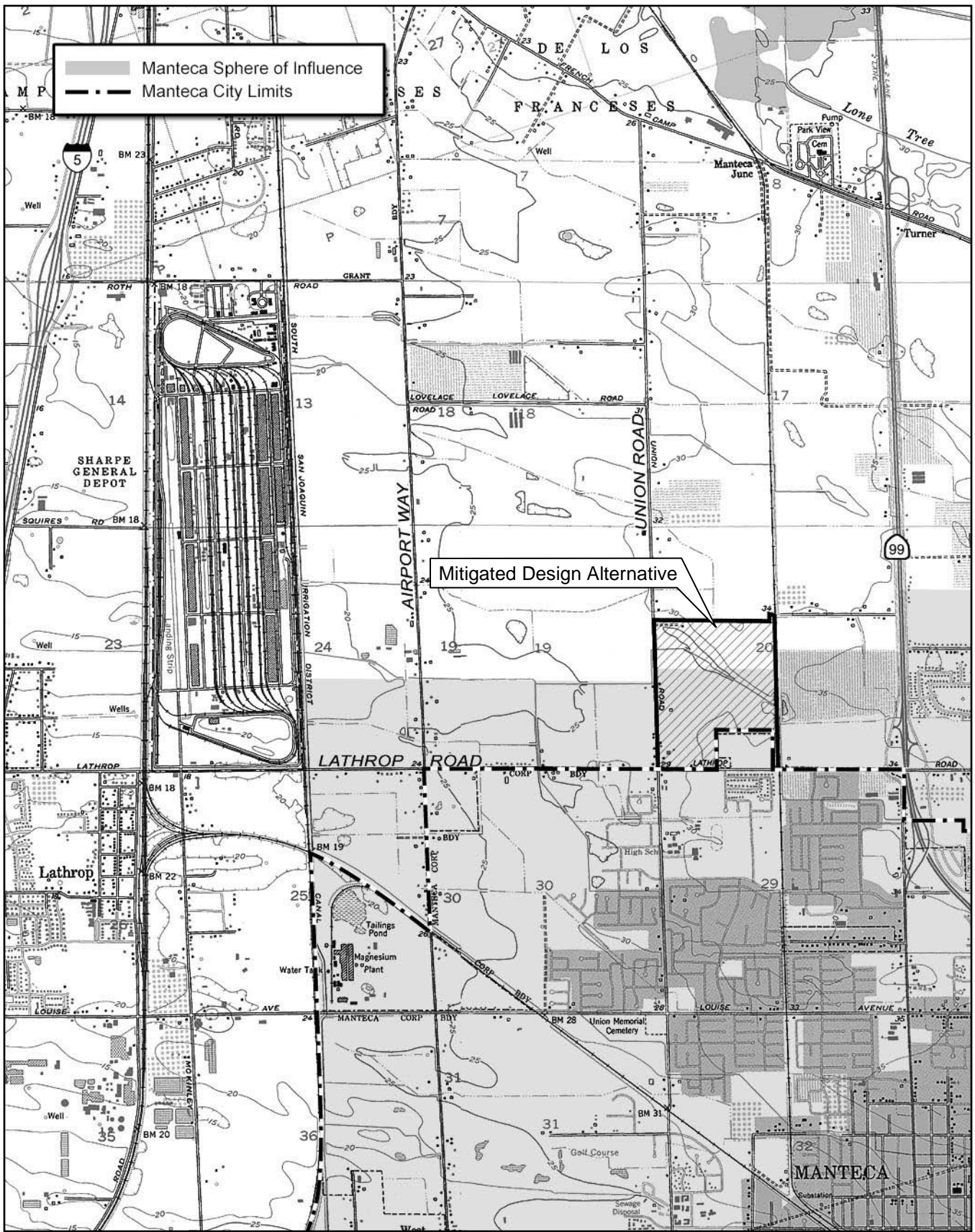
Proposed infrastructure and facilities that would serve the development (i.e., roadways, drainage, parks, etc.) would be similarly reduced. All existing site structures in the area where construction would occur would be demolished and removed from the site. Access to the proposed development would be provided from Union Road. Park access would be provided from the interior of the project site. Site landscaping and setbacks would be in accordance with applicable City guidelines.

The Mitigated Design Alternative would partially meet project objectives by providing a development that is consistent with land use patterns envisioned by the City's General Plan on a portion of the site and at a reduced scale. However, the Mitigated Design Alternative would not be consistent with the project objective to provide a range of housing types, and because of its substantially reduced size, it may be economically infeasible to develop a project of this size and the ability to provide certain amenities essential to this type of project may be curtailed.

7.3.1 ENVIRONMENTAL ANALYSIS

LAND USE

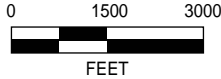
This alternative would also substantially reduce the acreage of important farmland (111 acres versus 530 acres) that would be developed onsite. However, because urban development would occur onsite, pressures for the conversion of farmland to the north of the site would likely remain, which is a significant and unavoidable impact. By comparison, the project would result in the conversion of up to 530 acres of agricultural land. Mitigation would be provided through participation in the SJMSCP, which would result in agricultural land being preserved elsewhere in the County. However, these mitigation measures would not be sufficient to reduce the



Source: U.S.G.S. Lathrop and Manteca Quad 1952 (revised 1994) -- Contour Interval 5 Feet

Mitigated Design Alternative

EXHIBIT 7-1



impacts to less-than-significant levels. Therefore, these impacts are considered significant and unavoidable. An additional impact resulting from potential conflicts between agricultural operations and nearby development is considered less than significant after mitigation.

Although this alternative would reduce the amount of important farmlands developed onsite, some important farmlands would still be developed, and mitigation is not available to reduce this impact to a less-than-significant level. Although this alternative would result in a significant and unavoidable impact related to conversion of farmland, impacts would be less than the project because of the reduced acreages that would be converted. *[Less]*

VISUAL RESOURCES

Under the Mitigated Design Alternative, there would be the same alteration of the views, but at a reduced scale, of the URSP area from surrounding lands, including SR 99 and local roadways. This impact was identified as significant and unavoidable for the project. With this alternative, the impact would also be considered significant and unavoidable because the viewshed would be substantially changed from existing conditions, similar to what would occur with the project. Lighting would be slightly less under this alternative, but lighting impacts were not identified as significant project impacts. Overall aesthetic resources impacts would still be reduced under this alternative for the reasons described above. *[Less]*

AIR QUALITY

Both the Mitigated Design Alternative and the project would result in development of the URSP area and the generation of associated construction- and operations-related air emissions. This alternative would produce approximately 4,400 daily vehicle trips, approximately 20% of the number of trips generated by the project. Overall air emissions would be less under the Mitigated Design Alternative because of the reduced development, project population, and vehicle trips. The reduction in development size would reduce air emissions by an estimated 80% compared with the project. Less-than-significant air quality impacts identified for the project related to odors and local mobile source carbon monoxide (CO) concentrations would be reduced under this alternative.

Impacts associated with construction emissions, stationary- and mobile-source toxic air contaminants (TAC), and long-term regional emissions are considered significant and unavoidable under the project, although mitigation measures would substantially lessen these impacts. Construction emissions would need to be substantially reduced to the point where very little grading would be allowed at any time, to reduce construction emissions to less-than significant. This alternative would develop land uses that would result in emissions that are below SJVAPCD thresholds. Therefore, this alternative would eliminate the project's significant unavoidable long-term regional emissions impacts. Impacts associated with stationary- and mobile-source TACs also would be considered significant and unavoidable under the project but would be reduced by this alternative because of the substantial reduction in development. Overall emissions would be substantially less than under the project, and this alternative would eliminate the project's significant and unavoidable impacts to air quality. *[Less]*

NOISE

Both the Mitigated Design Alternative and the project would result in temporary noise generated by construction activities; development of various noise generating land uses; increases in traffic noise; and development of sensitive receptors that would be exposed to existing or project generated noise levels exceeding City standards. Given the relative level of traffic (20% of project), compared with the project, traffic noise would be substantially reduced. After mitigation, under both scenarios, residual significant noise impacts would remain related to incompatibility between some project land uses and projected onsite exterior noise levels. However, this impact would be less under the Mitigated Design Alternative because with an 80% reduction in residential development there would be fewer sensitive receptors overall. Although the Mitigated Design Alternative does not avoid this significant and unavoidable impact, it does reduce the effects relative to the project. *[Less]*

BIOLOGICAL RESOURCES

Both the project and the Mitigated Design Alternative would develop large portions of the project site, resulting in significant and potentially significant impacts on sensitive and special-status plant, invertebrate, and animal species. However, these impacts would be reduced under this alternative through retention of more than half of the project site in undeveloped uses. Further, because of its location, this alternative would avoid the projects significant impacts to waters of the United States.

Significant and potentially significant biological resources impacts for both the project and the Mitigated Design Alternative would be reduced to less-than-significant levels through participation in the SJMSCP. No significant biological resource impacts were identified for the project after mitigation, so this alternative would not reduce or avoid any significant cultural resource impacts of the project. *[Similar]*

HAZARDS AND HAZARDOUS MATERIALS

The project would result in impacts related to the use of hazardous materials during project construction and operation; the potential exposure of construction workers, residents, and visitors to existing sources of hazardous materials during project construction and operation. All these impacts are considered less than significant, or less than significant after mitigation. These same impacts would occur under the Mitigated Design Alternative, although to a slightly lesser degree because of the reduced development area and population size. *[Less]*

GEOLOGY, SOILS AND SEISMICITY

Under the Mitigated Design Alternative there would be a reduction in project development; therefore impacts related to construction erosion and risks from seismic and soil hazards would be reduced. This alternative would include the same mitigation measures as the project; therefore, post mitigation impacts would not change (less than significant).

All impacts related to geology, soils, and mineral resources are considered less than significant, or less than significant after mitigation under the project. However, overall earth resources impacts are considered less for this alternative for the reasons described above. *[Less]*

PALEONTOLOGICAL RESOURCES

The project has the potential to uncover previously unknown paleontological resources. This impact can be mitigated to a less-than-significant level. Because the Mitigated Design Alternative would result in less ground disturbance, there is a lesser potential to uncover previously unknown paleontological resources. *[Less]*

HYDROLOGY AND WATER QUALITY

Under this alternative, approximately 80% of the site would not be developed under this alternative, so total runoff would be less. However, detention facilities would still be appropriately sized for the level of development proposed, so onsite and offsite impacts (San Joaquin River downstream) would be similar to those of the project, which results in a less-than-significant impact. The portion of the site not developed with urban uses would continue under agricultural operations and could transport to the San Joaquin River of a variety of pollutants associated with agricultural practices. This alternative would require the construction of at least one groundwater well (compared to 2 under the project) to serve the development. Therefore, this alternative would result in similar impacts to local groundwater wells and groundwater quality, although to a lesser degree. This was a less-than-significant impact (after mitigation) under the project and would be the same under the Mitigated Design Alternative. By comparison, the project would improve stormwater quality across the entire site through the implementation of stormwater BMPs and would minimize agricultural discharges to downstream water bodies compared to this alternative.

All hydrology and water quality impacts identified for the project are considered less than significant either before or after mitigation. Therefore, the Mitigated Design Alternative would not avoid any significant impacts. This alternative would result in greater discharges of agricultural pollutants to downstream water bodies; therefore, this alternative would result in greater hydrology and water quality impacts than the project. *[Greater]*

PUBLIC SERVICES AND UTILITIES

With the Mitigated Design Alternative, public utilities demands would be less. Potable water demands are estimated to be 494 acre-feet per year, 20% of the total project demand. Impacts to police, fire, and school services, wastewater conveyance, stormwater/surface runoff management, and demand for electricity and natural gas would be less than the project, but, like those of the project, would be less-than-significant or less-than-significant after mitigation. No significant public services or utilities impacts were identified for the project after mitigation, so this alternative would not reduce or avoid any significant public services or utilities impacts of the project. However, impacts would be substantially reduced. *[Less]*

TRANSPORTATION AND CIRCULATION

The Mitigated Design Alternative would result in development of 460 housing units, which is substantially less than the number of units under the project. At buildout, the project would result in significant and unavoidable impacts at 2 roadway intersections. Buildout of the project would contribute a higher level of traffic in the project area. Because this alternative would locate development in the eastern portion of the project site adjacent to Union Road, access to the site would be provided solely by Lathrop Road and Union Road. Therefore, a new roadway intersection along Airport Way would not be required and site access impacts along this roadway would not occur. Impacts to area roadways would be substantially reduced.

This alternative would result in the development of a new community that would create demands for public transit services (i.e., bus routes). Currently, no bus services are provided to the site and would not be provided under this alternative. The only feasible mitigation requires coordination with the San Joaquin Regional Transit District (SJRTD) to identify ways in which bus transit services can be provided to residents within the URSP project, but it is uncertain whether services would be provided. Because the provision of bus transit services to the URSP project site is dependent on actions taken by the SJRTD, there is no guarantee that such services would be provided in the future and this would be a significant and unavoidable impact of both the project and the Mitigated Design Alternative. However, demands for bus services would likely be less under this alternative. The Mitigated Design Alternative would substantially decrease the traffic-related impacts of the project. *[Less]*

CULTURAL RESOURCES

Under the project, ground disturbance and development of new structures would occur resulting in significant and potentially significant impacts related potential disturbance of undiscovered/unrecorded subsurface archaeological sites and human remains. These impacts would be reduced to less-than-significant levels after mitigation. Impacts to unknown archaeological resources would be potentially significant with this alternative and would be similar to those of the project. No significant cultural resource impacts were identified for the project after mitigation, so this alternative would not reduce or avoid any significant cultural resource impacts of the project. *[Similar]*

POPULATION AND HOUSING

Compared to the project, the Mitigated Design Alternative would result in approximately 80% less population growth. Housing displacement would be reduced by 50% to what would occur with the project. This is not a significant impact of the project. Therefore, this alternative would not reduce or avoid any significant impacts associated with population, employment, and housing. *[Similar]*

7.3.2 SUMMARY

The Mitigated Design Alternative would result in greater impacts than the project in one issue areas, lesser impacts in nine, and similar impacts in four. Significant unavoidable impacts

related to traffic, noise, agricultural resources, and aesthetic resources associated with the project would also occur under this alternative, but this alternative would contribute to these impacts to a lesser extent than the project. Further, this alternative would eliminate the project's significant and unavoidable air quality impacts.

7.4 OFFSITE ALTERNATIVE

An offsite alternative would require the location of another potentially feasible site for development of uses consistent with those of the project. As directed in the State CEQA Guidelines §15126.6(f) (2) (A), “the key question and first step in analysis is whether any of the significant effects of the project would be avoided or substantially lessened by putting the project in another location.” Because certain significant effects of the project are site-specific (such as the conversion of prime and important farmland, intersection impacts), it would be conceivable that an alternative location could avoid the significant effect. Therefore, it is valid to determine if feasible alternative locations may exist in the area.

The State CEQA Guidelines §15126.6(f) (2) (B) indicates that “if the lead agency concludes that no feasible alternative locations exist, it must disclose the reasons for this conclusion.” If feasible alternative locations do not exist, the EIR analysis need not continue to consider the issue of an offsite alternative.

The area in which it is reasonable to search for alternative sites would be the jurisdiction of the lead agency, the City of Manteca. Because the project would require the annexation of the URSP to the City, areas that fall within the County's jurisdiction adjacent to the City's urban limits would also be reasonable for this analysis. A site that could feasibly attain the basic objectives of the project would need to be of comparable size, with adequate access to roadways and utilities to support residential development, in a location where residential uses would be consistent with the General Plan designation and compatible with adjacent uses.

An examination of developable parcels in the City and a review of the City of Manteca General Plan Land Use Element led to the conclusion that a feasible alternative location for the project exists in the southern portion of the City. Currently, there is a large area of undeveloped land south of Woodward Avenue, west of Manteca Road (Main Street), and east of Airport Way, that is within the City's Primary Urban Services Boundary and is of sufficient size to accommodate a 553-acre development. In general, this area is designated for low density land uses, with a small area designated for CMU, and medium and high density residential land uses. These land use designations are comparable to existing land use designations for the URSP site and would be feasible for development of the Offsite Alternative. The Offsite Alternative would result in similar land uses and land use patterns as the project including the same number of housing units and areas of CMU.

The Offsite Alternative would meet all the project objectives including the provision of a residential community that is consistent with land use patterns envisioned in the City's General Plan, development of an integrated mixed master plan community, and integration with surrounding development. However, the proposed location for the Offsite Alternative is not

owned by the project applicants. Further, it is unknown whether land owners would be willing to sell their property. This alternative would require substantial time and investment to research the feasibility of acquiring the site, which makes this alternative potentially infeasible from a development standpoint.

7.4.1 ENVIRONMENTAL ANALYSIS

LAND USE

This Offsite Alternative may require amendments to the General Plan, but would not require the annexation of the project site to the City because it is currently within the City's primary urban services boundary. The annexation process itself would not result in significant environmental impacts and, therefore, this alternative would not avoid or reduce this impact.

This alternative would result in the same impacts associated with development of important farmland because this site also includes lands designated by the Department of Conservation, Farmland Mapping and Monitoring Program as prime farmland and farmland of statewide importance. Because this alternative would extend the urban core of the City to the south and would provide public services and infrastructure in this area, this alternative would also result in increased pressures for the conversion of farmland to the south of the site, which is a significant and unavoidable impact. Mitigation would be provided through participation in the SJMSCP, which would result in agricultural land being preserved elsewhere in the County. However, these mitigation measures would not be sufficient to reduce the impacts to less-than-significant levels. Therefore, these impacts are considered significant and unavoidable. An additional impact resulting from potential conflicts between agricultural operations and nearby development is considered less than significant after mitigation. The Offsite Alternative would result in the same farmland conversion and land use compatibility impacts as the project and would not avoid or reduce the significant and unavoidable impacts of the project. *[Similar]*

VISUAL

Under the Offsite Alternative, there would be the same type of land use alteration as the project because agricultural lands would be converted to urban land uses. This impact was identified as significant and unavoidable for the project. Lighting would be similarly changed under this alternative, but lighting impacts were not identified as significant project impacts. Overall aesthetic resources impacts would be the same under this alternative for the reasons described above. *[Similar]*

AIR QUALITY

Both the Offsite Alternative and the project would result in development of large areas of land with urban land uses and the generation of associated construction- and operations-related air emissions. This alternative would produce same vehicle trips as the project because the same number of housing units and commercial uses would be developed. Overall air emissions would be the same under the Offsite Alternative because of the similar development, project population, and vehicle trips. Less-than-significant air quality impacts identified for the

project related to odors and local mobile source carbon monoxide (CO) concentrations would be the same under this alternative.

Impacts associated with construction emissions, stationary- and mobile-source toxic air contaminants (TAC), and long-term regional emissions are considered significant and unavoidable under the project, although mitigation measures would substantially lessen these impacts, and would be the same with the Offsite Alternative. Therefore, this alternative would also result in significant unavoidable long-term regional emissions impacts. Impacts associated with stationary- and mobile-source TACs would also be considered significant and unavoidable under the project and this alternative because specific conditions regarding this impact cannot be determined at this time and there is no feasible mitigation approach available for this impact. *[Similar]*

NOISE

Both the Offsite Alternative and the project would result in temporary noise generated by construction activities; development of various noise generating land uses; increases in traffic noise; and development of sensitive receptors that would be exposed to existing or project generated noise levels exceeding City standards. After mitigation, under both scenarios, residual significant noise impacts would remain related to incompatibility between some project land uses and projected onsite exterior noise levels. The Offsite Alternative would not avoid this significant and unavoidable impact, and would result in similar impacts relative to the project. *[Similar]*

BIOLOGICAL RESOURCES

Both the project and the Offsite Alternative would develop large portions of undeveloped land areas. Biological impacts are generally site specific and depend on the type and quality of habitat that occurs on the site. Both the URSP site and the proposed location for the Offsite Alternative are located in relatively rural areas within the San Joaquin Valley. Similar habitat is expected to be present at both locations. Therefore, it is likely that the Offsite Alternative would result in similar significant and potentially significant impacts on sensitive and special-status plant, invertebrate, and animal species compared to the project.

Significant and potentially significant biological resources impacts for both the project and the Offsite Alternative would likely be reduced to less-than-significant levels through participation in the SJMSCP. Although it is likely that this alternative would result in similar biological impacts, it is unknown at this time whether any residual significant biological impacts would occur because the site-specific environmental constraints are not known. No significant biological resource impacts were identified for the project after mitigation, so this alternative would not reduce or avoid any significant biological resource impacts of the project. *[Similar]*

HAZARDS AND HAZARDOUS MATERIALS

The project would result in impacts related to the use of hazardous materials during project construction and operation; the potential exposure of construction workers, residents, and visitors to existing sources of hazardous materials during project construction and operation. All these impacts are considered less than significant, or less than significant after mitigation.

Because a similar level of development at a site with similar existing land uses (i.e., rural residential and agriculture) would occur, the Offsite Alternative would result in the same hazards and hazardous materials impacts. *[Similar]*

GEOLOGY, SOILS AND SEISMICITY

Under Offsite Alternative there would be a similar level of development; therefore impacts related to construction erosion and risks from seismic and soil hazards would be the same. This alternative would include the same mitigation measures as the project; therefore, post mitigation impacts would not change (less than significant).

All impacts related to geology, soils, and mineral resources are considered less than significant, or less than significant after mitigation under the project. Although geology impacts are generally site specific and are dependant on the type of soils present on site, the proposed location for the Offsite Alternative is located within the same regional geologic setting and would be anticipated to have similar geologic features (i.e., soils, soil erosion hazards) at the site compared to the project. Therefore, this alternative would result in similar less-than-significant geology, soils, and seismicity impacts as the project. *[Similar]*

PALEONTOLOGICAL RESOURCES

The project has the potential to uncover previously unknown paleontological resources. This impact can be mitigated to a less-than-significant level. Because the Offsite Alternative would result in similar ground disturbance, this alternative has the same potential to uncover previously unknown paleontological resources. *[Similar]*

HYDROLOGY AND WATER QUALITY

Under this alternative, a similar land area would be developed with urban uses and similar stormwater and detention facilities would be constructed. These facilities would be appropriately sized for the level of development proposed, so onsite and offsite impacts (San Joaquin River downstream) would be similar to those of the project, which results in a less-than-significant impact. All hydrology and water quality impacts identified for the project are considered less than significant either before or after mitigation. Therefore, the Offsite Alternative would not avoid any significant impacts. This alternative would result in similar stormwater discharges of urban pollutants to downstream water bodies; therefore, this alternative would result in similar hydrology and water quality impacts than the project. *[Similar]*

PUBLIC SERVICES AND UTILITIES

With the Offsite Alternative, public utilities demands would be the same and the same facilities that are proposed to serve the project (i.e., groundwater wells, infrastructure, and fire station) would be constructed. Therefore, this alternative would result in similar impacts to local groundwater wells and groundwater quality. This was a less-than-significant impact (after mitigation) under the project and would be the same under the Offsite Alternative. This impact, as well as impacts to police, fire, and school services, wastewater conveyance,

stormwater/surface runoff management, and demand for electricity and natural gas would be the same as the project and would be less-than-significant or less-than-significant after mitigation. No significant public services or utilities impacts were identified for the project after mitigation, so this alternative would not reduce or avoid any significant public services or utilities impacts of the project. *[Similar]*

TRANSPORTATION AND CIRCULATION

The Offsite Alternative would result in development of the same number of housing units (i.e., 2,301), and the same acreage of CMU areas (i.e., 38 acres) and the number of traffic trips generated by this alternative would be the same as the project. At buildout, the project would result in significant and unavoidable impacts at 2 roadway intersections. Because of the distance of the Offsite Alternative from these roadways, it is unlikely that this alternative would adversely affect the operations of these roadways. However, it is reasonable to expect that this alternative would have comparable impacts along local roadways near the proposed Offsite Alternative location.

This alternative would result in the development of a new community that would create demands for public transit services (i.e., bus routes). Similar to the project, no bus services are provided to Offsite Alternative location. The only feasible mitigation requires coordination with the San Joaquin Regional Transit District (SJRTD) to identify ways in which bus transit services can be provided to residents within the URSP project, but it is uncertain whether services would be provided. Because the provision of bus transit services to the URSP project site is dependent on actions taken by the SJRTD, there is no guarantee that such services would be provided in the future and this would be a significant and unavoidable impact of both the project and the Offsite Alternative.

Under this alternative, impacts related to roadway congestion from construction traffic, vehicular circulation patterns and site access, site design and transportation safety impacts, impacts to alternative transportation, impacts to emergency vehicle access, and conformity with City parking requirements would likely be the same compared to the project. Overall, it is reasonable to expect that the Offsite Alternative would result in similar transportation impacts compared to the project; however, localized impacts could occur and would be specific to the location of development. *[Similar]*

CULTURAL RESOURCES

Under the project, ground disturbance and development of new structures would occur resulting in significant and potentially significant impacts related potential disturbance of undiscovered/unrecorded subsurface archaeological sites and human remains. These impacts would be reduced to less-than-significant levels after mitigation. Impacts to unknown archaeological resources would be potentially significant with this alternative and would be similar to those of the project. It is unknown whether previously recorded cultural or archeological resources exist on the site or in the immediate vicinity. This alternative could result in significant impacts to known cultural resources and potentially significant impacts

related to previously undiscovered cultural resources. Given the age and history of structures in the City of Manteca in general, this alternative would likely require a historic resources evaluation at the same level as under the URSP project. If structures were found to be eligible under National Register of Historic Places criteria, this would result in a significant impact. It is unknown whether feasible mitigation measures would be available to reduce historic structure impacts to a less-than-significant level. No significant cultural resource impacts were identified for the project after mitigation, so this alternative would not reduce or avoid any significant cultural resource impacts of the project. *[Similar]*

POPULATION AND HOUSING

Compared to the project, the Offsite Alternative would result in the same population growth. Housing displacement would likely be similar to what would occur with the project. This is not a significant impact of the project. Therefore, this alternative would not reduce or avoid any significant impacts associated with population, employment, and housing. *[Similar]*

7.4.2 SUMMARY

The Offsite Alternative would result in similar impacts in all 13 resource areas. Significant unavoidable impacts related to traffic, air quality, noise, agricultural resources, and aesthetic resources associated with the project would also occur under this alternative.

7.5 ALTERNATIVES PREVIOUSLY CONSIDERED AND REJECTED

State CEQA Guidelines §15126.6(c) provides that an EIR “should also identify any alternatives that were considered by the lead agency but rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency’s determination.”

The lead agency considered an alternative that would increase the density of the active adult and traditional single-family housing onsite, resulting in an increased number of dwelling units. This alternative would achieve the project’s objectives relating to provision of a variety of housing types, provision of a master planned active adult housing community, provision of employment opportunities, and maximization of financial benefits to the surrounding community. However, implementation of this alternative would result in substantially greater traffic, air quality, and noise impacts, most of which are already significant and unavoidable under the URSP project. Therefore, this alternative would not fulfill the intended purpose of an alternatives analysis, which is to reduce or substantially lessen the significant impacts of the project, and was rejected from further consideration in this Draft EIR.

No additional alternatives to the project were brought forth during the scoping process.

7.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The State CEQA Guidelines require identification of an environmentally superior alternative. If the No Project Alternative is environmentally superior, CEQA requires selection of the “environmentally superior alternative other than the no project alternative” from among the project and the alternatives evaluated.

Table 7-1 identifies whether each of the three alternatives would have “greater,” “less,” or “similar” impacts as the project for each of the 13 environmental issues evaluated in this Draft EIR. The No Project Alternative would have greater impacts than the project in one issue area, lesser impacts in 9, and similar impacts in three. The Mitigated Design Alternative would have lesser impacts than the project in 10 issue areas and similar impacts in 4. The Offsite Alternative would have similar impacts to the project in all 13 issue areas.

Based on the listing of lesser and greater impacts as identified in Table 8-1, the No Project Alternative would appear to be the environmentally superior alternative. The project would result in 13 significant and unavoidable impacts in 5 resource areas: agricultural resources, visual resources, air quality, noise, transportation. The No Project Alternative, by comparison would not result in any significant and unavoidable impacts. It would have greater impacts than the project with respect to water quality (associated with stormwater runoff from agricultural activities). Nevertheless, because it would not result in any significant and unavoidable impacts, it is the environmentally superior alternative and it is superior to all other alternatives considered.

By comparison, the Mitigated Design Alternative would reduce, but not to a less-than-significant level, most of the project’s significant and unavoidable impacts and would reduce to less than significant the project’s significant and unavoidable air quality impact. Because overall less development would occur, although this alternative would still contribute to the listed significant and unavoidable impacts, its contributions would be less than what would occur with the project. For these reasons, the Mitigated Design Alternative is environmentally superior to the project.

The environmental effects of the Off-Site Alternative would be comparable to the project, because it would result in a similar level of development on a substantially similar site and the same levels of construction and operational impacts (i.e., air quality, noise, traffic, biological resources). This alternative would not reduce or eliminate the project’s listed significant and unavoidable impacts. Overall, this alternative would be environmentally similar to the project.

**Table 7-1
Comparison of the Impacts of the Project to Those of the Alternatives***

Environmental Issues	Alternatives		
	No Project	Mitigated Design	Offsite
Land Use	Less	Less	Similar
Visual Resources	Less	Less	Similar
Air Quality	Less	Less	Similar
Noise	Less	Less	Similar
Biological Resources	Less	Similar	Similar
Hazards and Hazardous Materials	Similar	Less	Similar
Geology, Soils, and Seismicity	Similar	Less	Similar
Paleontological Resources	Less	Less	Similar
Hydrology and Water Quality	Less	Greater	Similar
Public Services and Utilities	Greater	Less	Similar
Transportation	Less	Less	Similar
Cultural Resources	Less	Similar	Similar
Population and Housing	Similar	Similar	Similar
Totals			
Greater Impacts	1	1	0
Lesser Impacts	9	9	0
* For each environmental issue, the alternative is compared to the project based on the level of severity of impacts (greater, less, similar). Source: EDAW 2004			

8 REPORT PREPARATION

CITY OF MANTECA

Kyle Kollar..... Director of Community Development
Benjamin J. Cantu, Jr..... Advance Planning Manager
Kathleen Wold..... Planning Manager

EDAW

Gary Jakobs, AICP..... Principal-in-Charge
Amanda Olekszulín Project Manager
Wendy Copeland.....Assistant Project Manager, Environmental Planner
Jenifer King..... Environmental Planner
Leo Edson..... Senior Biologist
Petra Unger..... Senior Botanist
Eric Htain..... Wildlife Biologist
Tammie Beyerl..... Botanist
Charlane Gross.....Senior Archaeologist
Richard Deis..... Archaeologist
Angel Tomes..... Archaeological Historian
Chris Fitzer..... Hydrologist
Amy Meyer..... Visual Resources Specialist
Kurt Legleiter..... Senior Air Quality & Noise Specialist
Honey Walters..... Air Quality & Noise Specialist
Gayiety Hasbrouck..... Document Production
Amber Martin..... Document Production
Brian Perry..... Graphics
Lorrie Jo Williams..... Graphics
Lisa Clement..... GIS Specialist
Chris Donohue..... GIS Specialist

KDANDERSON TRANSPORTATION CONSULTANTS

Ken Anderson..... Principal/Owner
Jonathan Flecker..... Transportation Engineer

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9.2 PERSONAL COMMUNICATIONS

Cantu, Ben. 2005. Advance Planning Manager. City of Manteca Community Development Department. January 4, 2005—personal communication with A. Olekszulin of EDAW.

Klob, Kim. Senior regional planner. San Joaquin Council of Governments, Stockton, CA. October 28, 2003—telephone conversation with Sean Bechta of EDAW regarding growth trends in San Joaquin County.

Lang, Mike. PG&E, Stockton, CA. June 29, 2004—telephone conversation with Suzanne Eastridge of EDAW regarding electricity and natural gas supplies.

Milam, Don. City of Manteca, Public Works, Manteca, California. October 16, 2004—personal communication with Chris Fitzer from EDAW.

Vickers, David. Transportation Analyst, City of Manteca. December 3, 2004—personal communication with A. Olekszulin from EDAW

APPENDIX A

NOTICE OF PREPARATION AND COMMENTS



NOTICE OF PREPARATION

DRAFT ENVIRONMENTAL IMPACT REPORT

TO: REVIEWING AGENCIES

FROM: CITY OF MANTECA
Community Development Dept.
1001 W. Center Street
Manteca, CA 95337

Subject: Notice of Preparation of a Draft Environmental Impact Report

The City of Manteca will be the Lead Agency and will prepare a Draft Environmental Impact Report (EIR) for the project identified below. We need to know your views as to the scope and content of the environmental information that is germane to your agency's statutory responsibilities or your interests in connection with the proposed project. Your agency will need to use the EIR when considering your permit or other approval for the project.

The project description, location, and a summary of the environmental issues to be evaluated in the EIR are contained in the attached materials.

Because of the time limits mandated by State law, your responses must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Kyle Kollar, Community Development Director, at the address shown above. We will need the name for a contact person in your agency.

Project Title: Union Ranch Specific Plan EIR

Project Applicant: Pulte Homes Corporation

SCOPING MEETING: Date & Time: Tuesday, September 21, 2004 at 6:30 p.m.

Location: Council Chambers
City of Manteca
1001 W. Center Street
Manteca, Ca 95337

Date: _____

Signature: _____

Title: Community Development Director
Telephone: (209) 239-8424
Facsimile: (209) 825-2349
Email: kkollar@ci.manteca.ca.us

1. INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) and the State CEQA guidelines, the City of Manteca (as lead agency) will be preparing an Environmental Impact Report (EIR) to evaluate the environmental effects associated with adoption of the Union Ranch Specific Plan (specific plan), which includes a 550-acre mixed use development located adjacent to the northern limits of the City of Manteca, San Joaquin County, California. The EIR will identify any significant environmental impacts of the project, as well as recommend mitigation measures to reduce the project's environmental impacts where feasible.

In accordance with Section 15082 of the CEQA Guidelines, the City of Manteca has prepared this Notice of Preparation to provide responsible and trustee agencies and other interested parties with information describing the project and the issue areas that will be evaluated in the EIR.

As a specific plan project, this EIR will be prepared according to Section 15182 of the State CEQA Guidelines, which indicates that additional CEQA review would not be required for subsequent subdivisions or development approvals sought within the specific plan area as long as they are consistent with the elements and land use plans of the specific plan and would not result in additional impacts not previously identified and evaluated in the EIR for that specific plan.

2. PROJECT LOCATION AND CURRENT USE

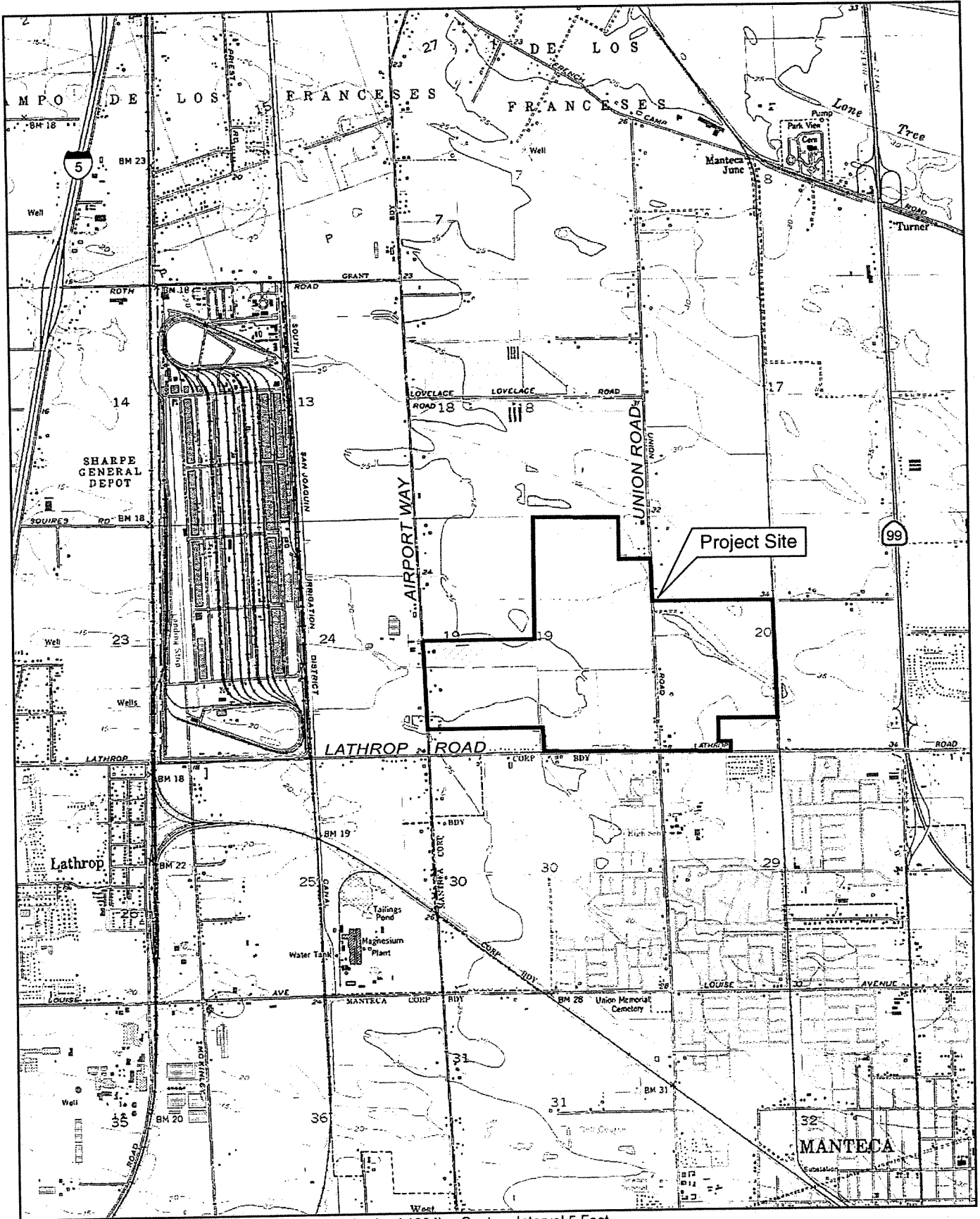
The proposed specific plan area is located on approximately 550 acres north of the City of Manteca, in San Joaquin County, California (Exhibit 1). The site is within the General Plan Urban Service Boundary. The specific plan area is located between Interstate 5 (approximately three miles to the west) and State Route 99 (approximately one mile to the east) and bordered by Airport Way to the west and Lathrop Road to the south. Union Road bisects the specific plan area in a north-south direction.

Although the specific plan area is within the City of Manteca Urban Services Boundary, it lays outside and north of the Manteca City limits. Before the extension of public services (i.e., water and wastewater) to the specific plan area, the city will need approval from the San Joaquin Local Area Formation Commission (LAFCO) to expand the city's sphere of influence (SOI) boundary and to annex the specific plan area to the city.

Existing land uses within the specific plan area primarily consists of agricultural operations including a goat dairy operation, hay sales and hauling operations, and small farms with cultivated row crops, fruit orchards, and rural residences and out buildings.

3. PROJECT CHARACTERISTICS

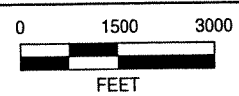
The Union Ranch Specific Plan would guide development of approximately 550 acres of land with low density residential, commercial/mixed use/high density residential, parks, and open space/trails (see Exhibit 2 and Table 1).

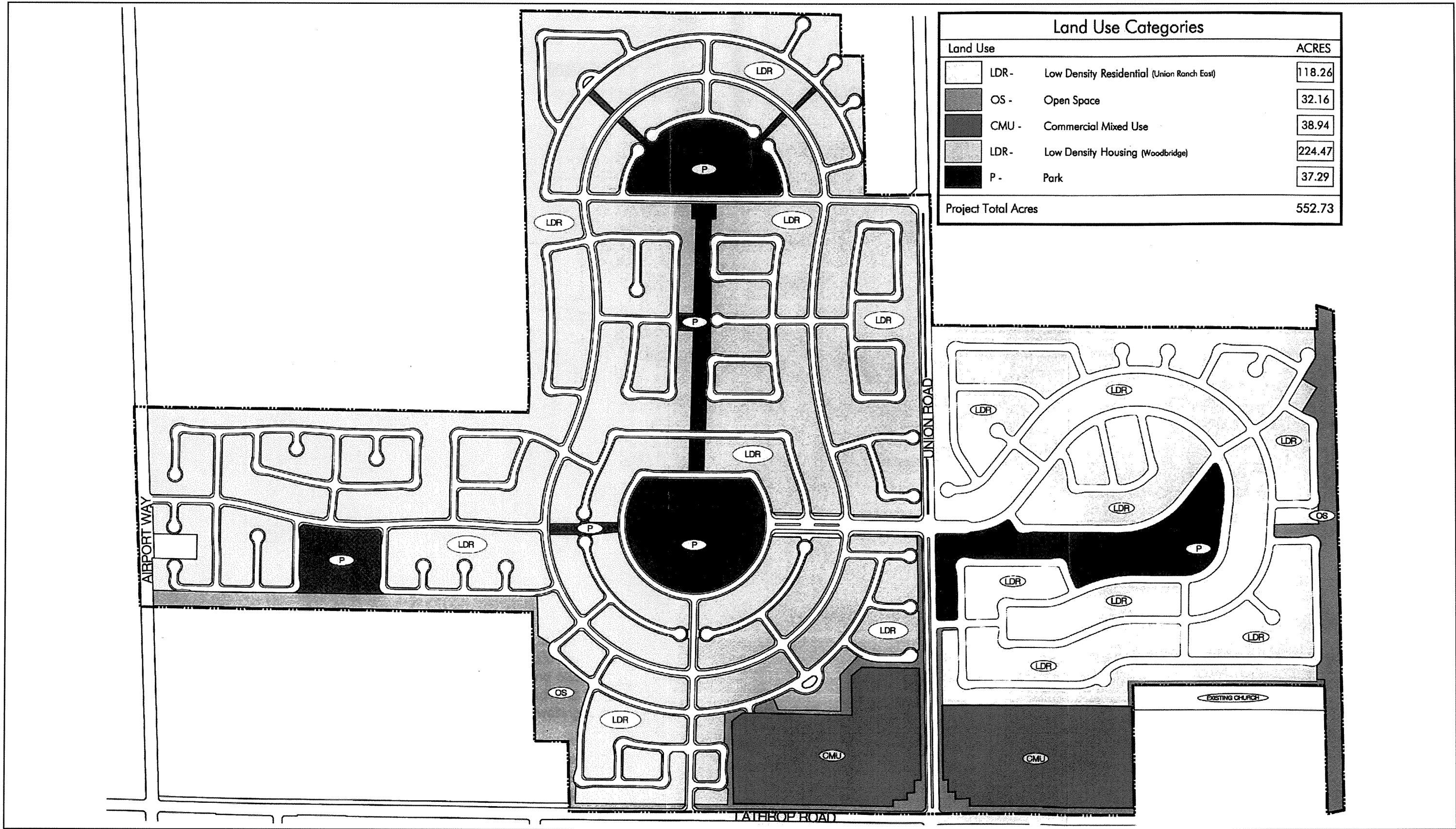


Source: U.S.G.S. Lathrop and Manteca Quad 1952 (revised 1994) – Contour Interval 5 Feet

URSP Project Site

Union Ranch Specific Plan EIR
 P 4T040.01 08/04





Source: The HLA Group 2004

URSP Proposed Land Use Diagram

Union Ranch Specific Plan EIR
P.4T040.01 08/04



General Plan Designation	Proposed Zoning Designation	# of Dwelling Units	Total Acreage
High Density Residential (within Commercial/Mixed-Use area)	HDR	341	13.6
Low Density Residential Min Lot Size 6,600 square feet (sf)	R-1-6-UR	535	127.77
Low Density Residential Min Lot Size 7,500 sf	R-1-6-WB	421	116.08
Low Density Residential Min Lot Size 5,500 sf	R-1-5-WB	614	126.20
Low Density Residential Min Lot Size 4,600 sf	R-1-4-WB	390	64.98
Commercial/Mixed-Use	CMU	N/A	25.34
Open Space/Trails	OS	N/A	32.16
Park	P	N/A	37.29
Major Right-of-Ways	N/A	N/A	9.31
Totals		1,960	552.73

The specific plan includes the development of two low-density residential communities: a senior restricted adult housing community and a traditional single family residential community. The senior restricted adult community would be developed on approximately 366 acres in the central and western portions of the specific plan area west of Union Road. The traditional single family residential community would be developed on approximately 127 acres in the eastern portion of the specific plan area east of Union Road. A small portion of the specific plan area, approximately 40 acres, would be developed with a commercial mixed-use development near the intersection of Union Road and Lathrop Road.

Within the specific plan area, public facilities including trails, open space, greenbelts, park facilities, and public utility infrastructure would be developed and would be consistently developed throughout the site. While zoning under the proposed specific plan is consistent with land uses envisioned in the City of Manteca 2023 General Plan, an amendment to the Zoning Ordinance would be required with regards to a mix of low-density housing densities defined by lot size and the commercial-mixed use designation. Further, the City will prezone the project site based on proposed land uses. The pre zoning designations will be submitted to the San Joaquin County Local Area Formation Commission (LAFCO) in the City's application for annexation of the site. The proposed land uses are described in greater detail below.

3.1 LOW-DENSITY RESIDENTIAL DEVELOPMENT

The specific plan would include development of 1,970 single-family housing units in 2 independent residential communities: senior restricted adult and traditional single family housing. Approximately 78% of the specific plan area would be developed with these proposed land uses. In general, the communities would be linked thematically with a common landscape, bike and pedestrian trails, and materials palette for walls, fences, and entry monuments. The senior restricted adult community would include 1,425 housing units, a recreation center,

senior restricted adult community would include 1,425 housing units, a recreation center, parkland, open space, and access to commercial uses. The traditional low-density housing community would include 535 traditional single-family dwelling units, parkland, open space, and bike and pedestrian trails.

3.2 COMMERCIAL-MIXED USE (CMU) DEVELOPMENT

A CMU development would be developed on approximately 40 acres at the intersection of Union Road and Lathrop Road in the southern portion of the specific plan area. The Center will include the development of:

- community/neighborhood activity/socializing areas within the center or in an adjacent park,
- onsite landscaped storm water detention facilities designed as an amenity,
- public service facilities (i.e., post office, library, fire station, or government offices),
- neighborhood work centers with space for private offices for telecommuters or where residents in the neighborhood may work near their homes,
- shared parking to reduce the parking required for each individual use, and/or
- high density housing on at least 35% of the CMU area.

3.3 PUBLIC FACILITIES

The specific plan includes development of approximately 37 acres of open space, including greenbelts and visual corridors, landscape setbacks adjacent to right-of-ways, and open space trail systems. Approximately 32 acres of the specific plan area would be devoted to parks uses (not including private recreational centers) that would include community activity/socializing centers, ball fields, tot lots and play apparatus, benches, picnic areas, shade structures, and onsite landscaped storm water detention facilities (i.e., detention basin, swales).

4. REQUESTED ENTITLEMENTS

Implementation of the Union Ranch Specific Plan would require the following entitlements from the City of Manteca:

- Adoption of rezoning designations for the site.
- LAFCO approval of a Sphere of Influence boundary expansion and annexation of the specific plan area to the City of Manteca.
- Approval of tentative subdivision maps.
- Approval of development agreements between the City and developer.
- Approval of a phasing plan for development.
- Adoption of design guidelines for the specific plan area.
- Approval of the specific plan and accompanying EIR.

Adoption of the specific plan would establish the land use entitlements for all land within the specific plan area. No further General Plan amendments or zoning designations would be required for specific developments within the specific plan area as long as the development is consistent with the land uses and standards described in the specific plan.

5. POTENTIAL ENVIRONMENTAL EFFECTS

The EIR will identify and describe the potential environmental impacts associated with implementation of the Union Ranch Specific Plan (the project) as described below. Mitigation measures will be required where appropriate to reduce potentially significant and significant impacts. The following issues are proposed for analysis.

5.1 AESTHETICS

The project would change land uses on the site from primarily agricultural to a planned residential and commercial development. The EIR will describe the visual changes that would occur with the project including the potential visibility of the project from surrounding uses and major viewsheds. The analysis will also include an assessment of the change in the visual character of the area and lighting/glare impacts to onsite and offsite areas.

5.2 LAND USE AND AGRICULTURAL RESOURCES

Existing land uses in the specific plan area and surrounding properties to the north, west and east are primarily agricultural. The EIR will evaluate the project's land use compatibility impacts with surrounding land uses, its consistency with relevant environmental plans and policies, and its effect on existing agricultural resources including impacts to existing Williamson Act contracts and important farmlands.

5.3 AIR QUALITY

The EIR will describe regional and local air quality in the vicinity of the project site and evaluate construction and operational impacts to air quality. The project's estimated air emissions will be quantified and compared to emissions thresholds of the San Joaquin Valley Unified Air Pollution Control District. The EIR will evaluate the construction, stationary source, mobile source, and CO emissions that would be generated by activities in the specific plan area.

5.4 BIOLOGICAL RESOURCES

The EIR will evaluate the potential for the project to affect any existing wetlands and sensitive animal and plant species that may be present in the specific plan area. Botanical and wildlife surveys of the project site and surrounding area will be conducted and summarized in the EIR as appropriate. The specific plan area lies within the area covered by the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). To the degree the project affects habitat and species covered under the SJMSCP, it will be identified and mitigation consistent with the SJMSCP will be recommended as appropriate to reduce the impacts where feasible.

5.5 CULTURAL RESOURCES

The EIR will include a cultural resource impact assessment for the project site and will consider historic resources in connection with existing buildings in the specific plan area. Field surveys of the project site and a literature review will be completed and summarized in the EIR as appropriate. The EIR will evaluate the likelihood that buried archaeological resources or historic resources on the ground surface would be adversely affected by proposed project activities.

5.6 GEOLOGY AND SOILS

The EIR will summarize the results of a preliminary geotechnical investigation, will describe the project's potential exposure to geologic hazards (i.e., earthquakes, liquefaction, etc.), and will describe project's potential effects on soil erosion. The specific plan area is not located in an area of known mineral resources, nor are any expected to be encountered during project development. Thus, no impacts related to mineral resources are anticipated. This issue will not be evaluated further in the EIR.

5.7 PALEONTOLOGICAL RESOURCES

The EIR will include a paleontological resources assessment for the project site. A field survey and a literature review related to geologic formations and recorded paleontological resources in the vicinity of the project site will be completed and summarized in the EIR.

5.8 HAZARDS AND HAZARDOUS MATERIALS

The EIR will summarize the results of hazardous material assessments and will evaluate the operational characteristics of the project to determine potential impacts related to past and proposed use of hazardous materials within the specific plan area. The EIR will also describe the project's potential to adversely affect existing emergency response plans.

5.9 HYDROLOGY AND WATER QUALITY

The EIR will describe existing drainage conditions at the project site and will evaluate the project's effect on the hydrology and water quality characteristics of the local groundwater basin including alteration of drainage patterns, erosion, storm water discharges, and flooding.

5.10 NOISE

The EIR will describe existing and changes to vicinity ambient noise levels, the project's construction and operational noise impacts, including noise generated from existing and proposed traffic, and will compare these impacts to applicable noise thresholds.

5.11 POPULATION AND HOUSING

The EIR will evaluate the project's effect on employment, population and housing in the local area including the project's consistency with growth projections envisioned in the City of Manteca General Plan.

5.12 PUBLIC SERVICES

The EIR will evaluate the adequacy of existing public services and the potential need for additional fire, police, waste disposal, public parks, and school services. The EIR will evaluate the project's potential to create an adverse impact to schools within the project region based on available county-wide data and information from the State Department of Education. The EIR will also evaluate whether the recreation facilities proposed as part of the specific plan would be adequate to meet anticipated project demand.

5.13 TRANSPORTATION/TRAFFIC

The EIR will evaluate project load and capacity and level of service impacts to regional and local transportation facilities in relation to local transportation standards. The project's projected vehicle trip generation for proposed land uses will be described, and the adequacy of proposed circulation routes within the development will be determined. Further, the EIR will describe access to local and regional transportation facilities and the adequacy of proposed parking for residential and commercial uses.

5.14 UTILITIES AND SERVICE SYSTEMS

The EIR will analyze the current capacity of the City's water and wastewater systems and the project's impact on these systems. An analysis of regional water supply conditions will be provided. An analysis of adequate sewer capacity availability to serve the project's projected demand in addition to the provider's existing commitments will be provided. The EIR will describe the existing gas and electrical facilities within the project vicinity, and provide an impact analysis of the utility line construction. The EIR will also describe the existing solid waste facilities that serve the site.



ENVIRONMENTAL HEALTH DEPARTMENT SAN JOAQUIN COUNTY

Donna K. Heran, R.E.H.S.
Director
Al Olsen, R.E.H.S.
Program Manager
Laurie A. Cotulla, R.E.H.S.
Program Manager

304 East Weber Avenue, Third Floor
Stockton, California 95202-2708
Telephone: (209) 468-3420
Fax: (209) 464-0138

Unit Supervisors
Carl Borgman, R.E.H.S.
Mike Huggins, R.E.H.S., R.D.I.
Douglas W. Wilson, R.E.H.S.
Margaret Lagorio, R.E.H.S.
Robert McClellon, R.E.H.S.
Mark Barcellos, R.E.H.S.

July 30, 2004

Kyle Kollar, Director
City of Manteca
Community Development Department
1001 W. Center Street
Manteca, CA 95337

Subject: Union Ranch

The San Joaquin County Environmental Health Department has reviewed the Tentative Subdivision Map and has the following comments:

- (1) The existing homes are being served by onsite sewage disposal systems and individual wells for domestic and irrigation purposes. The Environmental Health Department recommends that as a part of developing these properties, the wells, septic systems, and structures be destroyed under permit and inspection of the Environmental Health Department.
- (2) Parts of this proposed subdivision includes agricultural land that served as liquid waste disposal sites for the former DeKass Fabrick, A & J Foods, Chiron Corporation, and recently Suprema Specialties. The Environmental Health Department recommends that a Phase II Environmental Study be conducted to determine if any residual chemicals, metals, etc., remain in the affected disposal acreage.
- (3) The Environmental Health Department recommends that the City of Manteca request written approval from the California Regional Water Quality Control Board, Central Valley Region, in regards to converting land previously permitted (or not) for industrial waste discharge to individual home sites for future residents.
- (4) The proposed public well location shall be forwarded to the State Department of Health Services, Drinking Water Program for assessment and permitting requirements.

Union Ranch
Page 2 of 2

The San Joaquin County Environmental Health Department would also like to know if at the time of annexation that some of the properties not included in the Tentative Map along the North and South sides of Lathrop Road be considered in your annexation application. The San Joaquin County Environmental Health Department strongly encourages your consideration of these properties between Airport Way and Union Road. Should you have any questions or need further assistance, please contact Raymond Borges, Lead Senior R.E.H.S., R.D.I. of my staff at (209) 468-3284.

Donna Heran, R.E.H.S., Director
Environmental Health Department



Mike Huggins, Supervising REHS, RDI
Unit II, Land Use Program

cc: Donna Heran, R.E.H.S., Director
Timothy O'Brien, Regional Board
Bruce Baracco, Executive Officer, LAFCO



**SAN JOAQUIN COUNTY
COMMUNITY DEVELOPMENT DEPARTMENT**

1810 E. HAZELTON AVE., STOCKTON, CA 95205-6232
PHONE: 209/468-3121 FAX: 209/468-3183

August 23, 2004

Kyle Kollar
Community Development Director
City of Manteca Community Development Department
1001 W. Center Street
Manteca, CA 95337

RE: UNION RANCH TRACT NO. 3423

Dear Mr. Kollar:

Thank you for the opportunity to review the tentative map for the above referenced Union Ranch Tract No. 3423 subdivision. The San Joaquin County Community Development Department has reviewed the tentative map and offers the following comments:

Conversion of Agricultural Land

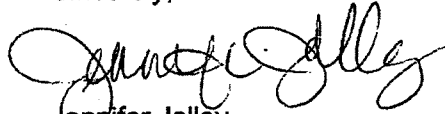
The subject property consists of approximately 270 acres within San Joaquin County. The Department of Conservation classifies this area as being a combination of Prime Farmland and Farmland of Statewide Importance. Approximately two-thirds of the project site has a General Plan designation of R/L (Residential-Low Density) and is zoned AU-20 (Agriculture, Urban Reserve-20 acre minimum). The remaining portion of the project has a General Plan designation of A/G (General Agriculture) and is zoned AG-40 (General Agriculture-40 acre minimum). The area has historically been used for agricultural production with a few scattered residences. The County is concerned about the conversion of agricultural and incorporation of potential mitigation measures into the review and approval of the proposed project. There are several ways a project proponent can minimize, reduce, or compensate for the significant loss of agricultural land, whether significant only by the loss proposed by the project, or cumulatively significant. The following is a list potential mitigation measures that may reduce the impacts to agricultural land to less than significant:

1. By providing water supply for agriculture.
2. By assisting agriculturalists in developing restoration and conservation projects.
3. By purchasing and combing smaller parcels to make agriculture more viable.
4. By conducting or funding flood plain restoration projects that benefit agriculture.
5. By developing or funding buffer zones between urban development and agricultural land.
6. By improving levees to protect agricultural land from flooding.

7. By conducting or funding erosion control projects that benefit agriculture.
8. By clustering development of the "Project" to support efficient use of agricultural land.
9. By conducting or providing funding for techniques that increase production by identifying new processes, new techniques, or new crop potential on heretofore-limited agricultural production lands, i.e., converting grazing land to vineyards.
10. By conducting or funding programs that identify best agriculture management practices to increase efficiencies, such as land adjacent to wetlands, and potentially bring more agricultural land into production.
11. By conducting or funding Urban Limit line studies that provided for improvement of geometric shape and compactness of urban development that reduces pressure to prematurely convert agricultural lands.

Please consider incorporating the above stated mitigation measures in the review and approval of the proposed tentative map. Please contact me at (209) 468-3161 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Jennifer Jolley". The signature is fluid and cursive, with the first name "Jennifer" and last name "Jolley" clearly distinguishable.

Jennifer Jolley
Senior Planner

Cantu, Ben

From: Quaresma, George
Sent: Friday, September 10, 2004 9:48 AM
To: Cantu, Ben
Cc: Kollar, Kyle; Sutton, Randy
Subject: Union Ranch Draft E.I.R.

My comments for the Union Ranch Specific Plan E.I.R.

Most of the area proposed for development is outside our current identified 5-minute response areas that can be served by existing fire stations. As a result;

- 1) A fire station site should be provided as far north as practicable with a minimum lot size of 120' X 200'.
- 2) The site should have direct access to Union Road to increase the response area and provide the least amount of disruption to the residents.
- 3) Services to the fire station site (sewer, water, street improvements) should be provided within the first 1,000 -1,500 dwelling units.

MUSD

MANTECA UNIFIED SCHOOL DISTRICT

Mary Karim, Facilities Planning Specialist

September 15, 2004

Mr. Kyle Kollar
Community Development Director
1001 W. Center Street
Manteca, CA 95337

Subject: Notice of Preparation of a Draft EIR
Pulte Homes Corporation

Dear Mr. Kollar:

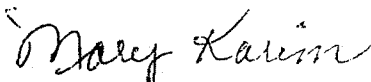
This is to advise you that we are in receipt of the Notice of Preparation of a Draft Environmental Impact Report (EIR) for the Union Ranch Specific Plan (Pulte Homes Corporation).

Although Pulte Corporation will be constructing senior citizen housing in this area, adjacent to this property it appears approximately 1600 single family homes will be built and will require the construction of a K-8 elementary school, thereby our interest of the environment in the surrounding area and its potential impact on adjacent properties.

Manteca Unified would appreciate being advised as to the results of the final EIR Report for the Union Ranch Specific Plan.

Should you have questions, I can be contacted at (209) 825-3200 extension 763.

Sincerely,
MANTECA UNIFIED SCHOOL DISTRICT



Mary Karim
Facilities Planning Specialist
Facilities Department

cc: Sandy Dwyer, Administrator of Facilities Planning

City of Lathrop

Community Development

Planning Division

(209) 858-2860, Extension 327

(209) 858-5259 Facsimile



September 21, 2004

Kyle Kollar
Community Development Director
City of Manteca
1001 W. Center Street
Manteca, CA 95337

Subject: Notice of Preparation (NOP) for a Draft Environmental Impact Report (DEIR) for the Union Ranch Specific Plan

Dear Mr. Kollar:

At its meeting of September 21, 2004, the City Council of the City of Lathrop reviewed the referenced Notice of Preparation for the Draft Environmental Impact Report (DEIR) for the Union Ranch Specific Plan and directed staff to submit this letter in response.

The City of Lathrop is very concerned about the potential impact this project will have on the City of Lathrop. State law requires that you address all impacts that might occur to the City of Lathrop in the EIR. Most prominently, we are concerned about the traffic impacts as Lathrop Road and Louise Avenue are regional roads.

Lathrop Road and Louise Avenue are designated as major arterials in the City of Lathrop General Plan with final configuration consisting of eight lanes from Interstate-5 to Harlan Road and four lanes from Harlan Road to the Manteca City limits. In addition, each of these two streets extends into the Manteca City limits. The DEIR must address the impacts on roads that go into and through the City of Lathrop.

The City of Lathrop Community Development and Public Works Departments reviewed the NOP and have the following concerns. The traffic generated from this project **will** result in a significant adverse impact to both the easterly and westerly direction of Lathrop Road and Louise Avenue in the City of Lathrop. Project generated traffic would also result in significant impacts to the Lathrop Road/Interstate-5 on and off ramps and the Louise Avenue/Interstate-5 on and off ramps.

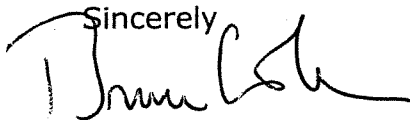
The issue is that the DEIR's of the past have **never** recognized any traffic proceeding on Lathrop Road or Louise Avenue through to Interstate-5 in the City of Lathrop. This is unrealistic, and without merit.

Kyle Kollar
September 21, 2004
Page 2

As required by CEQA, Staff is requesting that mitigation measure be added to the EIR for the project that addresses this requirement.

In the Draft EIR's of the past all traffic is shown only going to State Route-120. This means that traffic would choose to go a greater distance to get onto State Route-120 that leads to Interstate-5 then would go directly onto Interstate-5 from Lathrop Road or Louise Avenue. However, it is anticipated that some portion of the traffic from Manteca would, in fact, choose to utilize Lathrop Road and Louise Avenue to access Interstate-5, especially the new residents of Union Ranch Specific Plan area and the existing and new developments adjacent to Louise Avenue. **The actual traffic generated would result in a significant adverse impact to both the easterly and westerly direction of Lathrop Road and Louise Avenue in the City of Lathrop.** Traffic generated would also result in significant impacts to the Lathrop Road/Interstate-5 and Louise Avenue/Interstate-5 on and off ramps. These impacts **must** be addressed in the EIR and in the mitigation-monitoring plan. Development in Manteca is placing an unreasonable burden on the residents of Lathrop. **Appropriate mitigations are required to insure that development in Manteca is paying its fair share of the costs for road and interchange improvement in Lathrop caused by traffic generated in Manteca.**

Please provide me with a copy of the final environmental impact report for this project when available. In addition, please provide me with the dates of any future actions by the Planning Commission and City Council regarding the Union Ranch Specific Plan EIR.

Sincerely


Bruce Coleman
Community Development Director

cc: Pam Carder, City Manager
Susan Burns Cochran, City Attorney
Deanna Walsh, Principal Planner



ENVIRONMENTAL HEALTH DEPARTMENT SAN JOAQUIN COUNTY

Donna K. Heran, R.E.H.S.
Director
Al Olsen, R.E.H.S.
Program Manager
Laurie A. Cotulla, R.E.H.S.
Program Manager

304 East Weber Avenue, Third Floor
Stockton, California 95202-2708
Telephone: (209) 468-3420
Fax: (209) 464-0138

Unit Supervisors
Carl Borgman, R.E.H.S.
Mike Huggins, R.E.H.S., R.D.I.
Douglas W. Wilson, R.E.H.S.
Margaret Lagorio, R.E.H.S.
Robert McClellon, R.E.H.S.
Mark Barcellos, R.E.H.S.

September 21, 2004

Kyle Kollar, Director
City of Manteca
Community Development Department
1001 W. Center Street
Manteca, CA 95337

Subject: Notice of Preparation of a Draft Environmental Impact Report,
Union Ranch Specific Plan

The San Joaquin County Environmental Health Department (EHD) has the following comments that should be addressed in the scope of work in this Environmental document.

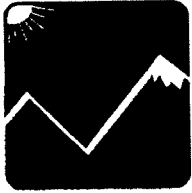
1. The existing homes are currently served by individual wells and onsite sewage disposal. Provisions for public water and sewer should be incorporated in any future design. In addition, rural parcels from Airport Way (North-side of Lathrop Road) to proposed project area should be studied for inclusion into the future annexation.
2. Previous industrial waste application on parts of the study area should be studied for residual impacts for the planned future use of these lands. A Phase II Environmental Study should be considered at a minimum.
3. Review by the California Regional Water Quality Control Board, Central Valley Region, in regards to land previously permitted (or not) for industrial wastewater application.
4. Any proposed public well location should be reviewed and approved by the State Department of Health Services, Drinking Water Program for assessment and permitting requirements.

Any questions should be directed to Raymond Borges, Lead Senior Registered Environmental Health Specialist, Registered Dairy Inspector of my staff at (209) 468-3284.

Mike Huggins, Supervising R.E.H.S., R.D.I.
Environmental Health Department

MH: cf

cc: Donna Heran, R.E.H.S., Director



San Joaquin Valley
Air Pollution Control District

20040427

September 22, 2004

Kyle Kollar
City of Manteca
Community Development Department
1001 W. Center Street
Manteca, CA 95337

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE UNION RANCH SPECIFIC PLAN EIR.

Dear Mr. Kollar:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the above referenced project. Based on the information provided, it appears that this project will have a significant impact on the ambient air quality. The entire San Joaquin Valley Air Basin is classified non-attainment for ozone and fine particulate matter (PM10). This project will contribute to the overall decline in air quality due to increased traffic and ongoing operational emissions. This project may generate significant air emissions and it will reduce the air quality in the San Joaquin Valley. The project will make it more difficult to meet mandated emission reductions and air quality standards. A concerted effort should be made to reduce project-related emissions as outlined below:

Based on the information provided, a preliminary analysis indicated that the potential emissions from this project exceed the District's Thresholds of Significance for adverse air quality impacts. These thresholds are 10 tons per year for either of the following two ozone precursor emissions: reactive organic gases (ROG) or oxides of nitrogen (NOx). The District recommends the preparation of an Air Quality Impact Assessment (AQIA) and a Traffic Impact Study to determine impacts when projects are of this size, unless an analysis has been accomplished for a recent previous approval such as a general plan amendment or zone change. Please indicate to the District if the project has been analyzed and what the results were from any previous study.

The District recommends using the URBEMIS 2002 program to calculate project area and operational emissions and to identify mitigation measures that reduce impacts. URBEMIS can be downloaded from the South Coast Air Quality Management District's

David L. Crow
Executive Director/Air Pollution Control Officer

Northern Region Office
4230 Kiernan Avenue, Suite 130
Modesto, CA 95356-9322
(209) 557-6400 • FAX (209) 557-6475

Central Region Office
1990 East Gettysburg Avenue
Fresno, CA 93726-0244
(559) 230-6000 • FAX (559) 230-6061
www.valleair.org

Southern Region Office
2700 M Street, Suite 275
Bakersfield, CA 93301-2373
(661) 326-6900 • FAX (661) 326-6985

website at: <http://www.aqmd.gov/ceqa/urbemis.html>. If the analysis reveals that the emissions generated by this project will exceed the District's thresholds, this project may significantly impact the ambient air quality if not sufficiently mitigated. The project applicant or consultant is encouraged to consult with District staff for assistance in determining appropriate methodology and model inputs.

The District does not typically recommend quantifying PM10 emissions from construction activities. The District considers that PM10 emissions are reduced to levels considered less-than-significant through compliance with the District's Regulation VIII (Fugitive PM10 Emissions) rules. If construction activity is especially intense, or sensitive receptors are nearby, the District recommends applying the enhanced PM10 control measures listed in the *Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)*.

Based on the information provided, the proposed project will be subject to the following District rules. The following items are rules that have been adopted by the District to reduce emissions throughout the San Joaquin Valley, and are required. This project may be subject to additional District Rules. To identify additional rules or regulations that apply to this project, or for further information, the applicant is strongly encouraged to contact the District's Small Business Assistance Office at (559) 230-5888. Current District rules can be found at <http://www.valleyair.org/rules/1ruleslist.htm>.

- District Rule 4103 (Open Burning) regulates the burning of agricultural material. Agricultural material shall not be burned when the land use is converting from agriculture to nonagricultural purposes. In the event that the project burned or burns agricultural material, it would be in violation of Rule 4103 and be subject to District enforcement action.
- If the project site contains any buildings needing demolition or renovation the applicant will need to be in compliance with the National Emission Standards for Hazardous Air pollutants (NESHAPS). Specifically, the primary air pollutant of concern is asbestos. To ascertain whether this project is subject to NESHAPS, the project applicant is advised to review the enclosed Asbestos – Compliance Assistance Bulletin. Brian Dodds is the Northern Region's District contact for the program and is available should you need further assistance at (209) 557-6424.
- District Rules 4901 (Wood Burning Fireplaces and Wood Burning Heaters) and District Rule 4902 (Residential Water Heaters) to limit the emissions of PM10 and NOx in residential developments. Please note that on July 17, 2003, amendments to Rule 4901 were adopted by the District's Governing Board. Amendments to the rule may affect future construction plans for residential developments. Specifically:
§5.3 Limitations on Wood Burning Fireplaces or Wood Burning Heaters in New Residential Developments.

Effective January 1, 2004,

- 5.3.1 No person shall install a wood burning fireplace in a new residential development with a density greater than two (2) dwelling units per acre.
- 5.3.2 No person shall install more than two (2) EPA Phase II Certified wood burning heaters per acre in any new residential development with a density equal to or greater than three (3) dwelling units per acre.
- 5.3.3 No person shall install more than one (1) wood burning fireplace or wood burning heater per dwelling unit in any new residential development with a density equal to or less than two (2) dwelling units per acre.

More information about Rule 4901 can be found at our website- www.valleyair.org. For compliance assistance, please contact Mr. Wayne Clarke, Air Quality Compliance Manager, at 230-5968.

- District Regulation VIII (Fugitive PM10 Prohibitions)- Regulation VIII (Rules 8011-8081) is a series of rules designed to reduce PM10 emissions (predominantly dust/dirt) generated by human activity, including construction, road construction, bulk materials storage, landfill operations, etc. A Dust Control Plan must be submitted for the District's approval at least 30 days before construction activities begin if the project cumulatively encompasses 40 acres or more or will move more than 2,500 cubic yards per day of material on at least three days of the project. A construction assistance bulletin has been enclosed for the applicant.

Please be advised that on August 19, 2004 and September 16, 2004, the District's Governing Board approved amendments to Regulation VIII, Rules 8011-8061 and 8071-8081; respectively, that become effective on October 1, 2004. Of particular note are amendments to Rule 8021 (see section 6.3.1); the Dust Control Plan threshold has changed from 40.0 acres to 5.0 or more acres for non-residential sites. If a non-residential site is 1.0 to less than 5.0 acres, an owner/operator must provide written notification to the District at least 48 hours prior to his/her intent to begin any earthmoving activities (see section 6.4.2). For residential construction the threshold for submittal of a Dust Control Plan have changed from 40 acres to 10 acres. If a residential site is 1.0 to less than 10.0 acres, an owner/operator must provide written notification to the District at least 48 hours prior to his/her intent to begin any earthmoving activities

- District Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). If asphalt paving will be used, then paving operations of this project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

The District encourages innovation in measures to reduce air quality impacts. There are a number of measures that could be incorporated into the design/operation of this project to provide additional reductions of the overall level of emissions. (Note: Some of the measures may already exist as City/County development standards. Any measure

selected should be implemented to the fullest extent possible.) The measures listed below should not be considered all-inclusive and remain options that the project proponent should consider:

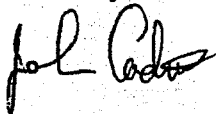
- Trees should be carefully selected and located to protect the building(s) from energy consuming environmental conditions, and to shade paved areas. Trees should be selected to shade paved areas that will shade 50% of the area within 15 years. Structural soil should be used under paved areas to improve tree growth. A brochure has been included for the applicant.
For Structural Soil see <http://www.hort.cornell.edu/uhi/outreach/csc/>
For Tree Selection see <http://www.ufe.org/>
For Urban Forestry see <http://www.coolcommunities.org>,
<http://wcufrre.ucdavis.edu>, and
[http://www.lgc.org/bookstore/energy/downloads/sjv tree guidelines.pdf](http://www.lgc.org/bookstore/energy/downloads/sjv_tree_guidelines.pdf)
- If transit service is available to the project site, improvements should be made to encourage its use. If transit service is not currently available, but is planned for the area in the future, easements should be reserved to provide for future improvements such as bus turnouts, loading areas, route signs and shade structures. Appropriations made to facilitate public or mass transit will help mitigate trips generated by the project. Direct pedestrian access to the main entrance of the project from existing or potential public transit stops and provide appropriately designed sidewalks. Such access should consist of paved walkways or ramps and should be physically separated from parking areas and vehicle access routes. Specifically: Bus turnout(s) should be planned near the entrance(s) of the development for school bus loading to accommodate school-age children.
- Sidewalks and bikeways should be installed throughout as much of the project as possible and should be connected to any nearby existing and planned open space areas, parks, schools, residential areas, commercial areas, etc., to encourage walking and bicycling. Connections to nearby public uses and commercial areas should be made as direct as possible to promote walking for some trips. Pedestrian and bike-oriented design reduces motor vehicle usage and their effects on air quality.
- The project should include as many clean alternative energy features as possible to promote energy self-sufficiency. Examples include (but are not limited to): photovoltaic cells, solar thermal electricity systems, small wind turbines, etc. Rebate and incentive programs are offered for alternative energy equipment. More information can found at-
<http://www.dsireusa.org/>, <http://rredc.nrel.gov/>,
<http://www.energy.ca.gov/renewables/>
- The applicant should use low-NOx diesel. The California Air Resources Board (CARB) has certified specific biodiesels for NOx reduction. Only biodiesels that

have been certified by CARB should be used. For more information on biodiesel, please call Mr. Chris Acree, Air Quality Specialist, at (559) 230-5829. Information on biodiesel can also be found at CARB's website- <http://www.arb.ca.gov/fuels/diesel/altdiesel/altdiesel.htm> and the EPA's website <http://www.epa.gov/oms/models/biodsl.htm>.

- Construction activity mitigation measures include:
 - Require construction equipment used at the site to be equipped with catalysts/particulate traps to reduce particulate and NOx emissions. These catalysts/traps require the use of ultra-low sulfur diesel fuel (15 ppm). Currently, California Air Resources Board (ARB) has verified a limited number of these devices for installation in several diesel engine families to reduce particulate emissions. At the time bids are made, have the contractors show that the construction equipment used is equipped with particulate filters and/or catalysts or prove why it is infeasible.
 - Use alternative fuel construction equipment.
 - Replace fossil-fueled equipment with electrically driven equivalents (provided they are not run via portable generator set).
 - Install wind breaks on windward sides of construction areas.
 - Curtail construction during periods of high ambient pollutant concentrations. This may include ceasing construction activity during peak-hour vehicular traffic on adjacent roadways, and "Spare the Air Days" declared by the District.
 - Require that all diesel engines be shut off when not in use on the premises to reduce emissions from idling.

Thank you for the opportunity to comment. If you have any questions, please feel free to contact me at (209) 557-6400.

Sincerely,



John Cadrett
Environmental Planner
Northern Region

Enclosure

C: file

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
Compliance Assistance Bulletin- December, 1994
Asbestos Synopsis

Asbestos Notification/Removal or Abatement	
Prior to any renovation or demolition of a facility	
<p>Inspect: Conduct an asbestos inspection of the site before:</p> <ul style="list-style-type: none"> -Any renovation which 160 sq. ft. of building materials, or 260 linear feet of pipe insulation will be disturbed, or -Any demolition of a facility with or without asbestos-containing materials <p>Notify: Submit an asbestos notification form for any regulated renovation or demolition, 10 working days before the activity.</p> <p>Fees: Fees must be paid to the District with the notification for all regulated renovations and demolitions.</p> <p>Demolition Release Form: Prior to any demolition, you must have completed a demolition release form. Upon its approval by the District this signed form may be used as proof (needed by the building official) of compliance with, or exemption from, the NESHAP notification requirements.</p> <p>Submit this form to the building department with your application for a demolition permit.</p>	
Applicability	
<p>Facilities subject to the NESHAP (regulated facilities) include all commercial buildings, apartments with more than 4 units, other structures and non-portable equipment. Single family dwellings may be exempt, but only on a case by case basis.</p> <p>Demolitions subject to the NESHAP (regulated demolitions) are demolitions of facilities described above, whether or not asbestos is present.</p> <p>Regulated renovation applies to any activity in which 160 sq. ft. of regulated asbestos-containing building materials or 260 linear feet of asbestos-containing pipe insulation is disturbed at a regulated facility.</p>	
Asbestos Notification and Inspection Requirements	
Definitions	
Facilities:	<p>Facilities subject to the rule include "all structures, installations, buildings and equipment, except for single family dwellings and apartments with four or fewer dwelling units." Single family dwellings and apartments are also subject to the regulation if:</p> <ul style="list-style-type: none"> -There is more than one building at a site being renovated or demolished, or -The building had been used for, or is being removed for a commercial or public use, or is to be used as a training burn exercise.
Demolition:	<p>In addition to the total destruction of a structure, demolitions include "the removal of any structural load-bearing member from a facility together with any related handling operations or the intentional burning of a building: (training burns conducted by a fire fighting agency). Also, the separation of a structure from its foundation prior to relocation is a demolition.</p>
Renovation:	<p>Altering a facility or one or more facility components in any way, including the stripping or removal of regulated asbestos-containing material (RACM) from a facility component. Renovations include all activities in which asbestos could be disturbed at a regulated facility, including the clean up and removal of debris from buildings which have burned.</p>

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT
Compliance Assistance Bulletin- December, 1994
Asbestos Synopsis

<p>Definitions, Continued</p> <p><i>Regulated Asbestos-Containing Materials (RACM) include:</i></p> <p><i>Friable Asbestos-Containing Material (ACM):</i></p> <p><i>Category I nonfriable ACM:</i></p> <p><i>Category II nonfriable ACM:</i></p>	<p>(1) Friable asbestos-containing material (ACM). (2) Category 1 nonfriable ACM in poor condition and "has become friable" or that has or will be subjected to sanding, grinding, cutting, or abrading. (3) Category II nonfriable ACM that has a high probability of becoming, or as become, crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation.</p> <p>Any material containing more than 1 percent asbestos, as determined by Polarized Light Microscopy (PLM) testing, which, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure.</p> <p>Any asbestos-containing packings, gaskets, resilient floor coverings, and asphalt roofing products containing more than 1 percent asbestos as determined by PLM testing.</p> <p>Any asbestos-containing materials, excluding Category 1 ACM, containing more than 1 percent asbestos as determined by PLM testing, which when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure.</p>
<p>Inspection: done by, or under the direction of a Cal-OSHA certified consultant prior to:</p> <ul style="list-style-type: none"> ● Any regulated demolition. ● Any renovation activity in which more than 160 sq. ft. of any building material or 260 linear feet of pipe insulation will be disturbed. An inspection is not required if the material to be disturbed is stipulated to be asbestos-containing and will be removed in accordance with the NESHAP. <p>Inspection Report Must Include:</p> <ul style="list-style-type: none"> ● A schematic showing the location of all tested materials. ● The following data for all asbestos-containing materials: <ol style="list-style-type: none"> 1. The amount and description of each material. 2. Percent asbestos content. 3. Whether or not the material is friable. 	
<p>Notification: An asbestos notification must be submitted to the District <u>at least 10 working days prior to:</u></p> <ol style="list-style-type: none"> 1. Any regulated demolition. 2. Any renovation in which more than 160 sq. ft. or 260 linear ft. of RACM will be disturbed. <p>A copy of the Asbestos Inspection Report must be included with the Notification.</p> <p>Notification will not be considered complete, nor will the 10 working day notice period begin until all required information and fees have been submitted to the District.</p>	
<p>Fees: District Rule 3050 requires that nonrefundable asbestos fees be received along with asbestos job notifications. Fees must be paid for regulated asbestos abatement projects and regulated demolition projects, <u>whether or not asbestos is present.</u></p>	
<p>Demolition Release Form: The California Health and Safety Code requires that the city or county building official have proof of compliance with, or exemption from, the asbestos notification requirement before he or she issues a demolition permit.</p> <p>After the District has received a demolition notification and is satisfied that the NESHAP notification requirements have been complied with, the District will issue a Demolition Release Form to the person who submitted the notification.</p>	
<p>Recycle and Waste Disposal: The asbestos notification must also identify any building materials which will be recycled after removal from a project. The name of the recycling contractor and location of such activity must be identified.</p>	

DEPARTMENT OF TRANSPORTATION

P.O. BOX 2048 STOCKTON, CA 95201
(1976 E. CHARTER WAY/1976 E. DR. MARTIN
LUTHER KING JR. BLVD. 95205)
TTY: California Relay Service (800) 735-2929
PHONE (209) 941-1921
FAX (209) 948-7194



*Flex your power!
Be energy efficient!*

October 4, 2004

**10-SJ-99 PM 1.83
NOP/EIR SCH# 2004092016
Union Ranch Specific Plan**

Benjamin J Cantu, Jr.
City of Manteca
Community Development Department
1001 W. Center Street
Manteca, CA 95337

Dear Mr. Cantu:

Thank you for the opportunity to comment on the Notice of Preparation/Draft Environmental Impact Report (NOP/DEIR) for the Union Ranch Specific Plan. The proposed project plan will guide development of approximately 550 acres of land with low density residential, commercial/mixed use, and open space trails. The proposed site is located north of the city of Manteca between SJ I-5 and SJ 99, bordered by Airport Way to the west and Lathrop Road to the south.

Our Functional Units have reviewed this document and have the following comments:

Traffic Operations

1. A Comprehensive Traffic Impact Study will need to be submitted to Caltrans for review.
2. Caltrans will need to approve mitigations to impacts within the State's right of way.

Mr. Benjamin J Cantu, Jr.

October 4, 2004

2

Travel Forecasting

District 10 Planning staff will track the Union Ranch Specific Plan project estimates in our cumulative development database and will include the information in all future traffic impact analyses. Project impacts from this as well as other associated development projects will be re-evaluated at the time a Project Study Report requires a complete traffic study.

In the interim, it may be useful for your local jurisdiction to begin calculating and collecting appropriate traffic impact fees to ensure adequate financing for any infrastructure improvements that may be needed in the future as a result of this and other related development projects.

At a minimum, these fees should address impacts to mainline and interchange facilities in closest proximity to the project. Since the project also demonstrates ancillary impacts to other regional facilities, appropriate fees should be assessed to cover these radiated project impacts.

Since the SJCOG Regional Transportation Plan provides a listing of Freeway Mainline and Interchange transportation improvement projects to mitigate regional growth impacts over the next 25 years, the Union Ranch Specific Plan fair share contribution can be reasonably calculated as shown below:

- Based on SJCOG projections, the 1,619 new detached single-family units proposed for Union Ranch Specific Plan will contribute approximately 1% of the total housing growth estimated for San Joaquin County over the next 25 years. (486,363 population growth from 2005 – 2030 / 3.0 average persons per household = 162,121 new homes)
- To address the regional growth impacts over the next 25 years, the SJCOG RTP lists Mainline and Interchange transportation improvement projects in Tier I and Tier II that total \$1,647,587,000.
- It follows then, that the transportation improvement cost associated with each new home constructed in San Joaquin County is \$10,162.70. ($\$1,647,587,000 / 162,121 = \$10,162.70$)
- Since Measure K and other mechanisms are fully funding the projects listed in Tier I, the shortfall to fund Tier II projects reduces the cost per home to \$4,178. (Tier II total for Mainline and Interchange = $\$677,370,000 / 162,121 = \$4,178$)

Mr. Benjamin J Cantu, Jr.

October 4, 2004

3

- Finally, the total cost to mitigate state highway impacts associated with the Union Ranch Specific Plan single-family home development proposal is calculated to be \$6,764,182.

Keep in mind however, that even the Tier II listing may not be adequate to fully mitigate all foreseen impacts due to the 25 years of regional growth. Some consideration should be given to projects that may be included in the 2007 (and future year) RTP update project listings. The cost per home listed above may, in fact, be a conservative estimate.

Environmental

Caltrans District 10 Environmental Branch looks forward to reviewing the draft EIS when it becomes available.

If you have any questions, or would like to discuss these comments in more detail, please contact Lynn O'Connor, at (209) 948-7575 (email: loconnor@dot.ca.gov) or Darlene Tigner, at (209) 948-7952 (email: dtigner@dot.ca.gov).

Sincerely,



Tom Dumas, Chief
Office of Intermodal Planning

c: Scott Morgan, State Clearinghouse



**SOUTH
SAN JOAQUIN
IRRIGATION DISTRICT**

October 6, 2004

Kyle Kollar
City of Manteca
Community Development Dept.
1001 W. Center Street
Manteca, CA 95337

Re: Notice of Preparation of a Draft Environmental Impact Report for Union Ranch

Dear Mr. Kollar:

The South San Joaquin Irrigation District has completed its review of the above referenced development. The District requests that the following be made conditions of approval to the subdivision map:

1. The South San Joaquin Irrigation District owns, operates, and maintains a drainage facilities known as the FCOC, located approximately 1/4 mile west of the westerly boundary of the property described in the above referenced project. This drain consists of a large open canal that is used for District operations and permitted storm drainage discharges by the City of Manteca and others.

Upon review of the information supplied, there is some cause for concern for the District relative to the proposed project as it relates to potential discharge of drainage into the FCOC. The development may rely heavily upon drainage into the FCOC. Potential concern could be water quality issues that will need to be mitigated.

Additionally, the drainage canal has a limited capacity. This was identified in a recent hydraulic study that emphasized the need to make major improvement to the canal to accommodate any proposed additional inflows. Flows that are currently entering the facility are permitted under an extension of an expired agreement between the City of Manteca and the District. The two agencies are in the process of negotiating a new agreement that would consider including properties such as this that are not covered under the existing agreement and have not been covered under any previous agreements.

In order to enable staff to better evaluate any potential impacts relating to this project, more information relative to water quantity and quality will need to be provided. Further

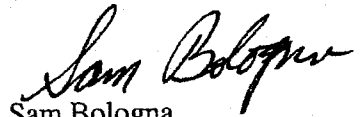
the environmental impact report will need to address those concerns and provide specific information concerning mitigation of those concerns. The District will also need to be included as an approving agency for any plans that will involve discharge of drain water into District facilities.

2. All District irrigation and drainage facilities which are determined by the District to be affected by the proposed development, shall be replaced with rubber gasket reinforced concrete pipe and shall be relocated, if necessary, to District approved locations. Further, hydraulic calculations to determine pipe size will be required for any design changes or relocations that are proposed on District facilities. In accordance with District standards, construction on District facilities is not allowed between February 15th and October 15th of any given year. As such, plans for pipeline improvements need to be received no later than mid-July (3 months before the end of water season), so that all construction work can be completed during the provided window period.
3. All improvements to the District facilities shall comply with the District's current standards, drawings, and policies. The developer shall enter into the necessary agreements, permits, etc., required by the District for construction of District facilities.
4. District facilities within the development, or impacted by the development, which provide storm water drainage or irrigation spill functions, shall not be abandoned, relocated, or replaced, unless alternate provisions are made to handle such drainage in accordance with District approval.
5. The property owner and/or developer shall execute Irrigation Service Abandonment Agreements and provide for the removal of irrigation and drainage facilities and structures on property no longer requiring irrigation service. The method of abandonment and extent of such removal shall be determined by District. Private irrigation facilities and easements shall be provided for private use to accommodate property that will still be using District water to irrigate adjacent to the development. The proposed connection of any such private facility to District facilities shall be approved in advance by the District.
6. Easements for all District facilities shall be dedicated on current District forms. Additional easements shall be dedicated for access to all manholes and control structures. All District easements shall be shown on the final map together with the District's standard acknowledgment. Easements for pipelines shall be a minimum of 30 ft. in width. Canal width easement will vary depending upon area needed to maintain and operate canal effectively. Necessary canal easement and canal improvements will be evaluated when plans are made available for review.
7. Improvement plans for both off-site and on-site improvements shall be submitted for review and approval by the District's Board of Directors. Prior to plan submittal, the developer shall submit a retainer for plan check and inspections required for the project in accordance with the current established fee schedule.

8. Upon completion of the project, the developer shall provide one complete set of "As-Built" drawings to the District for its future use.

If there are further questions please feel free to contact me at (209) 249-4617.

Sincerely,

A handwritten signature in cursive script that reads "Sam Bologna".

Sam Bologna
Engineering Department Supervisor



THOMAS R. FLINN
DIRECTOR



P. O. BOX 1810 - 1810 E. HAZELTON AVENUE
STOCKTON, CALIFORNIA 95201-3018
(209) 468-3000 FAX (209) 468-2999
www.co.san-joaquin.ca.us

THOMAS M. GAU
DEPUTY DIRECTOR

MANUEL SOLORIO
DEPUTY DIRECTOR

STEVEN WINKLER
DEPUTY DIRECTOR

BENTON ANGOVE
BUSINESS ADMINISTRATOR

October 8, 2004

Mr. Kyle Kollar
City of Manteca
Community Development Department
1001 W. Center Street
Manteca, California 95337

**SUBJECT: PUBLIC REVIEW COMMENTS OF THE NOTICE OF PREPARATION
OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE
UNION RANCH SPECIFIC PLAN**

Dear Mr. Kollar:

The San Joaquin County Department of Public Works has reviewed the above referenced document and our concerns, recommendations, and corrections are as follows:

The Storm Water Management Division offers the following comment:

Section 5.9 should include a study of any terminal drainage outlet that may be impacted by the proposed development of this area.

Thank you for the opportunity to be heard. Should you have questions or need additional information regarding the above comments, please contact me at 953-7624.

Sincerely,

CLAUDIA GEMBERLING
Environmental Coordinator

CG:to
TP-4J057-T1

c: Charles F. Kelley, Senior Civil Engineer
David Mendoza, Senior Civil Engineer

APPENDIX B

DRAFT UNION RANCH SPECIFIC PLAN

Union Ranch Specific Plan

Manteca, California



Prepared by
The HLA Group
Landscape Architects and Planners, Inc.
April 28, 2004

Prepared For: **Union Ranch Partners, LLC**
Manteca, California

Pulte Home Corporation
Pleasanton, California

Project Coordinators: **RLC Associates**
Manteca, California

Land Planner/Specific Plan: **The HLA Group Landscape Architects & Planners, Inc**
Sacramento, California

Civil Engineer: **Thompson-Hysell Engineers**
Modesto, California

Geotechnical Engineer: **Kleinfelder, Inc.**
Stockton, California

Traffic Engineering: **kdAnderson Transportation Engineers**
Loomis, California

Environmental Engineering: **EDAW**
Sacramento, California

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Section A. Specific Plan Summary

A.1 Introduction

The Union Ranch Specific Plan provides a comprehensive and orderly guideline for the development of 552.73 acres of new residential and commercial development within the City of Manteca-- all in concert with the 2023 General Plan. The Specific Plan proposes approximately 2000 single-family dwelling units in two distinct communities linked thematically with a common landscape, common bike and pedestrian trails, and a common materials palette for walls, fences and entry monuments. The plan area also includes a 38.9-acre commercial development fronting Lathrop Road. Of the total Plan Area, 355.82 acres shall be devoted to an active adult housing community, developed by Pulte Home Corporation as Woodbridge by Del Webb. The active adult community will be comprised of 1,425 single-family dwelling units, and will include a recreation center, parkland, open space and access to commercial uses. The remaining 127.77 acres devoted to residential uses will contain 535 traditional single-family dwelling units, as well as parkland, open space, as well as an extension of and access to the Tidewater Trail.

The Specific Plan is designed to provide a clear development program for the area it covers. This will be achieved by establishing the framework that will support development and ensure consistency within the Plan Area. The Specific Plan also outlines a program for providing supportive facilities and services and an implementation schedule to provide those services to meet development timelines. The Specific Plan addresses General Plan conformance in Section C, with reference to Circulation, Air Quality, Housing, Open Space and Conservation, and Community Design.

Specific Plans are authorized in Section 65450 of the California Government Code and are intended to provide the City of Manteca a review standard for evaluating various applications that come before it, for projects within the Plan Area. It also provides landowners with the requirements for their own design team to utilize when preparing specific site developments within the Plan Area, and to meet a minimum standard threshold while encouraging a consistent design theme.

Section 65450 requires the following information in a Specific Plan.

- a) Text and diagram which specifies the following:
 1. Distribution, location, and extent of the uses of land.
 2. Proposed distribution, location, and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waster disposal, energy, and other essential facilities proposed to be located within the area covered by the Plan and required to complete the Plan.
 3. A plan to implement the Plan including regulations, public projects, and financing necessary to carry out the Plan.
 4. Standards by which development will proceed, and standards for conservation and utilization of natural resources where this can be achieved.
- b) The relationship of the Specific Plan to the General Plan shall be stated.

This Specific Plan is divided into ten sections as outlined in the Table of Contents. Each of these Sections is to be used as a building block to meet the goals of Section 65450 of the California Government Code. The sections are summarized as follows:

Section A. Specific Plan Summary provides a brief overview of the planning area and planning process with sub-sections to discuss the project setting and regional context, development approvals and CEQA compliance.

Section B. Objectives of the Plan provides a general description of the goals and objectives of the Plan relative to land use, circulation, housing, open space, community design, and public facilities.

Section C. Land Use provides a further definition of the land use strategy and land use goals, and lists policies and development standards, as well as General Plan conformance for each land use.

Section D. Circulation provides an overview of the proposed transportation system including roadways, bikeways and walkways. Section D. illustrates typical improvements to new and existing right-of-ways.

Section E. Public Facilities discusses the law enforcement, fire, emergency services, parks and parkway elements of the Plan Area. This section identifies the proposed locations for public facilities and service ratios for the Plan Area.

Section F. Infrastructure summarizes the proposed systems for sewer, water and drainage. Detailed engineering studies have been prepared in support of the proposed land uses and will need to be periodically reviewed, revised, augmented and updated as detailed subdivision plans are submitted and approved.

Section G. Resource Management summarizes potential environmental issues and lists policies and standards to mitigate for impacts to natural resources in the Plan Area. This includes but is not limited to: water quality, air quality, wildlife, vegetation, and cultural resources.

Section H. Phasing and Financing summarizes the phasing of the backbone infrastructure and roadways. This includes a brief summary of construction costs for utilities and major improvements required for the project, as well as those benefiting the public at large.

Section I. Implementation and Administration describes the process by which subsequent submittals, or if necessary-- amendments to the Plan, are made.

Section J. Design Guidelines discusses the general parameters of community design including the selection of materials, finishes, plant palettes, and the arrangements of built objects such as signage, monuments and fencing. The design guidelines present the overall look and feel of the Plan Area, and provide development policies that establish control over the design of the community.

Five major master plans are found within the Specific Plan, covering Land Use, Circulation, Public Facilities, Infrastructure, and Design Guidelines. Collectively these master plans form the foundation the Specific Plan, and as a whole they set the criteria, design requirements, and performance standards for the creation of the Union Ranch Planning Area.

A.2 Project Setting and Regional Context

Union Ranch adjacent to the northern limits of the City of Manteca, San Joaquin County, California. Manteca is located 60 miles south of the City of Sacramento (the State Capital), 90 miles east of San Francisco, and 45 miles West of the Yosemite Valley. This places Manteca in the heart of California’s Central Valley with its level terrain gently sloping towards the west and the San Francisco Bay delta. The City and surrounding region has a rich agricultural history which is visually evident in the grid formed pattern of urban Manteca. The City is flanked by Interstate 5 to the west and bisected by Highway 99 to the east, each a major north-south transportation corridor; access to San Francisco is provided via Route 120.

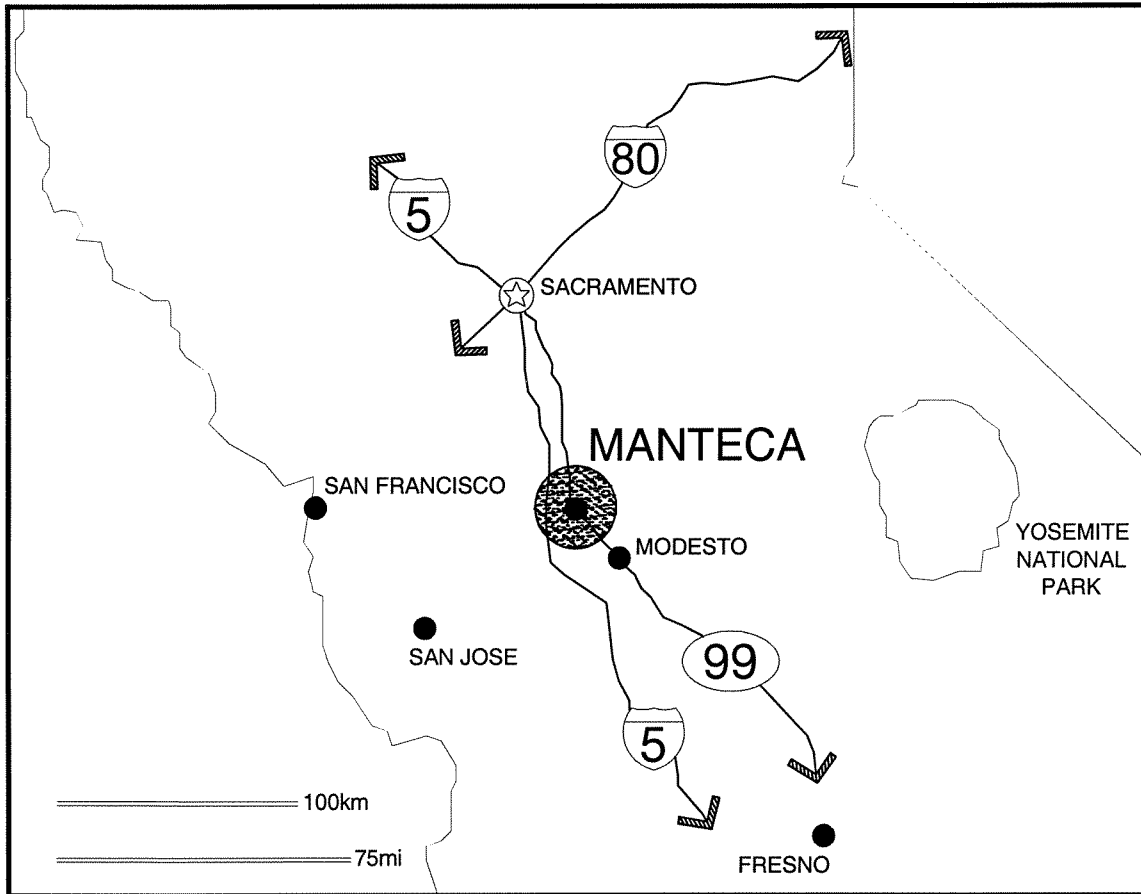


Figure A.2.1 Regional Context Map

The Union Ranch specific planning area is located north of Lathrop Road, which runs in an east-west direction linking Interstate 5 and Highway 99. The plan area itself is bisected by Union Road in a north-south direction. Union Road acts as a major link between Central Manteca and the town of French Camp. In 2003 the land area in which Union Ranch is located was included in the 2023 General Plan.

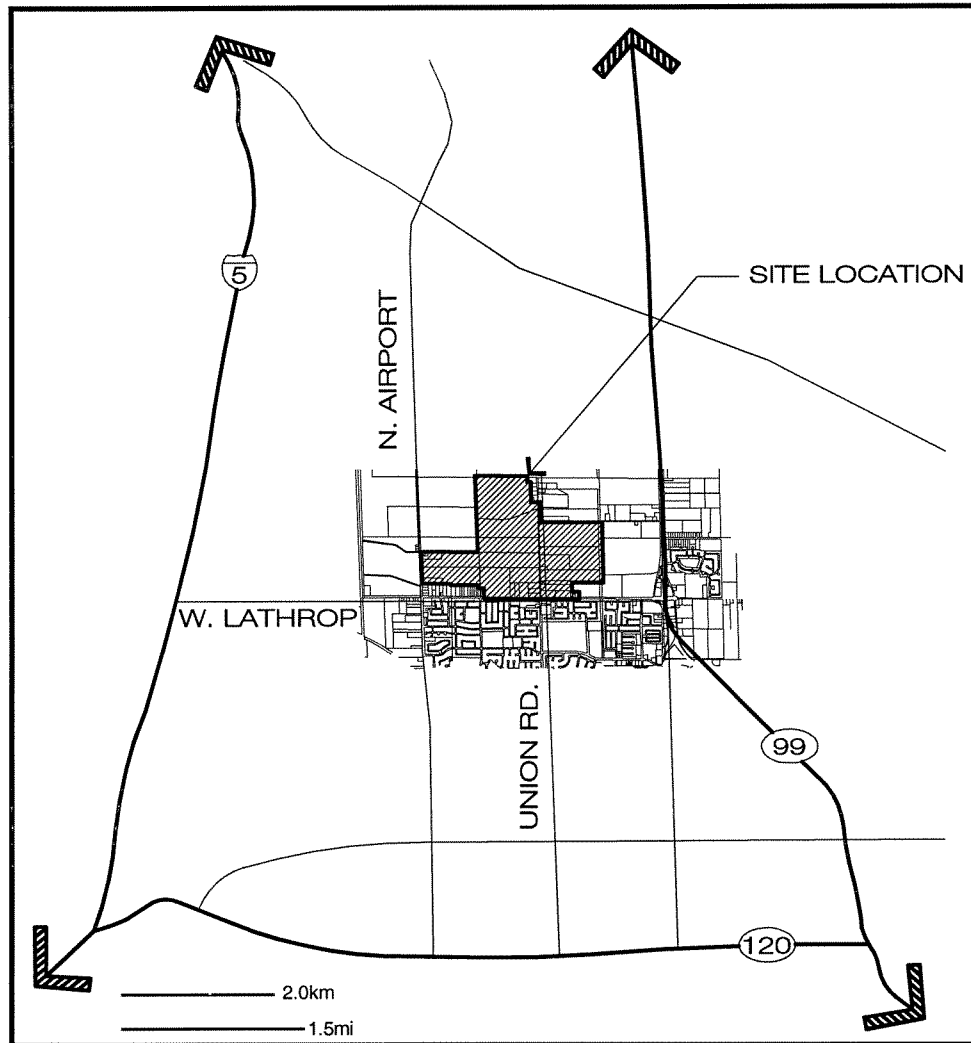


Figure A.2.2 Vicinity Map

Existing vegetation is chiefly agricultural in nature with the majority of visible plant material being fruit bearing orchard trees. A few large native Oaks are located to the northeast of the Union Road-Lathrop Road intersection. Existing residences located in the planning area are associated with the on-site farming activities. An existing hay/supply business is located on the northwest corner of the Union Road-Lathrop Road intersection. The balance of the plan area has been previously, or is currently, farmed.

South of Lathrop Road, at the southwest corner of Union- Lathrop Road, is a neighborhood retail center with a major chain supermarket; the southeast corner of the same intersection is zoned HDR and is partially improved with a new senior apartment complex. Other surrounding land uses to the north and west are agriculturally based. A few large lot residential parcels are to the north of the plan area fronting Union Road. To the East is the existing right-of-way of the Tidewater Railroad. It is currently utilized as a pedestrian/bicycle path south of Lathrop Road, extending to the central business district of Manteca. Delta College owns a large parcel to the east that is utilized for experimental agriculture with some classroom activity housed in a small existing building. The balance of adjacent parcels is dominated by typical single-family residential uses.

A.3 General Plan Consistency

The City of Manteca General Plan 2023 was adopted in October 2003 and it includes a larger General Plan area including all of the Union Ranch Specific planning area. The Specific Plan has been prepared to be in conformance to the General Plan.

A.4 Development Approvals

The approvals requested for this plan area as part of this Specific Plan include rezoning, tentative subdivision maps, utility and infrastructure master plans, development agreements, design guidelines, and associated environmental review.

The Union Ranch Specific Plan has been prepared pursuant to the provisions of the California Government Code, Title 7, Division 1, Chapter 3, Article 8, and Sections 65450 through 65457. The Code authorizes the City to adopt Specific Plans by resolution. Any subsequent development plans or agreements, tentative subdivision or parcel maps, and any other development approval must be consistent with the Specific Plan. Projects that are consistent with the Specific Plan will inherently be deemed consistent with the City's General Plan.

The Specific Plan is to provide a vehicle for implementing the City's General Plan on an area specific basis.

A.5 California Environmental Quality Act Compliance

All discretionary land use entitlement approvals associated with the implementation of the Specific Plan shall be subject to environmental review as required by the California Environmental Quality Act. An EIR covering all of the proposed land use applications and their associated environmental effects will be prepared by an independent consultant and incorporated into this plan by reference.

The California Environmental Quality Act requires identification of mitigation measures that may be incorporated into the approval of the project to lessen or eliminate significant environmental effects. It also requires a program of mitigation monitoring and reporting to assess the effectiveness of the mitigation measures. Such a program will be established for the Union Ranch Specific Planning Area.

Section B. Objectives of the Specific Plan

The Union Ranch Specific Plan has been designed as a clear development program for the area it covers and is supportive of the General Plan of the City of Manteca. The goals and policies of that General Plan have been addressed and a land use plan has been created that reflects the individuality of the Union Ranch Plan Area while supporting a development that will form the logical extension of urbanized Manteca. This individuality sets a high standard for community planning and design, anchoring the northern edge of the urban development envisioned by the 2023 General Plan. The attributes of the General Plan helped to determine the precise objectives of the Union Ranch Specific Plan and these objectives are itemized as follows:

Objective 1. Land Use

- Provide residential communities, within the City of Manteca, with supporting commercial, open space, and public facilities.
- Provide a range of housing types within the proposed residential framework proposed by the Specific Plan
- Provide appropriate design and buffers between uses in the Plan.
- Provide alternative access patterns, incorporating bicycle and pedestrian circulation.
- Integrate the planning area within the existing urban fabric of the City of Manteca.

Objective 2. Circulation

- Provide a safe and efficient circulation system for pedestrians, bicyclists and automobile traffic.
- Provide for future and current resident's requirements to provide adequate levels of service.
- Reduce bicycle/pedestrian conflict with the automobile.
- Provide safe and walkable communities.
- Conform to City Standards while introducing new community-based enhancements.

Objective 3. Housing

- Build upon the historical context of Manteca's housing stock.
- Provide a variety of housing options specific to the development programs proposed, including active adult and traditional single-family residential housing.
- Develop identifiable neighborhoods.
- Encourage and require energy conservation in the site planning and design of units.
- Encourage high quality materials throughout the Plan area.

- Provide ease of visual observation in the designs of units to secure the neighborhood in which they are located.

Objective 4. Open Space

- Establish a public open space system that is easily accessible to all residents of the Plan Area, exclusive of any private recreation facility.
- Open space areas shall be located to encourage maximum visibility for self-policing.
- Provide active and passive needs of the residents with a diversity of recreational opportunities.
- Bicycle and pedestrian paths shall link neighborhoods to commercial developments, parks and open space and the surrounding community.

Objective 5. Community Design

- Develop a comprehensive project theme that unifies the plan area while providing distinct and identifiable development opportunities for Woodbridge by Del Webb as well as the traditional residential development of Union Ranch East.
- Integrate the plan area into the existing urban fabric by reflecting the heritage of Manteca.
- Develop Design Guidelines which establish criteria for all land use features, whether public improvements, or on site developments, to address landscape; signage; architecture; parking; lighting; site furnishing; and similar visual built environments.
- Develop an enforceable program to insure conformance to the Design Guidelines.
- Encourage energy efficient design solutions in the built product.
- Encourage pedestrian plazas and group gathering areas within commercial use areas.

Objective 6. Public Facilities

- Develop a strong pedestrian and bicycle circulation plan.
- Ensure adequate public facilities to minimize impact on existing public infrastructure.
- Develop an appropriate phasing plan.
- Right of way improvements that include landscape infrastructure.
- Easily accessible access in distance and conveyances to provide public educatio

Section C. Land Use

C.1 Land Use Strategy

The Union Ranch Specific Plan Area is approximately five hundred and fifty acres located north of Lathrop Road and bisected by Union Road. The site is generally flat with a gentle slope to the west. The existing land use is, or has been, chiefly agricultural in nature. Similarly, adjacent land uses to the north and east are currently used for agricultural purposes, with industrial uses located to the west. To the south there is urbanized Manteca with more intensive development, including commercial, residential, and public/quasi public land uses.

The strategy of the Specific Plan is to develop a residential community that supports the logical extension of the existing developed portion of the City of Manteca. The organizing principal of the land use designations in the planning area is the arrangement of two residential neighborhoods—one designed as an age restrictive active adult community known as Woodbridge by Del Webb, and the other as a traditional single-family development known as Union Ranch East. The defining character of each will be a shared relationship to open space and parkland, and a strongly defined circulation system with a common landscape theme.

The Plan respects the existing commercial hub that exists at two major right-of-ways by placing Commercial Mixed Use Plan designations on the northeast and northwest corners of the Union Road/Lathrop Road intersection. The Plan expands upon existing Public \ Quasi-Public lands by allowing expansion of the existing church facility to the north of its current property line. An east-west Pedestrian/Bicycle Open Space Corridor links to an open space corridor that transverses north-south to provide seamless access to common areas and open space corridors throughout the Plan Area. In addition, the Plan preserves the Tidewater Open Space Corridor on the East side to connect to the existing corridor south of Lathrop Road. The Plan has also been designed with enhanced right-of-ways to improve and encourage pedestrian/bicycle access internally within the Plan Area, and to connect to the existing urban fabric of greater Manteca. (See Figure C.1.1) The strategy is to have designated land uses, with distinct development arrangements, but commonly linked through a landscaped-based design program.

C.2 Land Use Goals

The Union Ranch Specific Plan is intended to create two vibrant and distinct communities within a single planning area. The design of each shares a common community theme in material and plant palettes, a shared circulation system with access to arterial roadways and public bike and pedestrian pathways, as well as a shared access to the proposed commercial mixed-use development located along Lathrop Road. The differences between the two residential communities shall be defined by the demographic mix of the residents and housing product types found in each community.

The western portion of the Plan Area, totaling approximately 356 acres will be developed by Pulte Home Corporation as an active adult community known as Woodbridge by Del Webb. Land use goals specific to Woodbridge are as follows:

- Establish a community that can provide for the special social, recreational and housing needs for active adults who share common interests and lifestyles.
- Enhance living spaces by integrating the natural and built environments.
- Provide recreational amenities that include dynamic and passive activities with an emphasis on the design of landscape spaces that encourage interaction between residents, with ease of access by bike or on foot to recreational amenities.
- Maximize the potential for energy conservation through building and landscape design and orientations that recognize the climatic conditions of the area.
- Include a mix of housing styles on varying lot sizes that reflect the desires of the active adult marketplace.
- Establish a community that is safe for residents and buffered from noise and traffic and other nuisance factors.
- Integrate residential and non-residential uses through a highly developed landscape, and provide a provide bicycle and pedestrian paths to encourage a minimized use of the auto for shopping and leisure activities.
- Set a high standard for design for both architecture and landscaping with guidelines that will assure quality and compatibility throughout the Plan Area.
- Include visual landmarks in the form of prominent buildings, formal landscape corridors along major streets, and permanent views through open space corridors to provide visual orientation within the community.

The eastern portion of the Plan Area, known as Union Ranch East, shall be developed as a traditional single-family residential community, but with an emphasis on access to open space and parkland. Union Ranch East shall have a highly developed community theme based in a comprehensive palette of entry monuments, walls and fences, and landscape corridors. A summary of land use goals specific to Union Ranch East are as follows:

- Enhance living spaces by integrating the natural and built environments.
- Provide a community that emphasizes the design of landscape spaces that encourage interaction between residents, with ease of access by bike or on foot to recreational amenities.
- Maximize the potential for energy conservation through building and landscape design and orientations that recognize the climatic conditions of the area.
- Establish a community that is safe for residents and buffered from noise and traffic and other nuisance factors.
- Set a high standard for design for both architecture and landscaping with guidelines that will assure quality and compatibility throughout the Plan Area.
- Integrate residential and non-residential uses through a highly developed landscape, and provide a bicycle and pedestrian paths to encourage a minimized use of the auto for shopping and leisure activities.

The southern portion of the Plan Area shall be developed as a commercial mixed-use environment anchored by the intersection of Union and Lathrop Roads. Totally approximately 40-acres, the CMU designated parcels are bisected by Union Road and will be accessible from Union Ranch East and Woodbridge by Del Webb by vehicles, bicyclists and pedestrians. A summary of land use goals specific to the Commercial Mixed Use parcels are as follows:

- Integrate a vibrant commercial mixed-use development into the residential development by providing access for pedestrians, bicycle and electric vehicles.
- Integrate a mix of compatible uses on a single site(s) that include sales, services and activities that adjacent residents might require on a daily basis.
- Reduce vehicle trips for adjacent residents by connecting directly to multi-use paths and dedicated bike lanes.
- To provide a variety of services that include housing, retail and office opportunities built around an architectural and landscape theme common to the planning area.
- To provide opportunities for sustainable economic development at the intersection of Lathrop and Union Roads.
- Provide a vibrant and attractive gateway to the planning area.

C.3 Land Use Summary

The following subsection provides a general summary and description of different land use categories within the Plan Area and the permitted uses and development standards for each land use designation. Also described is the location of the land uses and any special design considerations applied to their proposed arrangement. The Specific Plan applies development standards that are modified, in some instances, from the Manteca Municipal Code, Title 17, Zoning. The land uses are consistent with the Land Use designations of the 2023 General Plan with modifications proposed to apply a mix of housing types defined by lot size and the character of the different neighborhoods found in Woodbridge and Union Ranch East.

For the purposes of the Specific Plan, the modifications in the permitted uses and development standards the suffix “WB” is attached to each zoning category in the Woodbridge by Del Webb portion of the Plan Area. Similarly, the suffix “UR” is attached to each zoning category in the Union Ranch East portion of the Plan Area. A modification to existing zoning categories is proposed with the additions of “R-1-4-WB” and “R-1-5-WB” which designates single-family residences on individual lots that are a minimum of 4,600 and 5,500 square feet in size.

Figure C.1.1 shows the general plan designations, while Figure C.1.2 shows the proposed land use zoning. The Plan has followed the Land Use Classifications of the 2023 General Plan with the following description of each:

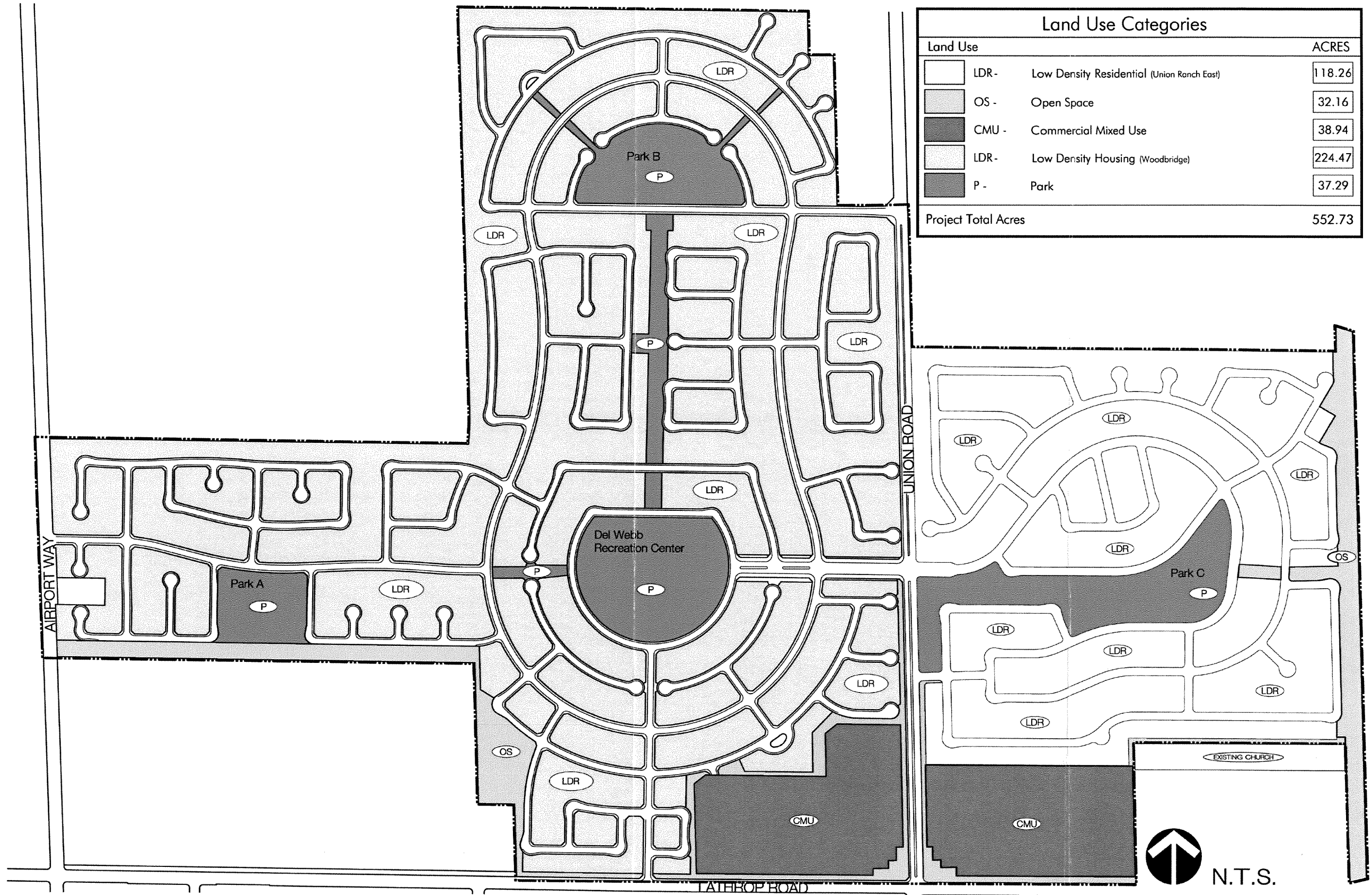


Figure C.1.1 Land Use Map

Table C.3.1 Land Use Summary

GENERAL PLAN DESIGNATION	LAND USE ZONE	# OF DWELLING UNITS	% OF TOTAL	TOTAL ACREAGE	% OF SITE	
Commercial/Mixed-Use	CMU	N/A	N/A	38.94	7%	
Low Density Residential- Union Ranch East Minimum Lot Size: 6,600 sf.	R-1-6 UR	535	27%	127.77	23%	
Low Density Residential- Del Webb Minimum Lot Size: 7,500 sf.	R-1-6-WB	421	22%	116.08	21%	
Low Density Residential- Del Webb Minimum Lot Size: 5,500 sf.	R-1-5-WB	614	31%	126.20	22%	
Low Density Residential- Del Webb Minimum Lot Size: 4,600 sf.	R-1-4- WB	390	20%	64.98	12%	
Open Space/Trails	OS	N/A	N/A	32.16	6%	
Park	P	N/A	N/A	37.29	7%	
Major R/W's*	N/A	N/A	N/A	9.31	2%	
Total		1960		552.73	100%	3.55 du/ ac

* Major R/W's include the portions of Airport Way, Lathrop Road, and Union Road outside the residential and commercial use areas.

Low Density Residential (LDR)

The Union Ranch Specific Plan Area provides Low Density Residential development in two separate communities. The residential development portion of the planning area accounts for 78% percent of the total Plan Area with 1,425 single-family active adult units, and 535 traditional single-family units. The Low Density designation in the 2023 General Plan provides for conventional neighborhoods of single-family residences with densities of 2.1 to 8.0 dwelling units per acre.

The Specific Plan envisions two unique residential environments, each with a variety of architectural styles, and lot configurations. The total population for the entire planning area is estimated to be approximately 4,229 persons, with 2,565 residents estimated for Woodbridge by Del Webb (WB)--assuming 1.8 dwellers per household, and 1,664 residents estimated for the Union Ranch East (UR) development based on 3.11 persons per dwelling unit. All parcels

shall be adjacent to an open space, or simple walking distance to one via a circulation system of landscape corridors or enhanced right-of-ways. This system serves to connect all the residential developments to each other, to the surrounding land uses and to existing community services.

The Union Ranch Specific Plan provides for an overall single residential density average of 3.5+/-dwelling units per acre. A variety of single-family detached housing types will be provided with varied lot sizes to provide a variety of housing product types. Therefore, the Specific Plan provides for modified setbacks in the single-family residential zone and provides a modified minimum lot size to accommodate a variety of housing types. A summary follows in Table C.3.2

Table C.3.2 Lot Summary

APPLICABLE ZONES	LOT DIMENSION	SQFT.	% OF TOTAL	TOTAL UNITS
R-1-6 UR (LDR)	60' X110'	6,600	27%	535
R-1-6 WB (LDR)	75' X 100'	7,500	22%	421
R-1-5 WB (LDR)	55' X 100'	5,500	31%	614
R-1-4 WB (LDR)	46' X 100'	4,600	20%	390
TOTALS			100%	1,960

Commercial-Mixed Use (CMU)

The Commercial Mixed Use Plan Area totals 38.9 acres and is located at the intersection of Union Road and Lathrop Road. This Land Use will be designed to maximize non-vehicular access from the surrounding land uses while facilitating vehicular access in an unobtrusive form.

This area is designed to be the centralized hub of commercial and office component at densities of 15.1 to 25 units per acre. The CMU designation does not preclude high-density housing that may be accommodated on 35% of the CMU designated land area. The land designated CMU shall be intended to primarily service the Plan Area, with a minor role of serving the existing surrounding land uses. The components of the CMU development will distinguish it from conventional neighborhood commercial or office developments, and may include:

- Space for community activities within the center.
- On-site storm water detention facilities designed as a landscape amenity.
- Public facilities where feasible, such as a post office, library, fire station or satellite government office.
- A neighborhood work center as defined in the General Plan.
- A shared parking program for the different uses.
- Refer to Table C.4.1 for a complete list of permitted uses.

The characteristics of the CMU development will include a strong architectural connection between the different uses with a clear common design theme. Site design, architecture, and signage are intended to be harmonious with the neighborhoods and will conform to the design guidelines found in Section J.

Open Space (OS) and Park (P)

Open space is a central feature of the Plan Area, and is created to provide a framework for the overall Land Use Plan. The aggregate of approximately thirty-two (32.16) acres of open space (not including parkland) creates an aesthetic view shed between land uses while enhancing alternate circulation opportunities. It provides a means for residents to recreate and relax, to safely and efficiently walk or bike within the community, and it also provides a visual buffer for differing land uses in the community. The overall enhancement to the quality of life is driven by the open space element, which includes open greenbelts and visual corridors, landscape setbacks adjacent to right-of-ways, and open space trail systems.

Although defined separately from Open Space (OS) in the General Plan, Parks are an important part of the open space system of Union Ranch. With approximately thirty-seven (37.29) acres of the Plan Area devoted to recreational open space amenities, (not including private recreational centers), the park component of the Plan will be an integral part of community life at Union Ranch. Public park space in Union Ranch will include recreational amenities such as ball fields, tot lots and play apparatus, benches, picnic areas, shade structures, and landscaping all in conformance to City of Manteca standards. The designated parkland in Union Ranch shall also serve as on-site storm water detention facilities. The function of such shall be integrated into the general park form.

C.4 Permitted Uses and Development Standards

Table C.4.1 provides a detailed allocation of permitted uses in each land use category. Uses are identified with a “C” for conditionally permitted uses and “P” for permitted uses. Uses not identified as either “C” or “P”, are not permitted in the Plan Area.

Table C.4.1 Permitted Land Use Summary

GENERAL LAND USE DESIGNATION	LDR	LDR	LDR	CMU	OS	P
SPECIFIC PLAN CLASSIFICATION	R-1-6 - UR/WB	R-1-5 - WB	R-1-4 - WB			
Residential Use Type						
Apartment				P		
Boarding/Rooming House				C		
Community Care Facility				C		
Condominium Townhouse				C		
Condominium Apartment				C		
Duplex	P	P	P			
Triplex			P			
Secondary Residential Unit	C					
Senior Citizen Housing Dev.	P	P	P			
Single-family Attached			C			
Single-family Detached	P	P	P			
Agricultural Use Type						
Crops for Use of Resident	P	P	P			
Recreational/Entertainment and Tourist Facilities Use Type						
Health Club				C		
Park or Playground	P	P	P	P	P	P
Swimming Pool-private	P	P	P			
Tennis Court	P	P	P	P		P
Theater-live				C		
Office Use Type						
Business or Professional				P		
Financial Institution, incl. Bank, S&L, or Credit Union				P		
Real Estate				P		
Temporary On-site Real Estate Tract Sales	C	C	C	C		
Medical/Dental/Optical				P		
Executive Suites				P		

GENERAL LAND USE DESIGNATION	LDR	LDR	MDR	CMU	OS	P
Clerical Support Services				P		
Copy and Graphic Reproduction Services				P		
Retail Sales Use Type						
Antiques				P		
Art Gallery				P		
Bicycle				P		
Bookstore				P		
Christmas Tree- temporary				P		
Clothing and Apparel						
Computer/Communications/ Electronics				P		
Drug Paraphernalia/ Health Supplies				P		
Drugs and Pharmaceuticals				P		
Fabric/Drapery/Upholstery				P		
Floor Covering				P		
Florist				P		
Furniture/ Appliance				P		
Gardening/Landscape Supply				C		
Gift and Card				P		
Gun				P		
Hardware-specialty				C		
Hobbies/Craft Supplies				P		
Home/Office Furnishings				P		
Jewelry/Watches				P		
Lapidary				P		
Lawnmower				C		
Leather Goods/Luggage				P		
Locksmith/Lock-Key Shop				P		
Movie Rental				P		
Music Records/Tapes/CD/ DVD				P		
Musical Instruments/Lessons				P		
Office Machines/Equipment				C		
Paint and Wall Paper				P		
Photo. Supply/Camera				P		
Post Office/Packaging/ Delivery Service				P		
Pottery/Ceramics/Statuary				P		

GENERAL LAND USE DESIGNATION	LDR	LDR	MDR	CMU	OS	P
Shoes				P		
Sporting Goods/Athletic Equipment				P		
Stationary/Office Supply				P		
Swimming Pool Supply/ Outdoor Furniture/Outdoor Cooking Equipment				P		
Toys/Hobbies/Gifts				P		
Variety				P		
Food and Beverage Retail Use Type						
Bakery -Small				P		
Brewery-Micro				C		
Catering				C		
Convenience Market				C		
Drive in Food Market/Dairy				C		
Farmers Market				C		
Food Store				P		
Fruit Stand				P		
Liquor Store				P		
Specialties, incl. Meat/Veg./ Health Foods or Candy				P		
Supermarket				C		
Eating and Drinking Establishments Use Type						
Bar/tavern or Cocktail Lounge				C		
Ice Cream Parlor				P		
Refreshment Stand/Kiosk				P		
Restaurant—sit down				P		
Restaurant –take out				P		
Services Use Type						
Artists Studio				P		
Automobile Rental				C		
Automobile Services-- specialized				C		
Automobile Service Station				C		
Automobile Wash—Full Service				C		
Barber or Beauty Shop				P		
Carpet Cleaning				P		

GENERAL LAND USE DESIGNATION	LDR	LDR	MDR	CMU	OS	P
Equipment—Light Rental				C		
Furniture Cleaning/Refurb./Upholstery				C		
Interior Decorator				P		
Laundromat—Self Service				P		
Laundry/Dry Cleaning/Pressing—Pick Up Only				P		
Pet Grooming				P		
Photography Studio				P		
Picture Framing				P		
Printing/Cartography/Lithography/Blue Printing				P		
Publishing				C		
Shoe Shine Stand				P		
Specialized Services—Multiple Occupancy				C		
Tailor/Dressmaker				P		
Tanning Salon				P		
Travel Agency				P		
Veterinary Out-patient Clinic				P		
Transportation Use Type						
Multi-modal Transportation Station				P		
Taxi Depot				P		
Information/ Ticket Kiosk				P		
Services Use Type						
Art Gallery—Public/Non Profit				C		
Child Day Care Center				C		
Church				C		
Clinic—Medical/ Physical Therapy				C		
Club/Lodge				C		
Convalescent Hospital				C		
Community Care Facility--Senior				P		
Community or Senior Citizen Center				P		
Fire Station				P		
Government Office/ Building				P		
Library				P		
Museum				P		

GENERAL LAND USE DESIGNATION	LDR	LDR	MDR	CMU	OS	P
Nursing Home				C		
Post Office				P		
Education Use Type						
College/University Extension				C		
Art/Craft/Music School				P		
Business/Trade School				C		
Dance School				P		
Driving School				P		
Martial Arts School				P		
Photography School				P		
Sound Studio/Radio/TV or Movie				C		
Special Events Sponsored by Organization				C		

Table C.4.2 detailed the development standards prescribed by the Specific Plan relative to the land use categories described above. Figures C.4.3 through C.4.12 illustrate examples of lot configurations for the single-family designations. More comprehensive development standards and general guidelines for community design are articulated in more detailed Design Guidelines found in Section J.

Table C.4.2 Development Standards

GENERAL LAND USE DESIGNATION	LDR	LDR	LDR	LDR	CMU	OS	P
SPECIFIC PLAN CLASSIFICATION	R-1-6 - UR*	R-1-6 - WB	R-1-5 - WB	R-1-4 - WB			
Floor Ration					1.0	N/A	N/A
Minimum Lot Area (sf)	6,600	7,500	5,500	4,600	N/A	N/A	N/A
Minimum Lot Width (ft)	60	75	55	46	N/A	N/A	N/A
Minimum Lot Depth (ft)	110	100	100	100	N/A	N/A	N/A
Minimum Front Yard Setback to Garage Door (ft)	20	15	15	15	N/A	N/A	N/A
Minimum Front Yard Setback to Dwelling (ft)	20	15	15	15	N/A	N/A	N/A
Minimum Side Yard Setback-One Side (ft)	5	5	5	5	N/A	N/A	N/A
Minimum Side Yard Setback-Both Sides	12	5	5	5	N/A	N/A	N/A
Minimum Rear Yard Setback (ft)	20	15**	15	15	N/A	N/A	N/A
Maximum Lot Coverage (% of Lot) Single Story	45%	50%	55%	N/A	N/A	N/A	N/A
Maximum Lot Coverage (% of Lot) Two Story	40%	40%	50%	N/A	N/A	N/A	N/A
Maximum Building Height	2 stories / 30 feet	2 stories / 30 feet	2 stories / 30 feet	2 stories / 30 feet	3 stories / 35 feet	N/A	N/A
Maximum Building Height Adjacent to LDR	N/A	N/A	N/A	N/a	2 stories / 28 feet within 60 feet		

* City of Manteca Zone requirements

** 15 foot minimum setback to liveable structure, 10 foot minimum setback to porch.

C.5 Housing Element

Homes located in the Planning Area shall be market based in their design and size, all in compliance with the Specific Plan classifications prescribed in the proceeding table. The homes shall be designed and constructed in consideration of the statewide residential new construction energy efficiency program known as California Energy Star New Home Program, created by Pacific Gas & Electric and other allied energy companies. The goal of the program is to exceed energy efficiency in new home construction as required by the California Code of Regulations Title 24, California Building Code Part 6—by reducing energy requirements by a minimum of 15% of Title 24 requirements.

Woodbridge by Del Webb in Manteca is planned to offer 8 single-story homes, with three standard elevations, each specifically designed to meet the needs of today's active adults, age 55 and older. The plans range in square feet from approximately 1300 square feet to approximately 2600 square feet. Woodbridge will also participate in the Environments for Living Gold Package Plan for all homes built in the community, which includes the following components.

- Inspection of program ventilation and safety requirements, including fresh-air ventilation, CO detectors, and no unsealed furnaces/water heaters
- Inspection of thermal and air barriers
- 2-year heating and cooling energy use guarantee – if the homeowner's heating and cooling bills exceed the average guaranteed usage, 100% of the difference will be refunded
- Energy Star label
- 5-Star Home rating
- At least 30% more efficient than homes built to the 1993 MEC
- HERS Rating
- Blower door testing
- Reduced carbon emissions exhausted into the atmosphere as compared to standard homes
- Inspection of mechanical sizing/thermal components
- Visual inspection of duct insulation
- Testing for air tightness/pressure balancing

R-1-4 WB / R-1-5 WB

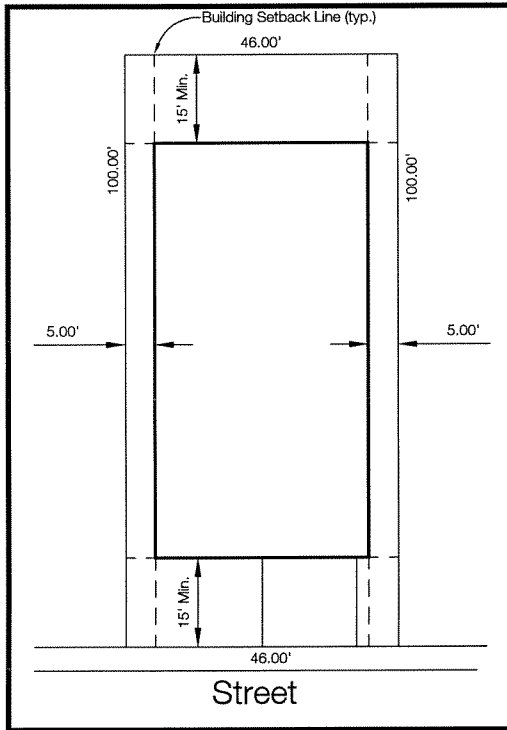


Figure C.4.3 46X100 Foot Lot

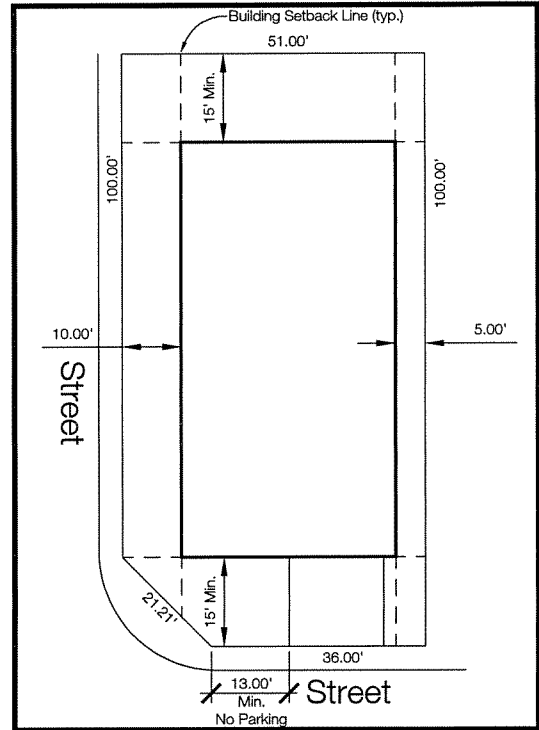


Figure C.4.4 51X100 Foot Corner Lot

R-1-4 WB / R-1-5 WB

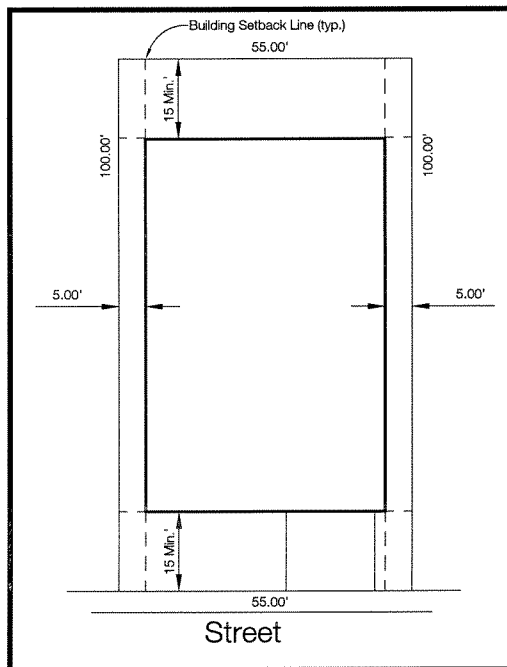


Figure C.4.5 55X100 Foot Lot

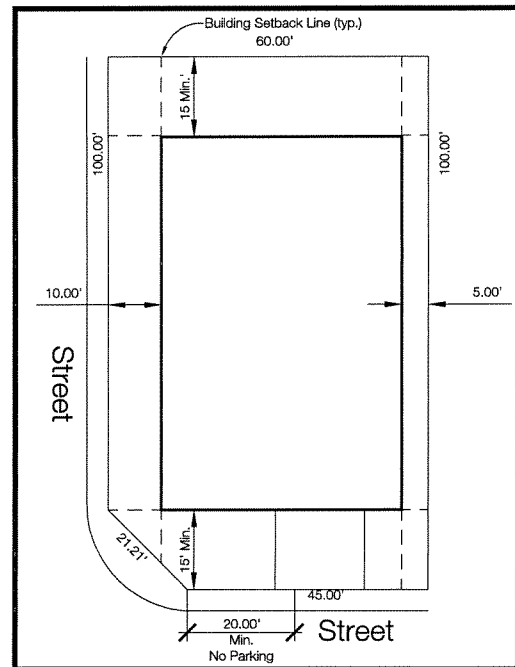


Figure C.4.6 60X100 Foot Corner Lot

R-1-4 WB / R-1-5 WB

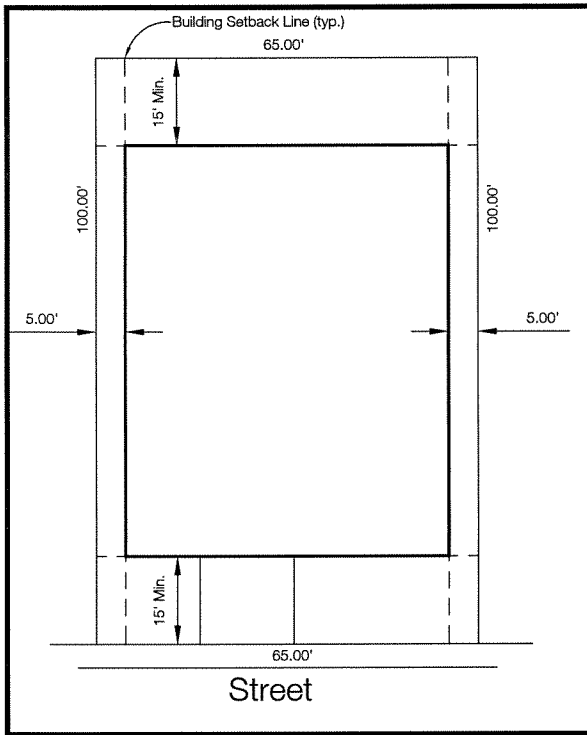


Figure C.4.7 65X100 Foot Lot

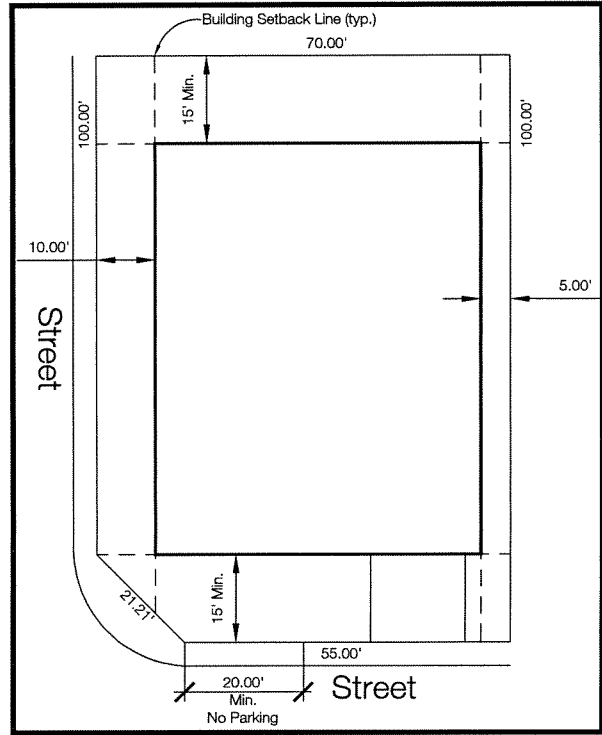


Figure C.4.8 70X100 Foot Corner Lot

R-1-6 WB / R-1-6 UR

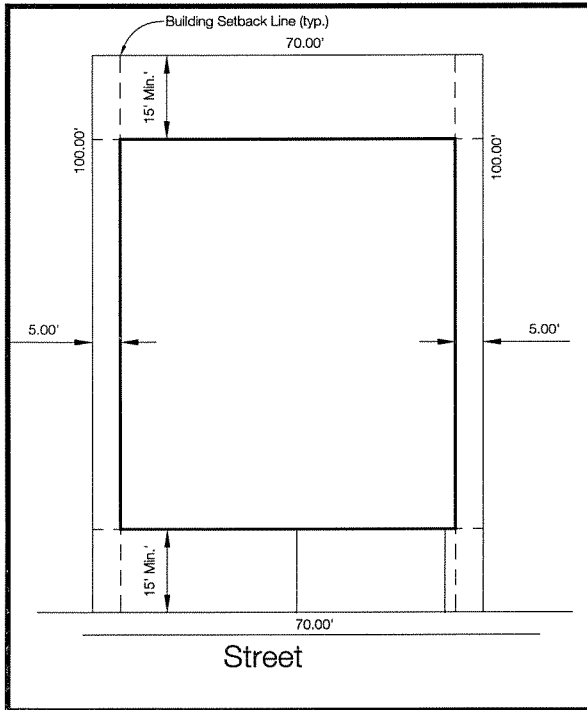


Figure C.4.9 70X100 Foot Lot

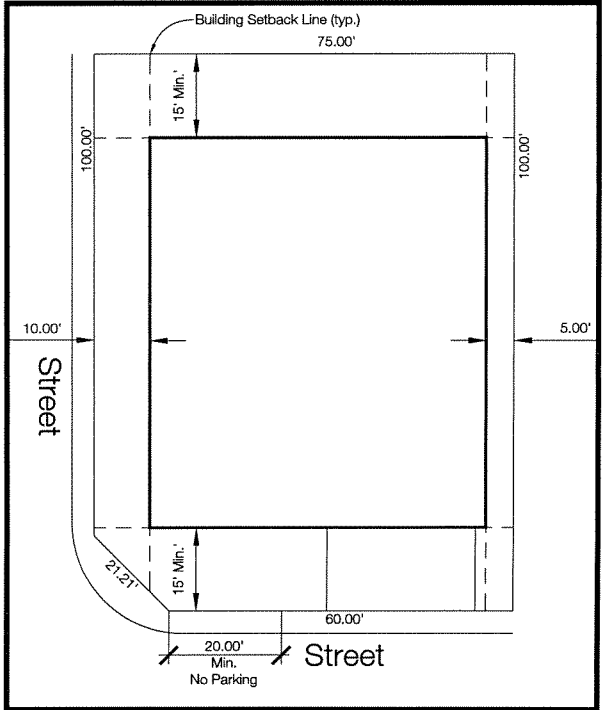


Figure C.4.10 75X100 Foot Corner Lot

R-1-6 WB

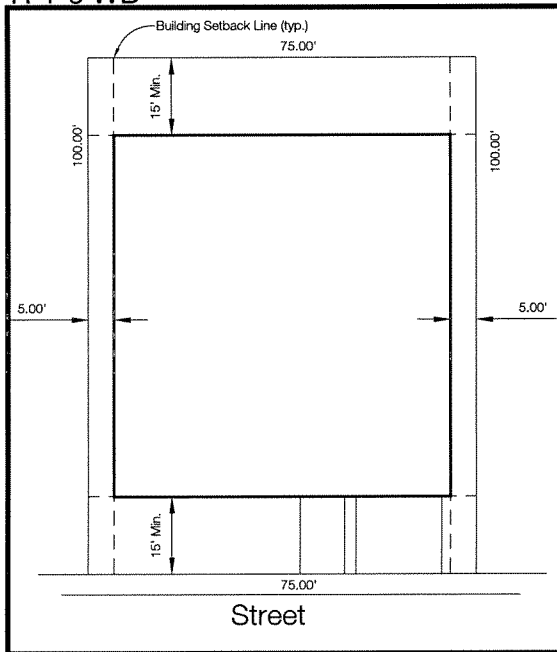


Figure C.4.11 75X100 Foot Lot

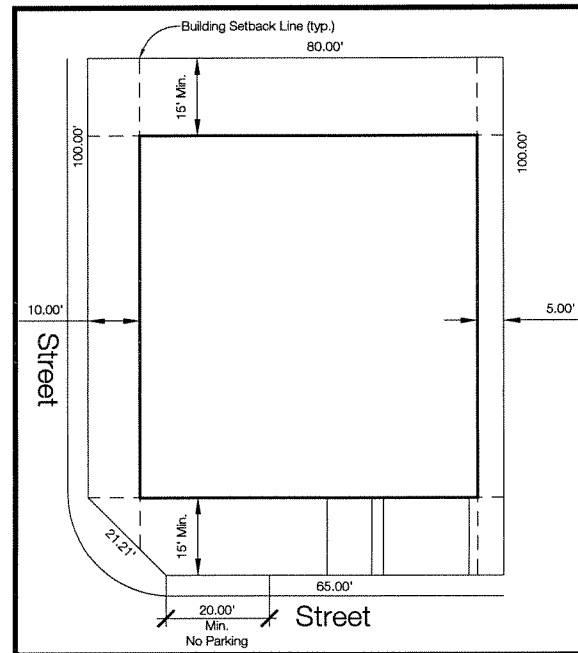


Figure C.4.12 80X100 Foot Corner Lot

C.6 General Plan Consistency

The Union Ranch Specific Plan has been prepared to be consistent with the City of Manteca's 2023 General Plan relative to land use. In reviewing this consistency this subsection addresses the policy elements of Community Design, Housing, Circulation, Air Quality, and Open Space and Conservation. For each relevant element the governing policy from the General Plan is provided followed by the supporting descriptive response outlining the Specific Plan's conformance to the General Plan's desired goals for appropriate land use. If the General Plan element has not been addressed then the goal of the elements is not applicable or relevant to the Specific Planning Area, and therefore it has been omitted.

C.6.1 Community Design

CD-P-1

Retain the existing central city core as the geographical center of the city.

Consistency: The Union Ranch Specific Plan enhances the central city core by not allowing conflicting land uses in the Plan to that which is provided in the Central City. In addition, the Plan encourages bicycle, pedestrian, and automobile access to the Central City. This is accomplished by linkage to the Tidewater open space corridor and respecting two existing major arterials in the Plan Area.

CD-P-7

The City shall implement neighborhood design standards in the Residential districts that contribute to the overall character of the neighborhood by emphasizing residential features that enhance the sense of community, ensure a safe pedestrian orientation, and minimize the visual prominence of garages.

Consistency: The Union Ranch Specific Plan provides design guidelines that will ensure a unique and distinctive character for the neighborhoods in the Plan Area. A design emphasis has been placed on the idea of a safe pedestrian environment and a strong sense of community.

CD-P-10

Establish city gateway features at intersection of Lathrop Road/Highway 99, Austin Road/Highway 99, McKinley Road/Highway 120.

Consistency: Not applicable to the Union Ranch Specific Plan, however, the enhanced landscape environment required by the Specific Plan will complement the City gateway proposed at Lathrop Road/Highway 99.

CD-P-12

Limit uses that require Soundwalls adjacent to the highways.

Consistency: Not applicable to the specific area of the Union Ranch Specific Plan because the planning area is not adjacent to either Highway 99 or Highway 120. However, soundwalls are proposed adjacent to major arterials, and residential collectors in the Plan Area.

CD-P-15

Major arterial streets shall include a common landscape theme that includes primary street trees, groundcover, sidewalks, bus shelters where required and lighting applied through out the city.

Consistency: The major arterial streets of the Union Ranch Plan, Lathrop, Airport Way and Union, offer a common landscape theme, which identifies and enhances the current standards on both right-of-ways. Enhanced right-of-way setbacks are provided which include primary street trees, sidewalks, enhanced lighting, and groundcover materials.

CD-P-16

The City shall develop special design standards for the perimeter road system comprising Lathrop Road, Austin Road, Woodward Avenue, and Airport Way to ensure their development as divided roadways.

Consistency: Section D, Circulation of the Union Ranch Specific Plan illustrates proposed improved right-of-ways on Lathrop Road and Airport Way. Medians are proposed to ensure the development of the sections as divided roads.

CD-P-21

Provide parks and schools as distinct centers for neighborhoods.

Consistency: The Union Ranch Specific Plan proposes a series of parks and connecting open space areas as the primary organizing element of the overall community design.

CD-P-22

Provide features that distinguish one neighborhood from another, such as natural features, entry gateways, street lighting or signage.

Consistency: The overall character of Union Ranch as identified in the Design Guidelines ensures a required uniqueness to Woodbridge and Union Ranch East, with enhanced entries using extensive plant palettes, stone veneers, sign walls, arbors and enhanced paving. For more information refer to the Design Guidelines contained in this document.

CD-P-23

Provide pedestrian systems that connect the center of adjacent neighborhoods.

Consistency: The Specific Plan offers a strong pedestrian circulation system throughout the Plan Area with a major trail system designed to traverse both east-west and north-south.

CD-P-24

The City shall ensure through design guidelines that the walls surrounding residential area neighborhoods are attractive and well designed.

Consistency: Design Guidelines illustrating the selection of built materials such as wall, arbors, fencing, lighting and paving has been identified in the Design Guideline section of this document.

CD-P-25

The City shall encourage mixed land uses but provide physical separation of design buffers between incompatible land uses.

Consistency: The CMU portion of the Planning Area shall be integrated into the overall community design with design guidelines that foster the overall character of the community. Direct access will be provided for pedestrians, bicyclists and automobiles. However, a visual and physical separation will be provided by a landscape corridor separating different land use designations.

CD-P-26

Residential neighborhoods shall be designed to provide access from the neighborhood streets to these open space corridors.

Consistency: Each neighborhood in the Union Ranch Planning Area shall be linked via a multi-use trail system to all major roadways, open spaces and public parks.

CD-P-30

Neighborhoods in new growth areas shall incorporate the following characteristics:

- The edges of the neighborhood shall be identifiable by use of landscaped areas along major streets of natural features, such as permanent open space. Primary arterial streets may be used to define the boundaries of neighborhoods. The street system shall be designed to discourage high volume and high speed traffic through the neighborhood.
- Neighborhoods shall be not more than one mile in length of width.
- Each neighborhood shall include a distinct center, such as an elementary school, neighborhood park(s), and/or mixed-use commercial area within a reasonable walking distance of the homes, approximately one-half mile.
- Each neighborhood shall include an extensive pedestrian and bikeway system comprised of sidewalks and bike lanes along streets and dedicated trails.

Consistency: The Union Ranch Specific Plan is supportive of this goal and has provided major permanent open space areas, trail systems, extensively landscaped corridors, neighborhoods compact in scale and very walkable, focused park centers to each neighborhood, and an extensive network of bike trails and multi-use paths.

CD-P-31

The pedestrian and bikeway system shall be linked to other pedestrian and bikeways in adjacent neighborhoods and, ultimately, to the Citywide Pedestrian and Bikeway Trail System to provide a continuous interconnected system.

Consistency: The Union Ranch Planning Area contains a network of bikeways and multi-use trails that cross the area in an east-west direction, as well as connect the Planning Area in a north-south fashion via the Tidewater Trail which ultimately connects to the CBD.

CD-P-32

New buildings shall be designed to be responsive to the local climate in a manner that provides shelter from sun and rain for pedestrians.

Consistency: New buildings in the Commercial Mixed Use area are encouraged to provide covered walkways in front of store facades to provide a continuous cover from the elements.

CD-P-33

Passive solar design features are encouraged whenever possible. Design of buildings should consider energy-efficient concepts such as natural heating and/or cooling, sun and wind exposure and orientation, and other solar energy opportunities

Consistency: New buildings in the Commercial Mixed Use area and the private recreation center are encouraged to consider energy efficient concepts, specifically utilizing solar energy opportunities. Refer to section C.5 for a description of energy efficient principles that are proposed for the residential housing component of the Plan.

CD-P-34

Solar collectors, if used, shall be oriented away from public view or designed as an integral element of the roof structure.

Consistency: Solar collectors are required to be oriented away from public view in the Specific Plan.

CD-P-35

Architectural elements that contribute to a building's character, aid in climate control and enhance pedestrian scale are encouraged. Examples include canopies, roof overhangs, projections or recessions of stories, balconies, reveals, and awnings.

Consistency: An Architectural themed character that addressed pedestrian scale and a Specific Plan character is addressed in the Design Guidelines.

CS-P-36

Encourage the creation of an urban forest comprised of street trees, residential lot trees, trees in non-residential parking lots and in public open space.

Consistency: The Union Ranch Specific Plan strongly enhances this policy by enhanced requirements for landscape improvements as outlined in the Design Guideline section of the Plan.

CD-P-37

Commercial centers should provide for convenient, attractive pedestrian access from street fronts and from adjacent commercial, office, and residential land uses.

Consistency: The CMU designated portion of the Plan Area is directly accessed via sidewalks, dedicated bike lanes and roadway. Direct access to Woodbridge is provided for the use of electric vehicles.

CS-P-38

Commercial centers should provide for convenient, attractive pedestrian access within the center with dedicated pedestrian ways between all building and pedestrian spaces such as plazas, courtyards and terraces at natural gathering areas within the site.

Consistency: The Specific Plan addresses pedestrian linkages in the Commercial Mixed Use area as well as throughout the Plan Area as established by the CMU designation in the 2023 General Plan, and further detailed in Section J, Design Guidelines.

CS-P-38

Commercial centers should provide for convenient, attractive pedestrian access within the center with dedicated pedestrian ways between all buildings and pedestrian spaces such as plazas, courtyards and terraces at natural gathering areas within the site.

Consistency: Pedestrian corridors are required in the Plan Area as established by the CMU designation in the 2023 General Plan, and further detailed in Section J, Design Guidelines.

CS-P-39

Integrating the pedestrian elements (walkways, plazas and terraces) with the buildings will enhance the pedestrian experience. The pedestrian relationship to building should be comfortable, convenient, and protected from extremes of sun and wind.

Consistency: Pedestrian plazas and terraces are strongly encouraged/required in the Commercial Mixed Use area and the private recreation center as established by the CMU designation in the 2023 General Plan, and further detailed in Section J, Design Guidelines.

CD-P-40

Outdoor plazas or other common areas that provide space for special landscaping, public art, food service, outdoor retail sales or seating areas for patrons are encouraged in retail settings appropriate to such pedestrian activity. The plaza or other common area shall be appropriately scaled to the retail use and shall be directly connected to the primary walkway.

Consistency: Special plaza terrace areas have been identified in the Specific Plan, which are interwoven into the pedestrian circulation system as established by the CMU designation in the 2023 General Plan, and further detailed in Section J, Design Guidelines.

CD-P-41

Buildings adjoining public spaces, including pedestrian ways shall be designed to allow the sun to reach sidewalks and plazas in the winter.

Consistency: Solar considerations for sun exposure in the winter and shade in the summer are encouraged in the Commercial Mixed Use area as detailed in Section J, Design Guidelines.

CD-P-42

Building configurations that provide "outdoor rooms", courtyards, paseos and promenades are encouraged.

Consistency: The overall architectural character of the Specific Plan encourages and supports this policy as detailed in Section J, Design Guidelines.

CD-P-43

Where practical, and in compliance with ADA standards, common areas that provide seating should be separated from the primary walkway by informal barriers, such as planters, bollards, fountains, low fences and/or changes in elevation.

Consistency: Plazas are enhanced to give special identity and separation from high traffic areas. All built feature shall be ADA compliant.

CD-P-44

Provide minimal levels of street, parking, building, site and public area lighting to meet safety standards and provide direction.

Consistency: An enhanced lighting program is provided in the Specific Plan. Special attention to pedestrian scale and safety is addressed. Refer to the Design Guidelines in Section J, for more information.

CD-P-45

Provide directional shielding for all exterior lighting to minimize the annoyance of direct or indirect glare.

Consistency: This goal is supported in the Design Guideline section of the Specific Plan.

CD-P-46

Provide automatic shutoff or motion sensors for lighting features in newly developed areas.

Consistency: This goal is supported in the Design Guideline section of the Specific Plan.

CD-P-47

The City shall adopt light and glare standards that minimize the creation of new light source and annoyance of direct and indirect glare.

Consistency: This goal is supported in the Design Guideline section of the Specific Plan.

CD-P-48

Allow pockets of agricultural activity to remain within the urban areas of the city where such uses are compatible with the surrounding urban use.

Consistency: The Union Ranch Specific Plan Area is planned to be phased over a period of years. Current agricultural activity will be allowed to remain as the Plan is incrementally developed.

CD-P-49

Allow use of small under-utilized parcels or undeveloped portions of parcels for temporary, seasonal agricultural activity, such as truck farms, strawberries, and small orchards.

Consistency: Not applicable because there are no small planned parcels in the Plan Area.

CD-P-50

In order to retain a visual reminder of the agricultural heritage, the City will permit the use of non-fruiting species, such as flowering pear and plum, as secondary accent trees in landscape corridors along major streets. The primary street tree shall provide a shade canopy over the street.

Consistency: The Design Guideline section of the Specific Plan outlines the use of ornamental flowering and non-fruiting tree species as an accent tree. The primary street tree shall provide a shade tree canopy.

C.6.2 Housing Element - General Plan Consistency**H-P-10**

The City shall encourage mixed use development opportunities, residential development in mixed-use neighborhoods, development that combines residential with service commercial and office uses, and the construction of second units (granny flats, carriage houses and similar small dwelling intended for one or two residents) in appropriate zoning designations.

Consistency: The CMU designated land use in the Plan Area encourages the use of higher density housing as a component along with other uses such as commercial endeavors and office uses.

H-P-11

The Commercial Mixed Use (CMU) zone designation shall allow residential use. Commercial Mixed Use (CMU) zones with in infill areas may develop completely with High Density Residential (HDR) land use.

Consistency: The CMU designated land use in the Plan Area encourages the use of higher density housing as a component along with other uses such as commercial endeavors and office uses.

H-P-25

In accordance with residential development standards of the State Government Code Sections 65583(c)(1) for factory built housing, the City shall allow mobile home and factory-built housing on a permanent foundation that meets all zoning requirements on any residentially-zoned parcel.

Consistency: The Specific Plan does not support the construction of mobile homes on permanent foundations in the Plan Area.

H-P-38

The City will maintain an adequate level of public services and infrastructure to meet the needs of existing and projected development, within the fiscal capacity of the City.

Consistency: The Plan is supportive of the Housing Element policy.

H-P-39

The City shall ensure with in fiscal limitations that park and recreation facility acquisitions and improvements keep pace with residential development.

Consistency: The Plan is supportive of the Housing Element policy.

H-P-40

The City shall ensure that housing developments pay their own way in terms of financing public facilities and services.

Consistency: The Plan is supportive of the Housing Element policy.

H-P-42

The City shall encourage the development of new housing units designed for the elderly and disabled persons to be in close proximity to public transportation and community services.

Consistency: The Plan is supportive of the Housing Element policy by providing senior or active adult housing immediately adjacent to commercial mixed-use development, which is located on major arterial corridors

H-P-45

The City shall prohibit discrimination in the sale or rental of housing with regard to race, ethnic background, religion, handicap, income, sex, age, and household composition.

Consistency: The Plan is supportive of the Housing Element policy.

H-P-47

The City shall give special attention in housing programs to the needs of special groups, including the disabled, large families, the elderly, and families with lower incomes.

Consistency: The Plan is supportive of the Housing Element policy by focusing on the provision of housing for seniors.

H-P-49

The City shall promote the use of energy conservation features in the design of all new residential structures.

Consistency: The Plan is supportive of the Housing Element policy by requiring that new home construction meet or exceed the current energy star rating system.

H-P-50

The City shall encourage residential construction of durable materials and designs suited to the local conditions that will contribute to reductions of the life-cycle cost of the dwelling.

Consistency: The Design Guideline section of the Plan outlines the minimum requirements for the design or new residential units and encourages the use of durable materials and innovative construction techniques to assist to reduce the life-cycle cost of the dwelling while providing a superior housing product.

H-P-51

The City shall encourage innovative building construction techniques and materials to reduce initial and ongoing housing costs and provide superior housing.

Consistency: The Design Guideline section of the Plan outlines the minimum requirements for the design of new residential units and encourages the use of durable materials and innovative construction techniques to assist to reduce the life-cycle cost of the dwelling while providing a superior housing product

H-P-53

The City shall encourage land use and circulation development patterns that facilitate the use of lower cost alternative vehicles.

Consistency: The Plan is supportive of the Housing Element policy by providing a multi-use path system that would allow small electric vehicles to operate in the Woodbridge portion of the Plan Area.

C.6.3 Circulation Element**C.6.3a Street System****C-P-1**

The City shall strive to attain the highest possible traffic levels of service (LOS) consistent with the financial resources available and the limits of technical feasibility. The impact of new development and land use proposal on

LOS should be considered in the review process.

Consistency: The Plan is supportive of the Circulation Element policy, for more information refer to the supplemental Circulation Study, prepared by kdAnderson Transportation Engineers.

C-P-2

Manteca's target for transportation LOS is to provide City-wide average LOS of C or better, and a minimum of LOS D at any individual location. LOS C, LOS D and the other Level of Service ratings as defined in current traffic engineering standards. This "C average, D minimum" shall be accomplished by attempting to provide LOS C at all locations, but accepting LOS D under the following circumstances:

- a. *Where construction facilities with enough capacity to provide LOS C is found to be unreasonably expensive. This applies to facilities, for example on which it would cost significantly more per dwelling unit equivalent (DUE) to provide LOS C than to provide LOS D.*
- b. *Where it is difficult or impossible to maintain LOS C because surrounding facilities in other jurisdictions operate at LOS D or worse.*
- c. *Where free-flowing roadways or interchange ramps would discourage use of alternate travel modes.*
- d. *Where maintaining LOS C will be a disincentive to use of existing alternative modes or to the implementation of new transportation modes that would reduce vehicle travel.*

Consistency: The Plan is supportive of the Circulation Element policy, for more information refer to the supplemental Circulation Study, prepared by kdAnderson Transportation Engineers, and contained in the appendix.

C-P-3

Streets shall be dedicated, widened, extended, and constructed according to the Street cross-section diagrams established in the City Improvement Standards. Dedication and improvement of full rights-of-ways as shown in the Street Standards shall not be required in existing developed areas where the City determines that such improvements are either infeasible or undesirable.

Consistency: The Plan calls for all streets to be dedicated, widened, and constructed at a minimum to the current City Standards shown as detailed in Section D. Circulation.

C-P-4

Major circulation improvements shall be completed as abutting lands develop or re-develop, with dedication of right-of-way and construction of improvements, or participation in construction of such improvements, required as a condition of approval.

Consistency: The Specific Plan is supportive of this element. Refer to Section D. Circulation for proposed roadway improvements in the Plan Area.

C-P-5

Development which would necessitate roadway improvements prior to the development of lands abutting those roadway improvements shall be required to make such improvements, or participate in such improvements, as a condition of approval.

Consistency: The Specific Plan is supportive of this element. Refer to Section D. Circulation for proposed roadway improvements in the Plan Area.

C-P-6

New development will pay a fair share of the costs of street and other traffic and transportation improvements based on traffic generation and impacts on levels of service in conformance with the standards and policies established in the Public Facilities Implementation Plan.

Consistency: As part of the implementation of the Specific Plan transport PFIP fees shall be paid, as well improvements made to existing arterial roads within the Plan Area.

C-P-7

The street system shall be expanded in a contiguous and concentric manner to serve new development areas and provide improved circulation for existing residents.

Consistency: The Specific Plan is supportive of this element. Refer to Section D. Circulation for proposed roadway improvements in the Plan Area.

C-P-8

Street improvements will be designed to provide multiple, direct and convenient traffic routes.

Consistency: The Specific Plan is supportive of this element. Refer to Section D. Circulation for proposed roadway improvements in the Plan Area.

C-P-9

Residential and collector street intersections with collector and arterial streets shall be aligned with other residential and collector streets, where feasible, to allow light electric vehicles (NEVs), bicyclists, and pedestrians to travel conveniently and safely from one neighborhood to another without using major streets.

Consistency: The Specific Plan is supportive of this element. Refer to Section D. Circulation for proposed roadway improvements in the Plan Area, as well as the supplemental Circulation Study prepared by kdAnderson Transportation Engineers.

C-P-10

Signals, roundabouts, traffic circles and other traffic management techniques shall be applied at residential and collector street intersections with collector and arterial streets in order to allow light electric vehicles (NEVs), bicyclists, and pedestrians to travel conveniently and safely from one neighborhood to another.

Consistency: The Specific Plan is supportive of this element. Refer to Section D. Circulation for proposed roadway improvements in the Plan Area, as well as the supplemental Circulation Study prepared by kdAnderson Transportation Engineers.

C-P-11

Major circulation improvements which are not tied to abutting development, such as new freeway interchanges or additional freeway ramps, should be implemented ahead of, or at the same time as, major new development within the city which would otherwise result in serious traffic impacts for some or all of the remaining circulation system.

Consistency: The circulation study prepared by kdAnderson Transportation Engineers, and included in the appendix to the Specific Plan states that no serious impacts are expected from the implementation of the Plan. For more information refer to the study.

C-P-12

The City shall promote development of a perimeter road system along Lathrop Road, Austin Road, Woodward Road, and Airport Way.

Consistency: The Plan is supportive of the Circulation Element policy by proposing improvements to Lathrop Road and Airport Way.

C-P-13

The City may allow the development of private streets in new residential projects that demonstrate the ability to facilitate police patrol, emergency access, and solid waste collection and fund on-going maintenance to the satisfaction of the Community Development Director.

Consistency: There are no private streets planned as a part of the Specific Plan.

C-P-14

The City shall promote infill development that completes gaps in the circulation system to facilitate north-south and east-west circulation.

Consistency: The Specific Plan provides for improved road systems with the widening and improving of Union Road and Airport Way in a north/south direction, and Lathrop Road in an east/west direction.

C-P-15

Residential subdivisions with lots fronting on an existing freeway or arterial street shall provide for a separate frontage road. Developers shall build frontage roads per City Improvement Standards.

Consistency: Not applicable to the Union Ranch Plan Area as no lots are proposed to front an arterial street or freeway.

C-P-16

All residential developments along the south side of the SR 120 By-pass shall be developed with a frontage road between the residential development and the freeway and provided with acceptable noise attenuation measures.

Consistency: Not applicable to the Union Ranch Plan Area as it is not located south of Route 120 By-pass.

C-P-17

Residential subdivisions backing onto a freeway are discouraged. Where subdivisions back on to an arterial or collector, the developer shall have the option to build a masonry wall or a combination wall and berm. The top of walls along freeways shall be at least eight-feet above the elevation of the freeway travel lanes. Walls and berms shall be attractive and developed for low maintenance. All such berms and walls shall be approved by the City.

Consistency: Residential Lots backing on to arterial or collector streets will have soundwalls located along the rear property lines. Refer to Section J, Design Guidelines for more information.

C.6.3b Traffic Safety

C-P-21

The creation or continuance of traffic hazards shall be discouraged in new development and other proposals requiring the City to exercise its discretionary authority.

Consistency: The Plan will be designed to meet or exceed all current or future standards of the City of Manteca and minimize traffic hazards.

C-P-22

In the development of new projects, the City shall give special attention to maintaining adequate corner-sight distances to City street intersections and at intersection of City streets and private access drives and roadways.

Consistency: The Plan shall meet or exceed all current requirements of site distance clearances of the City of Manteca with no built objects located within view triangles, and all roadways/driveways clear a minimum of 20-feet to curb return.

C-P-23

The City shall identify and remove, as feasible, obstacles limiting corner-sight distances at City street corners.

Consistency: The Plan shall meet or exceed all current requirements of site distance clearances of the City of Manteca with no built objects located within view triangles, and all roadways/driveways clear a minimum of 20-feet to curb return.

C-P-24

The City shall maintain a program of identification and surveillance of high traffic accident locations, with emphasis on early detection and correction of conditions, which could potentially constitute traffic hazards.

Consistency: The Plan is designed to all current standards of the City of Manteca.

C.6.3c Parking

C-P-29

Ensure that there is adequate parking for normal commercial activities.

Consistency: All areas with off-street parking will conform to the current City of Manteca Zoning Code.

C-P-30

Ensure that there is adequate parking for special events.

Consistency: All areas with off street parking will conform to the current City of Manteca Zoning Code. Special event parking may include on-street parking where allowable, parking or in the private recreational club facilities located in the Del Webb development.

C-P-31

Coordinate the parking area locations with the roadway, transit, pedestrian, and bikeway systems.

Consistency: The Plan is designed to maximize on street parking, and to provide for parking in the commercial mixed- use portion of the site. The network of multi-use pedestrian and bike trails will allow access the parking areas.

C-P-32

Parking lots will be provided in the downtown area to provide small parking areas within easy walking distance of the businesses, rather than single large parking lot.

Consistency: Not applicable to the Union Ranch Plan Area as it is not located in the downtown area.

C.6.3d Transportation Alternatives**C-P-33**

The City should establish a safe and convenient network of identified bicycle routes connecting residential areas with recreation, shopping, and employment areas within the City.

Consistency: The Union Ranch Specific Plan has been designed to enhance a citywide network of safe and convenient bicycle routes and enhance them internally within the Plan Area. An east/west connection is made across the entire Plan Area by means of a multi-use pedestrian and bike path that will connect to the Tidewater Trail.

C-P-34

Provide spur or branch walkways connecting to the residential neighborhoods and primary public destinations.

Consistency: The Union Ranch Specific Plan has provides a comprehensive network of sidewalks, dedicated bike lanes and multi-use paths that connect new and existing neighborhoods.

C-P-35

Route sidewalks so that they connect to major public parking areas, transit stops, and intersections with the bikeway system.

Consistency: The Union Ranch Specific Plan has provides a comprehensive network of sidewalks, dedicated bike lanes and multi-use paths that connect new and existing neighborhoods.

C-P-36

Provide adequate bicycle parking facilities at commercial, business/professional and light industrial uses.

Consistency: Parking facilities shall be required in all the Plan Area to meet or exceed the requirements of the City of Manteca.

C-P-37

Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians. Provide shade and/or protection from wind and other weather conditions when possible.

Consistency: Safety conditions have been enhanced for bicycle use with shade trees along bike routes, and the requirement for adequate weatherproof parking facilities at the commercial mixed use development. All bicycle corridors intersect at major right-of-way intersections where easy protected crossings can be made. The Tidewater Bicycle corridor does intersect with Lathrop Road, with signalized crossing available at Union Road.

C-P-38

Wherever possible, bicycle facilities should be separate from roadways and walkways.

Consistency: Dedicated on-road bike lanes are provided on certain road sections as detailed in Section D. Circulation. Multi-use paths of minimum 12-foot width are provided in the Plan Area to allow safe usage of both bicyclists and pedestrians.

C-P-39

The City shall limit on-street bicycle routes to those streets where the available roadway width and traffic volumes permit safe coexistence of bicycle and motor vehicle traffic.

Consistency: Dedicated on-road bike lanes are provided on certain road sections as detailed in Section D. Circulation, where safe joint usage will allow. Multi-use paths of minimum 12-foot width are provided in the Plan Area to allow safe usage of both bicyclists and pedestrians.

C-P-40

The City shall develop a "city-loop" Class I bike path that links Austin Road, Atherton Drive, (the proposed new road south of SR 120), Airport Way and a route along or near Lathrop Road to the Tidewater bike path and its extensions.

Consistency: The Specific Plan proposes a dedicated bike lane along Lathrop Road connecting directly to the Tidewater Trail- Bike Corridor along with a multi-use path through-out the entire Plan Area.

C-P-41

The City shall extend the bicycle route north along the former Tidewater Southern Railway right-of-way, and any branch or connecting link.

Consistency: The Specific Plan proposes the construction of the Tidewater Trail north of Lathrop Road to the limits of the Plan Area.

C.6.4 Air Quality Element

AQ-P-1

Cooperate with other agencies to develop a consistent and coordinated approach to reduction of air pollution and management of hazardous air pollutants.

Consistency: The Specific Plan supports the use electric vehicles in the Del Webb portion to reduce auto emissions. Furthermore, multi-use bike and pedestrian trails are proposed for the Planning Area to assist in reducing hazardous air pollutants.

AQ-P-2

Develop a land use plan that will help to reduce the need for trips and will facilitate the common use of public transportation, walking, bicycles, and alternative fuel vehicles.

Consistency: The Specific Plan fully supports this policy by reducing the required automobile vehicular trips by the following methods:

- 1) Strong pedestrian circulation system that unifies the Plan Area.
- 2) Provides pedestrian circulation that links to the City- wide trail system. This is accomplished by the extension of the Tidewater Open Space corridor, a new East-West linkage in the heart of the Plan Area, new internal north-south linkages, and enhanced pedestrian corridors on the major arterials.
- 3) All pedestrian corridors accommodate bicyclists as well as pedestrians.

AQ-P-3

Segregate and provide buffers between land uses that typically generate hazardous or obnoxious fumes and residential or other sensitive land uses.

Consistency: Landscape buffers and soundwalls are provided between arterial right-of-ways and residential uses. No hazardous or obnoxious adjacent land uses exist or are proposed in the 2023 General Plan.

AQ-P-4

Develop and maintain street systems that provide efficient traffic flow and thereby minimize air pollution from automobile emissions.

Consistency: The Specific Plan street system has been designed to provide efficient traffic flow to the three major arterial right-of-ways, Lathrop, Union and Airport Way, and internally as well.

AQ-P-5

Develop and maintain circulation systems that provide alternatives to the automobile for transportation, including bicycle routes, pedestrian paths, bus transit, and carpooling.

Consistency: Alternatives to automobile are provided internally and to the external City- wide community, which addresses bicycle and pedestrian opportunities. Pedestrian/bicycle access to the existing carpool lots on Lathrop are supported in the Plan Area. Bus transit is encouraged in the commercial mixed-use area.

AQ-P-6

Coordinate public transportation networks, including trains, local bus service, regional bus service and rideshare facilities to provide efficient public transit service.

Consistency: Not applicable to the Union Ranch Specific Plan planning document.

AQ-P-7

New construction will be managed to minimize fugitive dust and construction vehicle emissions.

Consistency: The Plan requires construction to meet all current/future City Building Department/Public Works requirements. Dust shall be controlled as per Section 10 of the State of California Department of Transportation Standards.

AQ-P-8

Wood burning devices shall meet current standards for controlling particulate air pollution.

Consistency: No wood burning devices, including stoves or fireplaces shall be allowed in the Planning Area. Natural gas inserts shall be permitted.

AQ-P-9

Burning of any combustible material within the City will be controlled to minimize particulate air pollution.

Consistency: The Plan requires construction to meet all current/future City Building Department/Public Works requirements

AQ-P-10

Encourage energy efficient building designs.

Consistency: The Plan requires energy efficient building designs that promote solar orientation in the building design, and the use of energy efficient appliances and lighting.

C.6.5 Resource Conservation Element

C.6.5a Water Quality

RC-P-1

The City shall continue to implement water conservation standards for all commercial and industrial development.

Consistency: The Specific Plan is consistent in its policies to minimize water consumption and to educate residents and commercial/office users in the Plan Area by planting water efficient landscapes that employ controlled irrigation, and plantings of low to moderate water use plants.

RC-P-2

The city shall explore potential uses of treated wastewater when opportunities become available.

Consistency: The Plan supports the 2003 General Plan update in encouraging uses of treated wastewater in a City- wide program. Due to the distance from the wastewater treatment plant, this probably is not practical or quantities available for this Plan Area.

RC-P-3

The city shall protect the quantity of Manteca's groundwater.

Consistency: Water conservation is promoted in the Specific Plan with surface drainage to recharge overland in parks and open space areas.

RC-P-4

The City shall require water conservation in both City operations and private development to minimize the need for the development of new water sources.

Consistency: The Specific Plan is consistent in its policies to minimize water consumption and to educate residents and commercial/office users in the Plan Area by planting water efficient landscapes that employ controlled irrigation, and plantings of low to moderate water use plants.

C.6.6b Energy Conservation

RC-P-6

Develop construction and design standards that promote energy conservation.

Consistency: The Specific Plan promotes construction and design standards that are current to the City wide standards and further encourages energy conservation in its Design Guidelines.

RC-P-7

Conserve Public Utilities

Consistency: The efficient use of public utilities is encouraged with sound design of basic infrastructure requirements, all to current City of Manteca standards.

RC-P-8

Conserve petroleum products

Consistency: Petroleum products are conserved by the extensive non-vehicular circulation system and the minimizing of turf to limit gas operated lawn mowers.

C.6.5c Soils and Erosion Control

RC-P-10

Minimize soil erosion and loss of topsoil from land development activities, wind, and water flow.

Consistency: Construction in the Plan Area shall comply with the State of California General NPDES Permit regulating storm water associated with construction activity from soil disturbances.

C.6.5d Water Quality

RC-P-11

Minimize sedimentation and loss of topsoil from soil erosion.

Consistency: Construction in the Plan Area shall comply with the State of California General NPDES Permit regulating storm water associated with construction activity from soil disturbances.

RC-P-12

Minimize pollution of waterways and other surface water bodies from urban runoff.

Consistency: On-site detention facilities and drainage channels for storm water conveyance shall be constructed in the Plan Area. For more information refer to Section F. Infrastructure.

RC-P-13

Protect the quality of Manteca's groundwater.

Consistency: Water quality will be protected by providing capture of urban runoff, and limiting uses that can detrimentally affect long term groundwater quality.

RC-P-14

Encourage participation by the County and surrounding communities in a basin-wide groundwater management study.

Consistency: Water quality will be protected by providing capture of urban runoff, and limiting uses that can detrimentally affect long term groundwater quality. For more information refer to Section F. Infrastructure.

RC-P-15

Once sewer service has been extended to incorporate areas, new septic tanks shall not be permitted.

Consistency: Sanitary connections shall be provided to all new development in the Plan Area. Septic Tanks shall not be allowed.

C.6.5e Open Space

RC-P-16

Provide public and private open space within urbanized parts of Manteca, in order to provide visual contrast with the built environment and to provide for the creational needs of residents.

Consistency: The Plan provides seventy (69.45) acres or 13-percent of the total Plan Area with Open Space or Parkland. All have been carefully planned to be in close proximity to all residential units in the Plan Area and visually available from the major arterials.

RC-P-17

Provide access to public open space areas.

Consistency: The Plan provides public access both internally and externally to the open space areas of the Plan and the Community through a network of multi-use path systems, sidewalks and roadways.

RC-P-18

New development shall maximize the potential for open space and visual experiences.

Consistency: The Plan maximizes the visual experiences by locating open space adjacent to major view corridors. The open space corridors as well provide long vanishing points in the design to enhance viewing experiences. Open space areas maximize their potential by their location and relation to pedestrian corridors, and commercial mixed-use areas.

C.6.5f Agricultural Resources

RC-P-19

The city shall support the continuation of agricultural uses on lands designated for urban use, until urban development is imminent.

Consistency: Because the Specific Plan is phased, and because the intent of the Plan is to encourage the existing agricultural use to continue, the Union Ranch Specific Plan supports this policy of the Agricultural Resources elements.

RC-P-20

The city shall provide an orderly and phased development pattern so that farmland is not subjected to premature development pressure.

Consistency: The phased development of the Plan is outlined in the Specific Plan, refer to Section H, for more information.

RC-P-21

In approving urban development near existing agricultural lands, the City shall take actions so that such development will not unnecessarily constrain agricultural practices or adversely affect the viability of nearby agricultural operations.

Consistency: The Land Use Plan has been developed to look inwardly toward existing Manteca urban development and to prevent impact to existing agricultural lands to the north. Access to existing farmlands will be minimized with limited street extension, furthermore, parcels within the Plan Area will be fenced or walled.

RC-P-22

Nonagricultural uses in areas designated for agriculture should be redirected to urban areas.

Consistency: Not applicable to the Union Ranch Specific Plan because the Planning Area land is a designated urban area.

RC-P-24

Provide buffers at the interface of urban development and farmland, in order to minimize conflicts between these uses.

Consistency: The proposed 2023 General Plan sets aside agriculture and very low density residential to the north of the Plan Area to provide a buffer to agricultural lands.

RC-P-25

The City Shall ensure, in approving urban development near existing agricultural lands, that such development will not unnecessarily constrain agricultural practices or adversely affect the economic viability of nearby agricultural practices or adversely affect the economic viability of nearby agricultural operations.

Consistency: The Union Ranch Specific Plan does not constrain adjacent agricultural practices or the economic viability of existing agricultural operations.

RC-P-26

The City shall restrict the fragmentation of agricultural land parcels into small rural residential parcels except in areas designated for estate type development in the General Plan Land Use Diagram.

Consistency: The Specific Plan does not propose the fragmentation of land parcels into small rural residential parcels.

RC-P-27

The City shall discourage the cancellation of Williamson Act contracts within the Primary Urban Service Boundary line.

Consistency: No parcels in the Specific Plan Area are subject to Williamson Act contracts.

RC-P-28

The City shall not extend water and sewer lines to premature urban development, that would adversely affect agricultural operations.

Consistency: All proposed extensions are consistent with City utility master plans and there is no premature development in this Plan Area.

C.6.5g Biological Resources

RC-P-31

Minimize impact of new development on native vegetation and wildlife.

Consistency: Most of the Plan Area is existing, or previous agricultural land. The existing native vegetation consists of existing native Oaks in the Commercial Mixed Use area, which will be retained in the Plan if their health is in good condition.

RC-P-32

Condition new development in the vicinity of the San Joaquin River and Wathall Slough to promote and protect riparian habitat, wetlands, and other native vegetation and wildlife communities and habitats.

Consistency: Not applicable to the Union Ranch Specific Plan planning document.

RC-P-33

Discourage the premature removal of orchard trees in advance of development, and discourage the removal of other existing healthy mature trees, both native and introduced.

Consistency: The Plan will be phased, with existing orchards remaining in production as long as possible. Existing native Oaks will be retained, wherever possible, whenever long-term health viability is present.

RC-P-34

Protect special-status species and other species that are sensitive to human activities.

Consistency: No special-status species have been identified in the Specific Plan or the 2023 General Plan process in the Plan Area.

RC-P-35

Allow contiguous habitat areas.

Consistency: Existing habitat areas will not be disturbed in the Plan Area, refer to Section G. Resource Management for more information.

RC-P-36

Consider the development of new drainage channels planted with native vegetation, which would provide habitat as well as drainage.

Consistency: A proposed drainage channel located in the Woodbridge portion of the Plan Area shall receive native vegetation per City requirements.

Section D. Circulation

The circulation system proposed for Union Ranch is comprised of arterial roads, collector streets, neighborhood streets, bikeways and pedestrian paths, a major trail system, and future public transportation routes. The primary goal of the circulation plan is to provide an improved circulation system that allows for the safe and efficient movement of people, goods, and services within the Plan Area and to provide efficient connections to existing systems and routes in the City of Manteca. Other goals, in support of the General Plan and the Draft Residential Design Guidelines, are:

- To expand transportation alternatives within the City, such as bicycling, walking and access to future public transit.
- Minimize traffic accidents and hazards.
- Ensure the adequate provision of both on-street and off-street parking.
- Provide street improvements that meet City standards, and if they do not, to propose a standard that is safe, efficient, and assists to support the character of the community.
- Provide residential streets that are attractive and contribute to the overall sense of community.

Improvements within the Plan Area include the provision of new right-of-ways as well as improvements to existing street sections, with traffic signal(s) added where necessary. The proposed circulation system will provide convenient and safe access to all locations within the Plan Area as illustrated in Figure D.1.1, Circulation Diagram. The Traffic Impact Study prepared by kdAnderson & Associates summarizes the cumulative traffic counts and provides a basis for roadway sizing shown on the Circulation Diagram. It demonstrates that the proposed Circulation Plan is consistent with the General Plan. For additional detail, please refer to the Traffic Study prepared in support of the Specific Plan.

The existing right-of-ways of Lathrop Road, Union Road, and Airport Way form the backbone of the Plan Area and shall be improved as part of this Plan. New right-of-ways are proposed that include City standard sections for residential streets and proposed street sections per the City's draft residential design guidelines. A summary is as follows:

- **Arterial Road:** Lathrop Road, a portion of Union Road, Airport Way
- **Residential Collector:** Typical Residential Street, Union Ranch East. Typical Residential Street, Woodbridge by Del Webb
- **Neighborhood Street:** Typical Residential Street, Union Ranch East
- **Major Residential Collector:** Woodbridge by Del Webb primary entrance road
- **Residential Collector:** Woodbridge by Del Webb secondary entrance road
- **Neighborhood Street:** Woodbridge by Del Webb, typical neighborhood street
- **Neighborhood Street:** Woodbridge by Del Webb, typical cul-de-sac street
- **Neighborhood Street:** Woodbridge by Del Webb, typical neighborhood street at parkway

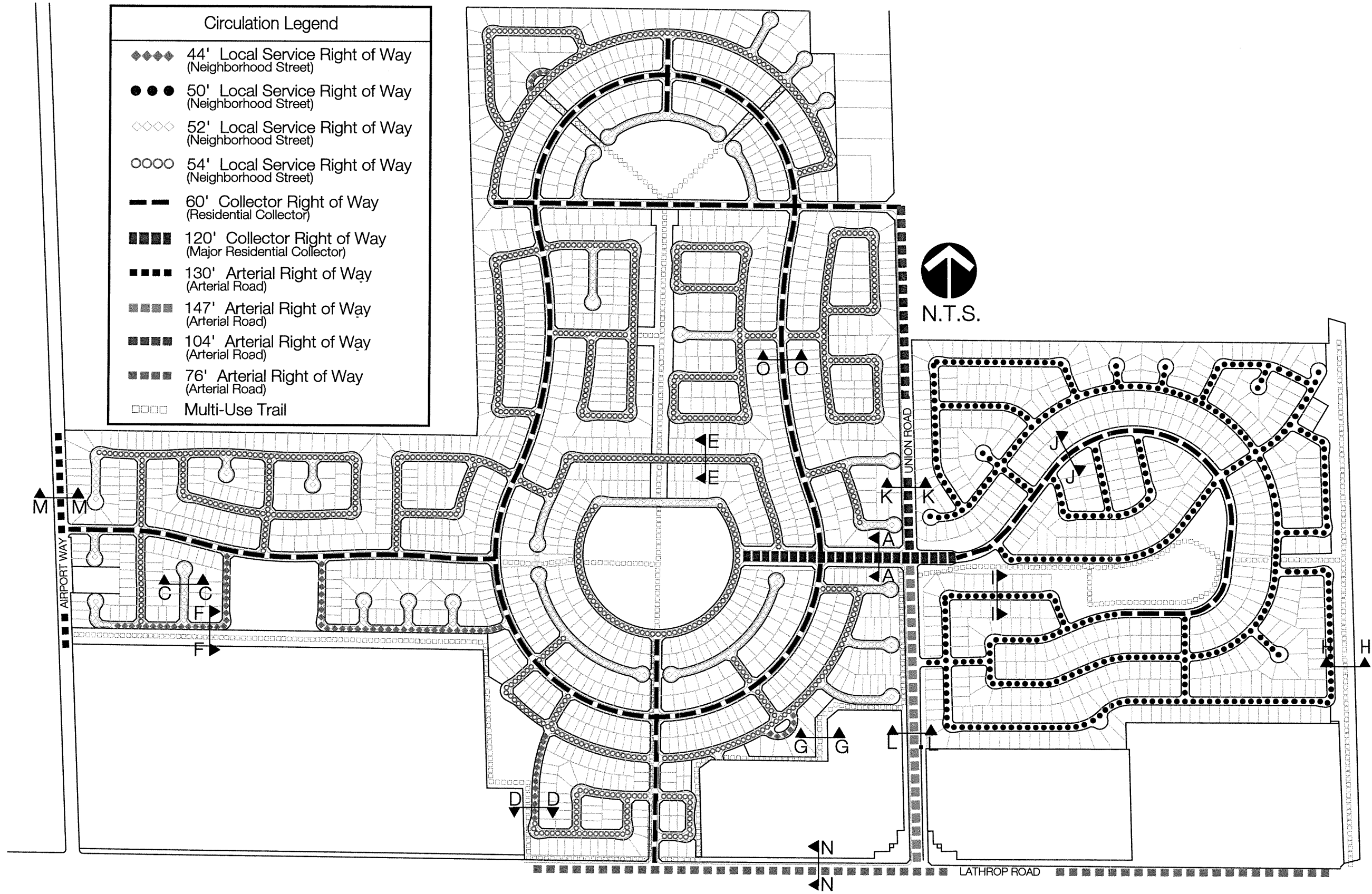


Figure D.1.1 Circulation Diagram

D.1 Existing Right-of-Ways

Four major existing right-of-ways shall be employed in the Plan Area and they are Lathrop Road, Union Road, Airport Way, and the Tidewater Trail. As existing right-of-ways they help define the periphery of the Plan Area and form the basic north-south and east-west traffic corridors. Each shall be improved to exceed current City of Manteca standards.

Union Road is a major existing north-south right-of-way extending from south of Highway 120 to French Camp. Existing infrastructure on Union Road includes extensive community facilities, such as a High School, City Offices, and commercial facilities. Lathrop Road is a major existing east-west right-of-way extending from east of Highway 99 to Interstate 5. The Tidewater Open Space Corridor is the former right of way for the Tidewater Railroad that has been reclaimed by the City of Manteca as a pedestrian bicycle corridor, and shall be continued north of Lathrop Road, on the eastern edge of the Plan Area. Airport Way is an existing arterial road, with minimum improvements. Existing Right of Ways will be improved to the following standards:

Lathrop Road

Lathrop Road shall be widened to its full right-of-way width per the City's General Plan and shall include 20-foot landscape lot fronting the proposed commercial mixed-use development. A general description of the typical road section is as follows:

- The provision of four (4) travel lanes with a 14-foot center median
- 5-foot Class II designated bike lane, single side of the right-of-way
- Vertical curb and gutter, typical
- 6-foot parkway strip-improved on the north side of the road only
- 5-foot sidewalk
- 20-foot landscape easement fronting the proposed commercial mixed use development

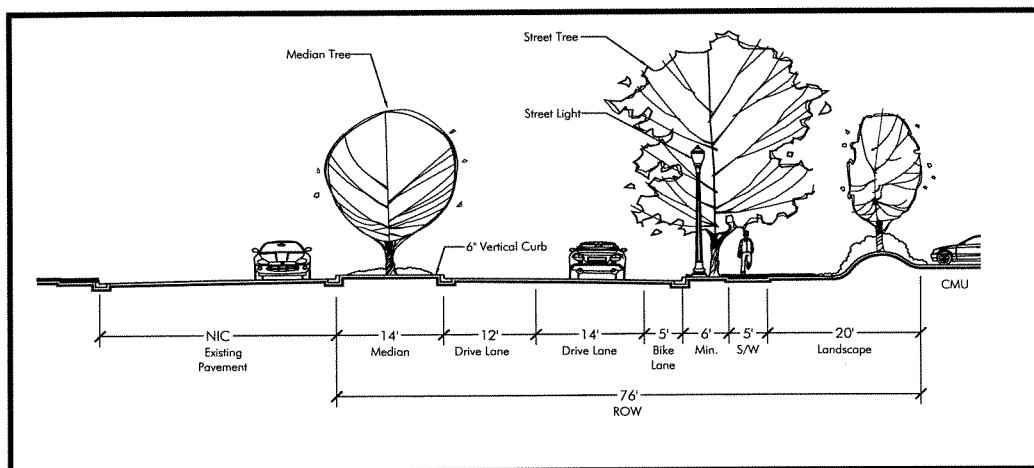


Figure D.1.2 Arterial Road - Lathrop CMU Frontage, Section N

Union Road- South of the Community Entries

Union Road shall be widened to its full right-of-way width of 147-feet and shall include 31.5-feet of additional landscape area on either side of the right-of-way. A general description of the typical road section is as follows:

- The provision of four travel lanes and a 12-foot center median
- Vertical curb and gutter, typical
- 10-foot parkway on both sides of the right-of-way
- 12-foot wide meandering multi-use path to be located in the landscape area on the west side of the right-of-way
- 5-foot sidewalk, per City standards, to be located in the landscape strip on the east side of the right-of-way

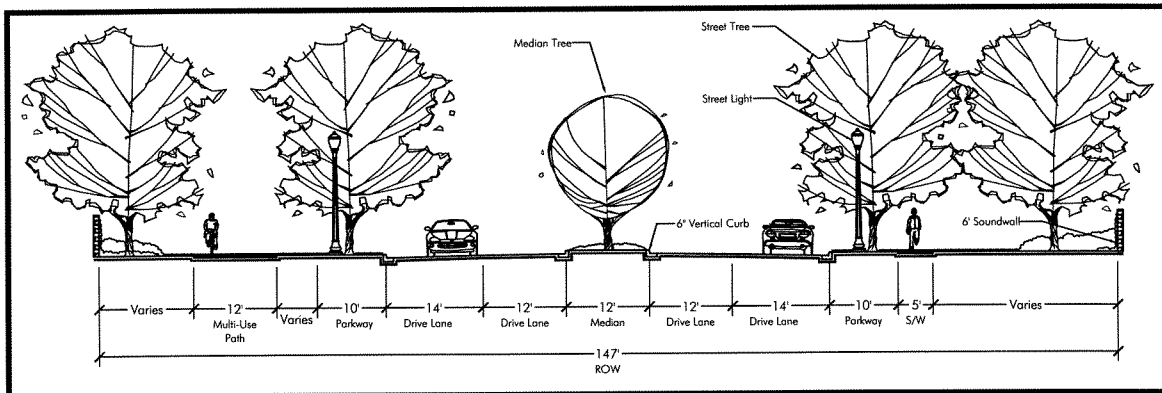


Figure D.1.3 Arterial Road - Union Road South of Community Entries, Section L

Union Road- North of the Community Entries

Union Road shall be widened to its full right-of-way width of 104-feet, a general description of the typical road section is as follows:

- The provision of four travel lanes and a 12-foot center median
- Vertical curb and gutter, typical
- 5-foot sidewalk, per City standards, to be located on both sides of the right-of-way
- 5-foot landscape strip on both sides of the right-of-way.

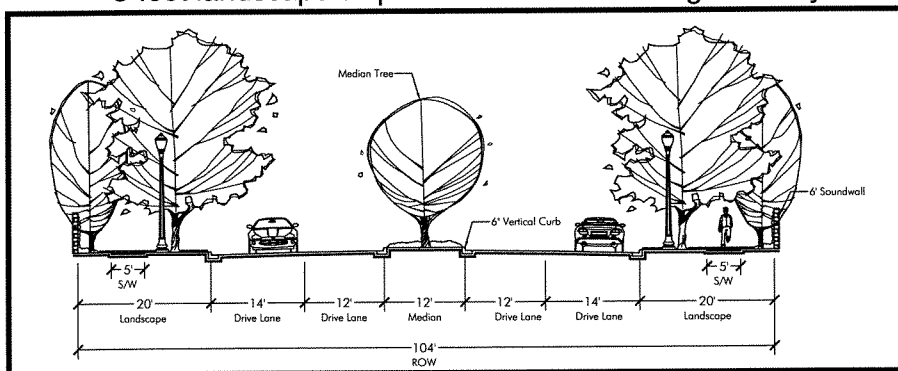


Figure D.1.4 Arterial Road - Union Road North of Community Entry, Section K

Airport Way

Airport Way shall be widened to its full right-of-way width of 130-feet, a general description of the typical road section is as follows:

- The provision of six travel lanes and a 12-foot center median
- Vertical curb and gutter, typical
- 5-foot sidewalk, per City standards, to be located on both sides of the right-of-way
- 5-foot landscape strip on both sides of the right-of-way

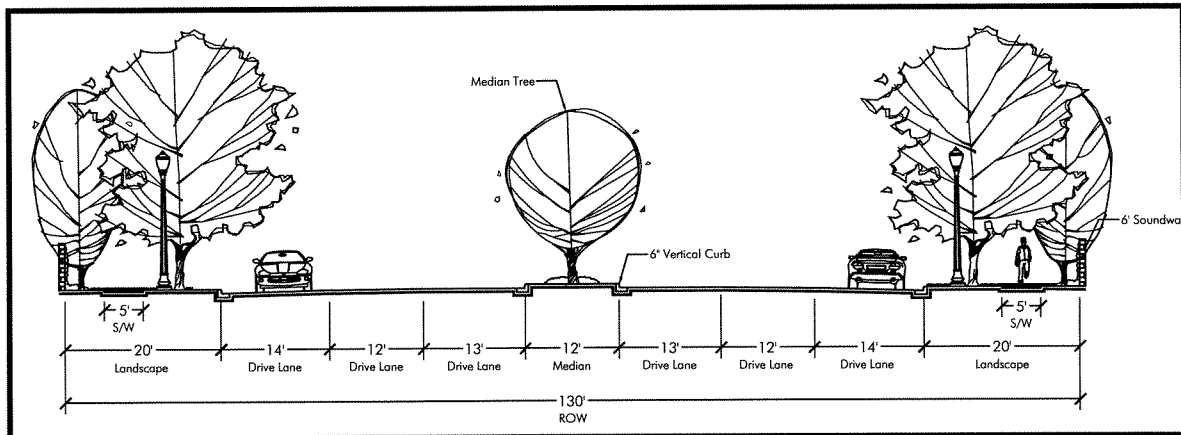


Figure D.1.5 Arterial Road - Airport Way, Section M

D.2 Proposed Right-of-Ways

Right-of-Ways are planned to provide safe and efficient circulation for automobile, pedestrian, and bicycle traffic. They also serve to define the streetscape, which when combined with landscape corridors, parkways and built elements such as walls, fences and monuments, helps to establish community character. The Union Ranch Specific Plan proposes a variety of right-of-way widths to suit site-specific conditions. These proposed right-of-ways conform to current City standards wherever possible, and where they vary from current standards they apply the design criteria described by the City of Manteca Residential Design Guidelines, dated December 3rd, 2002. A summary is as follows:

Union Ranch East

Residential Collector Street, 60-foot Right-of-Way - City Standard

- Two, 14-foot drive lanes
- 8-foot parking lane, both sides of the right-of-way
- Total pavement section of 44-feet
- Rolled curb and gutter, typical
- 5-foot sidewalk, typical (monolithic)
- 3-foot easement, both sides of the right-of-way

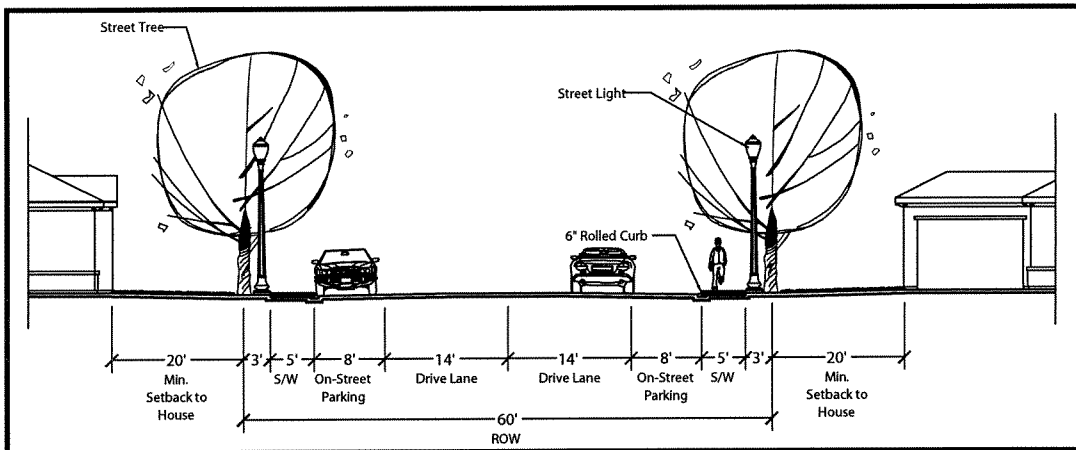


Figure D.1.6 Residential Collector - Union Ranch East, Section J

Neighborhood Street, 50-foot Right-of-Way - City Standard

- Two, 10-foot drive lanes
- 8-foot parking lane, both sides of the right-of-way
- Total pavement section of 34-feet
- Rolled curb and gutter, typical
- 5-foot sidewalk, typical (monolithic)
- 2-foot easement, both sides of the right-of-way

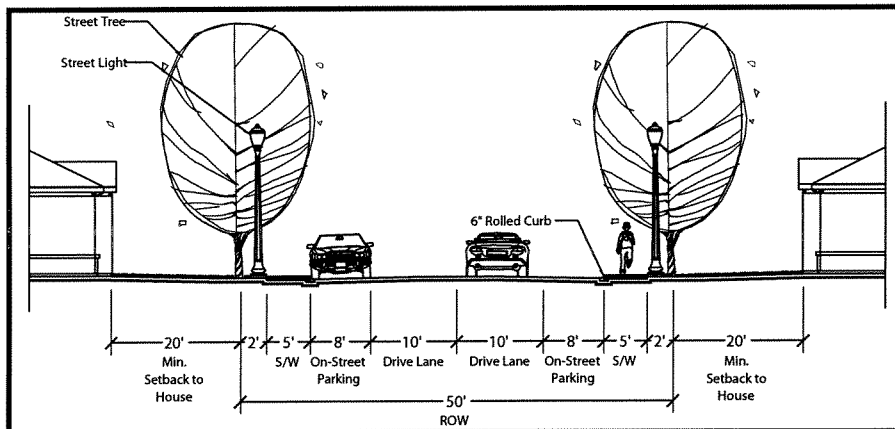


Figure D.1.7 Neighborhood Street - Union Ranch East, Section I

Neighborhood Street at the Tidewater Open Space Corridor, 50-foot Right-of-Way

- Two, 10-foot drive lanes
- 7-foot parking lane, both sides of the right-of-way
- Total pavement section of 34-feet
- Rolled curb and gutter, typical
- 5-foot sidewalk, typical (monolithic)
- 3-foot easement, both sides of the right-of-way
- Open Space Corridor with 12-foot meandering path

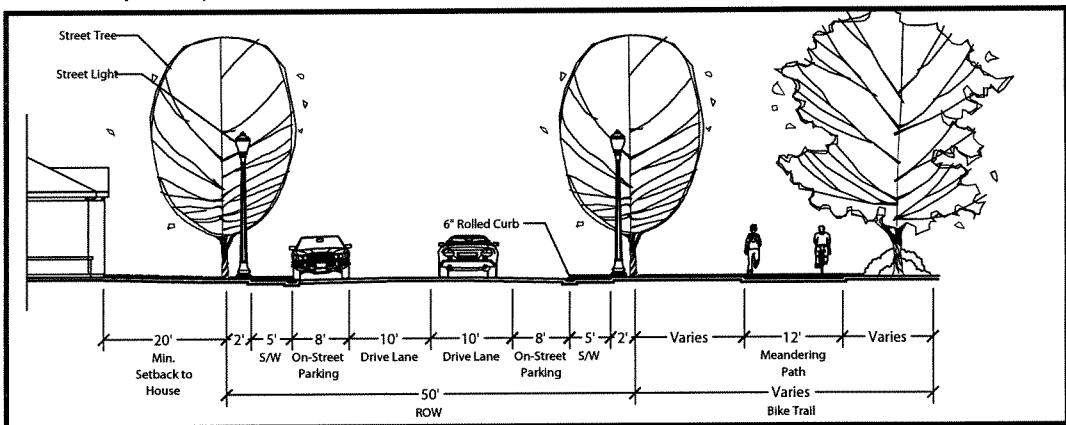


Figure D.1.8 Neighborhood Street at Tidewater Trail- Union Ranch East, Section H

Woodbridge by Del Webb

Major Residential Collector, 120-foot Right-of-Way

- Four, 12-foot travel lanes and a 12-foot center median
- 5-foot Class II designated bike lane, both sides of the right-of-way
- Total pavement section of 70-feet
- Vertical curb and gutter, typical
- 6-foot parkway strip, both sides of the right-of-way
- 5-foot separate sidewalk, both sides of the right-of-way
- Parkway of varying width (14-foot + or-)

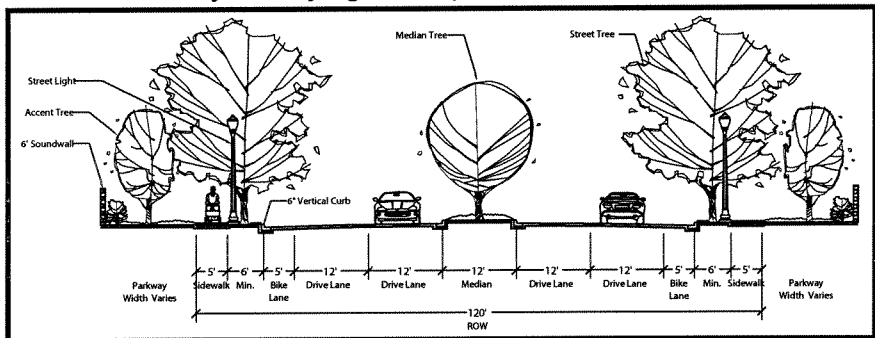


Figure D.1.9 Major Residential Collector Street - Woodbridge by Del Webb, Section A

Residential Collector, 76-foot Right-of-Way

- Four travel lanes
- 5-foot Class II designated bike lane, both sides of the right-of-way
- Vertical curb and gutter, typical
- Total pavement section of 54-feet
- 6-foot parkway strip, both sides of the right-of-way
- 5-foot separate sidewalk, both sides of the right-of-way

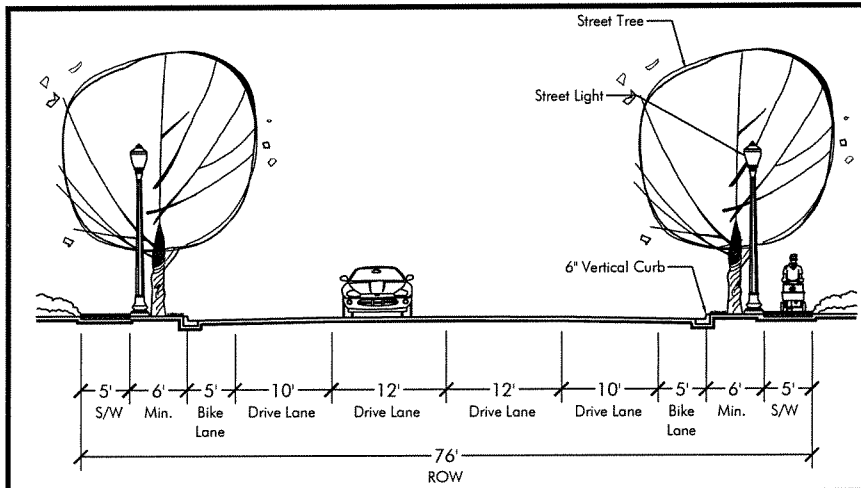


Figure D.2.1 Residential Collector Street - Woodbridge by Del Webb, Section B

Cul-de-Sac Street, 52-foot Right-of-Way

- Two, 10-foot travel lanes
- Two, 7-foot parking lanes
- Rolled curb and gutter, typical
- Total pavement section of 34-feet
- 5-foot parkway strip, both sides of the right-of-way
- 4-foot separate sidewalk, both sides of the right-of-way

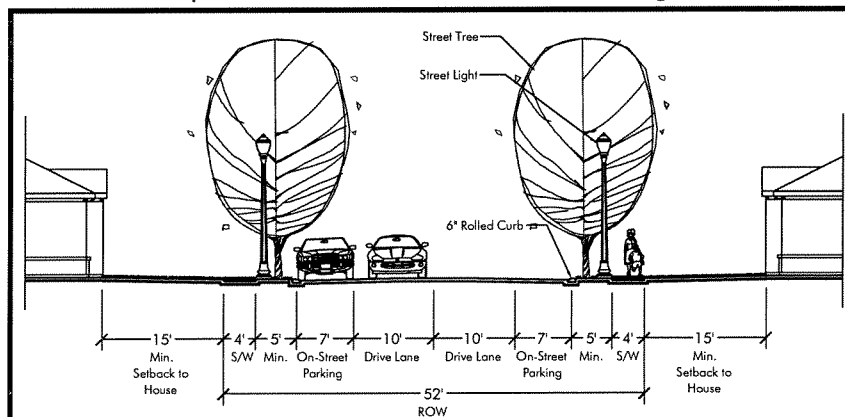


Figure D.2.2 Cul-de-Sac Street - Woodbridge by Del Webb, Section C

Neighborhood Street at Parkway, 54-foot Right-of-Way

- Two, 10-foot travel lanes
- Two, 7-foot parking lanes
- Rolled curb and gutter, typical
- Total pavement section of 34-feet
- 6-foot parkway strip, one side of the right-of-way
- 4-foot separate sidewalk, one side of the right-of-way
- 12-foot meandering bike trail located in open space corridor of varying width, one side of the right-of-way

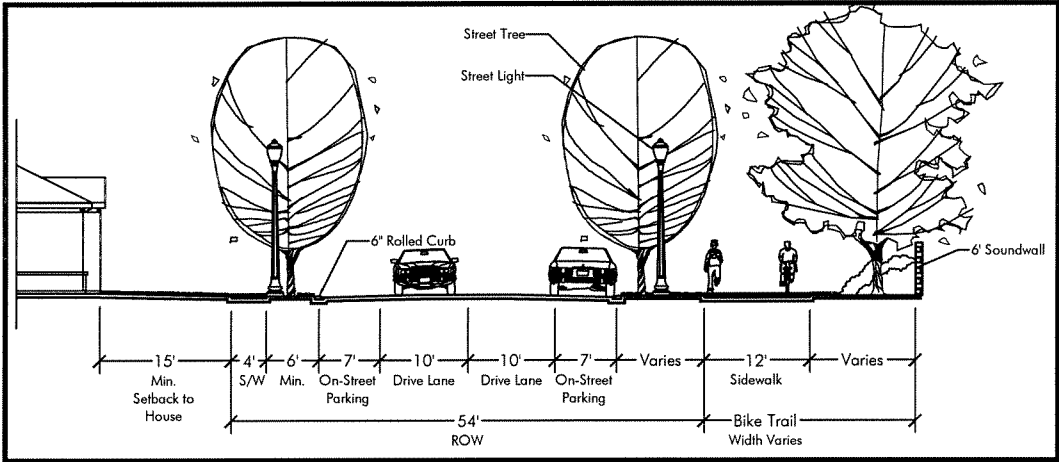


Figure D.2.3 Neighborhood Street at Parkway - Woodbridge by Del Webb, Section D

Typical Neighborhood Street, 54-foot Right-of-Way

- Two, 10-foot travel lanes
- Two, 7-foot parking lanes
- Rolled curb and gutter, typical
- Total pavement section of 34-feet
- 6-foot parkway strip, both sides of the right-of-way
- 4-foot separate sidewalk, both sides of the right-of-way

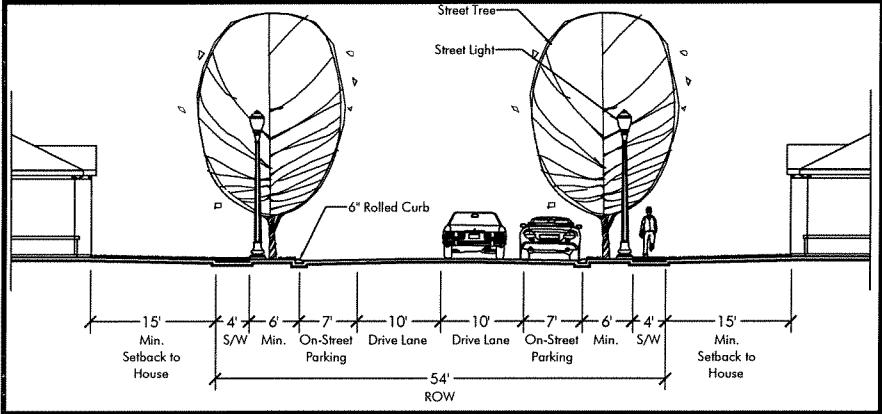


Figure D.2.4 Neighborhood Street - Woodbridge by Del Webb, Section E

Typical Neighborhood Street at Parkway, 44-foot Right-of-Way

- Two, 10-foot travel lanes
- Two, 7-foot parking lanes
- Total pavement section of 34-feet
- Rolled curb and gutter, typical
- 6-foot parkway strip, one side of the right-of-way
- 4-foot separate sidewalk, one side of the right-of-way
- 12-foot meandering bike trail located in open space corridor of varying width, one side of the right-of-way

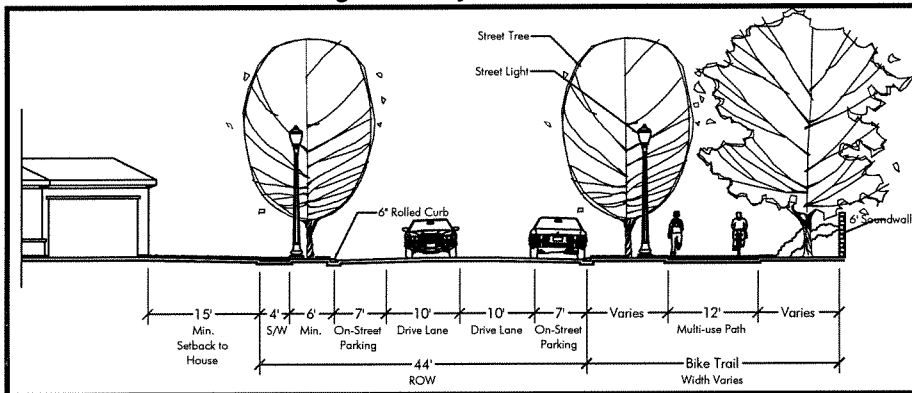


Figure D.2.5 Neighborhood Street at Parkway - Woodbridge by Del Webb, Section F
Bike Trail- Rear Yard, Varying Right-of-Way

- 12-foot meandering multi-use path
- Open space corridor landscaping-varying overall width

Residential Collector Street, 60-foot Right-of-Way

- Two, 10-foot travel lanes
- Two, 7-foot parking lanes
- Rolled curb and gutter, typical
- Total pavement section of 34-feet
- 5-foot parkway strip, both sides of the right-of-way
- 5-foot separate sidewalk, both sides of the right-of-way

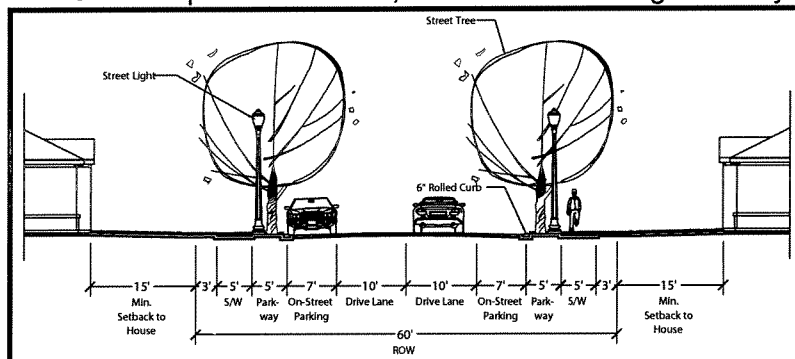


Figure D.2.6 Residential Collector Street - Woodbridge by Del Webb, Section O

D.3 Non-Vehicular Circulation

A comprehensive system of multi-use paths and bikeways is proposed for the Plan Area to allow for safe and convenient access between land uses. The goal is to encourage pedestrian activities and bicycling as an alternative to traditional automobile usage. Class I bike trails are proposed (as part of a 12-foot multi-use path system) within Open Space Corridors that traverse the Plan Area in a north-south and east-west orientation. Access to the Class I bike trail is provided via neighborhood streets, arterial roads and residential collector streets. Figure D.1.1 illustrates this arrangement. Class II bike lanes shall be striped on designated streets within the Plan Area, (see street sections in subsection D.2 for more information) and Class III routes may be designated on residential streets during tentative mapping to provide additional connectivity. Bike trails are defined as follows:

Class I - Provides a minimum of 12-foot multi-use path.

Class II- Provides a paved striped land at the edge of a street or road for one-way bike travel.

Class III- Provides a shared use with vehicular traffic on a residential street

The extensive bikeway system within the Plan Area will provide opportunities to connect with existing and proposed bikeways in adjacent developments, including a primary connection to downtown Manteca via the Tidewater Open Space Corridor. Tentative mapping for residential projects shall be designed to ensure a positive and safe orientation toward open space, with roadway access provided adjacent to Open Space Corridors, see Figure D.1.1, or with rear yard orientations complete with see-through view fencing as illustrated by the Bike Trail- Rear Yard, Varying Right-of-Way exhibit found in subsection D.2. The orientation of cul-de-sac streets perpendicular to Open Space Corridors, with openings in the soundwall wall and fencing, will also allow for ease of public access.

D.4 Public Transit

Existing public transit bus stops are provided at Union Road/Lathrop Road. The Plan will support the use of these facilities by providing for an enhanced, protected bus stop facility with identifying signage. Future public transit stops will be predicated on the City of Manteca and their desire to increase the level of service. Bus turn-outs will be designed in the tentative maps on arterial streets, on the far side of each major intersections and at the entries to Union Ranch East and Woodbridge, in coordination with City of Manteca standards.

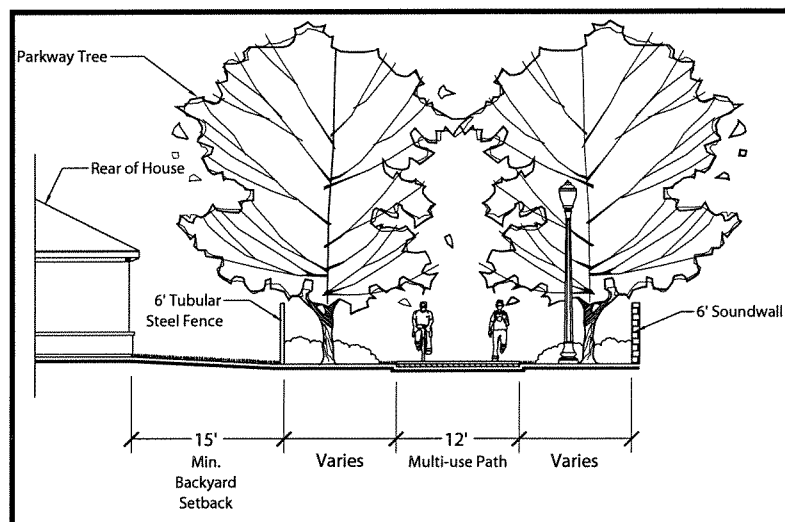


Figure D.2.7 Bike Trail - Rear Yard, Section G

Section E. Public Facilities

This section addresses the general public facilities required to serve the future residents of the Plan Area. It includes a description of police protection/law enforcement, fire protection, solid waste disposal, as well as parks and recreation facilities. This section includes a list of standards for each public service. Funding for these public facilities shall be provided by the current fee programs. Woodbridge by Del Webb is an active adult community unique to Manteca and, as such, has varying impacts on public facilities that differentiate it from a standard R-1 subdivision. Woodbridge will generate less water consumption, wastewater flow, traffic and therefore street maintenance costs, and police service costs than a conventional single-family housing development. Gruen Gruen + Associates of San Francisco has studied the fiscal impacts of Woodbridge on City of Manteca services and determined that the project will generate additional City revenue of approximately \$434,000 above the cost of services. A complete analysis of the fiscal impacts and methodology used can be found in the supplemental report; "An Analysis of the Fiscal Impacts of the Proposed Woodbridge Active Adult Development," dated February 2004.

E.1 Police Protection/Law Enforcement

The Manteca Police Department is a full service municipal law enforcement agency with specialized assignments and recognized specialties. In addition, the Department has an active and valuable volunteer staff consisting of Police Explorers, Reserve Officers, and senior citizens who render invaluable assistance to the Department and the community. In compliance with other goals and policies in the Specific Plan, the commercial areas and neighborhoods will be designed to encourage pedestrian activity. This will require a higher level of attention and care for the design of public spaces to ensure that there is adequate opportunity for surveillance by the police and general public.

The City meets a standard of one sworn officer per 1000 residents. No additional facilities will be required in the plan area.

E1.1 Law Enforcement Standards

- A) *The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible response time for police calls.*
- B) *The City shall provide police services to existing and projected population, including the Union Ranch Specific Plan Area.*
- C) *The Planning Commission and City Engineer will review proposed residential street patterns to evaluate the accessibility for police patrols and emergency response.*
- D) *Residential-based surveillance and law enforcement notification programs, such as Neighborhood Watch, are strongly encouraged.*
- E) *All land uses in the plan area should be designed to facilitate surveillance and access by law enforcement equipment and personnel.*
- F) *Streets shall be designed and constructed to ensure that emergency response is not impaired.*

E.2 Fire Protection

The Manteca Fire Department (MFD) provides fire services in the City of Manteca. The Insurance Services Office (ISO) has rated Manteca as a Class 3 on a scale of 9. Manteca shares the second best rating in the County and is rated in the top 15% of fire departments in San Joaquin County. Currently there are three fire stations in Manteca, with one located at 800 East J St. Lathrop, CA (2) two miles from the Union Ranch Plan Area.

The Manteca Fire Department also provides emergency medical response. To maintain a standard level of care all fire personnel are trained and certified Emergency Medical Technician-1 (EMT) and EMT-D. There are two emergency care hospitals in Manteca, with the closest located at E. North Street-- approximately eight miles from the Union Ranch Plan Area. The Fire Department has determined that Union Ranch is to receive a Fire Station. Location within the Union Ranch planning area to be determined.

E.2.1 Fire Protection Standards

- A) *The City has identified a goal to maintain an overall fire insurance (ISO) rating of 4 or better.*
- B) *The City shall provide fire services to serve the existing and projected population.*
- C) *The Fire Department shall continuously monitor response times and report annually on the results of the monitoring.*
- D) *The Planning Commission and City Engineer will review proposed residential street patterns to evaluate the accessibility for fire engines and emergency response.*

E.3 Solid Waste Disposal

The City of Manteca Solid Waste Department shall provide weekly solid waste disposal and recycling services for the Plan Area. The City utilizes the Forward Landfill Inc. to process and ship its solid waste and materials. Green waste is also delivered to the Austin Road/Forward Landfill. This landfill has a closure date of 2053 and has a remaining capacity of 1,608,752 cubic yards.

E.3.1 Solid Waste Disposal Standards

- A) *The City shall provide residential recycling picked up on a bi-weekly schedule and regular weekly garbage removal.*
- B) *Residential bi-weekly curbside pickup of compost materials.*
- C) *Leaf and Christmas Tree pickup.*
- D) *Oil collection containers picked up on a weekly basis.*
- E) *Commercial recycling made available.*
- F) *Household Hazardous Waste collection.*

E.4 Park Facilities

The Manteca General Plan states that the primary objective of park improvements is to provide recreational amenities for all residents. A secondary objective is to provide space for public gatherings that may attract visitors to the community by ensuring that parks serve a variety of uses. For the parks in Manteca to meet the primary recreation-based objective park facilities

need to be designed with local neighborhoods in mind. To this end the Union Ranch Plan Area proposes a total of 69.45-acres of open space and parkland, including bike trails and private recreation center, with a total public parkland dedication of 23.78- acres for shared storm water detention and recreational amenity. Park facilities standards are presented here in complete support of the 2023 General Plan policies and implementation procedures, including the provision of 5-acres of community parkland for every 1000 projected residents and 3.5 acres of neighborhood park for every 1000 projected residents. A summary is as follows in Table E.4.1:

Table E.4.1.1 Open Space & Park Amenities

Open Space & Park Amenities	Neighborhood Park Park A	Neighborhood Park B (Woodbridge by Del Webb)	Neighborhood Park C (Union Ranch East)	Open Space Trails and Pathways
Basketball Court			X	
Tot Lot Play Equipment		X	X	
Adventure Play Equipment		X	X	
Picnic/BBQ	X	X	X	
On-street Parking	X	X	X	
Pavilion/Picnic Shelter	X		X	
Pavilion/Exhibition Space		X		
Picnic Tables	X	X	X	
Walk/Jog Trail	X	X	X	X
Irrigation System	X	X	X	
Multi-Use Turf Area	X	X	X	
Sculpture/Art Work	X	X	X	
Bike Trail	X		X	X
Drinking Fountain(s)	X	X	X	
Site Furnishings (benches, trash receptacles)	X	X	X	X
Security Lighting	X	X	X	X
Distinctive Pedestrian Entry (s)	X	X	X	
Dog Park	X			
Landscape Improvements	X	X	X	X
Signage	X	X	X	X
Acreage	5.41	8.9	9.5	32.16

Park A:

Woodbridge by Del Webb, 5.4 acres with a total detention capacity of 8.8 acre-feet.

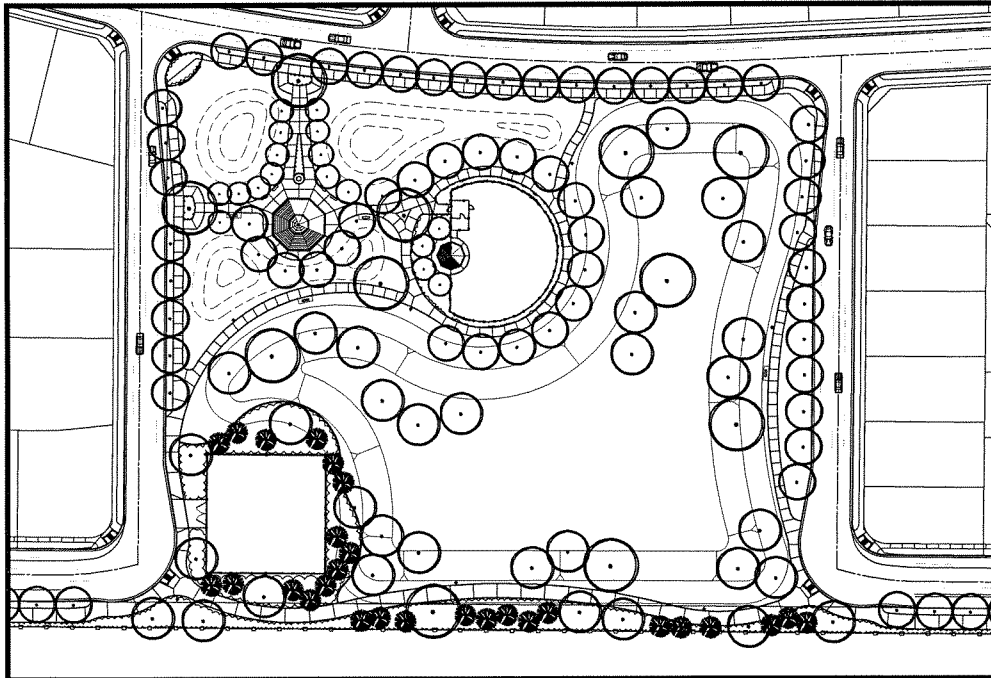


Figure E.4.1.1 Park Site A

Park B:

Woodbridge by Del Webb, 8.9 acres with a total detention capacity of 16.4 acre-feet.

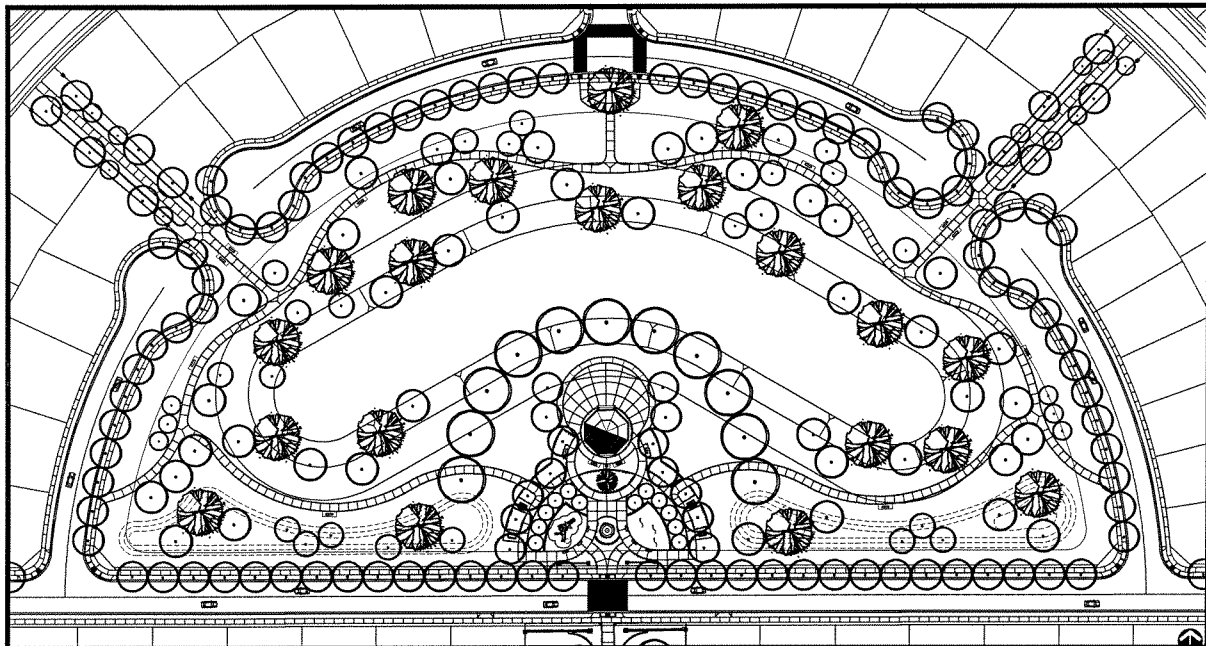


Figure E.4.1.2 Park Site B

Park C:

Union Ranch East, 9.5 acres with a total detention capacity of 14.3 acre-feet.

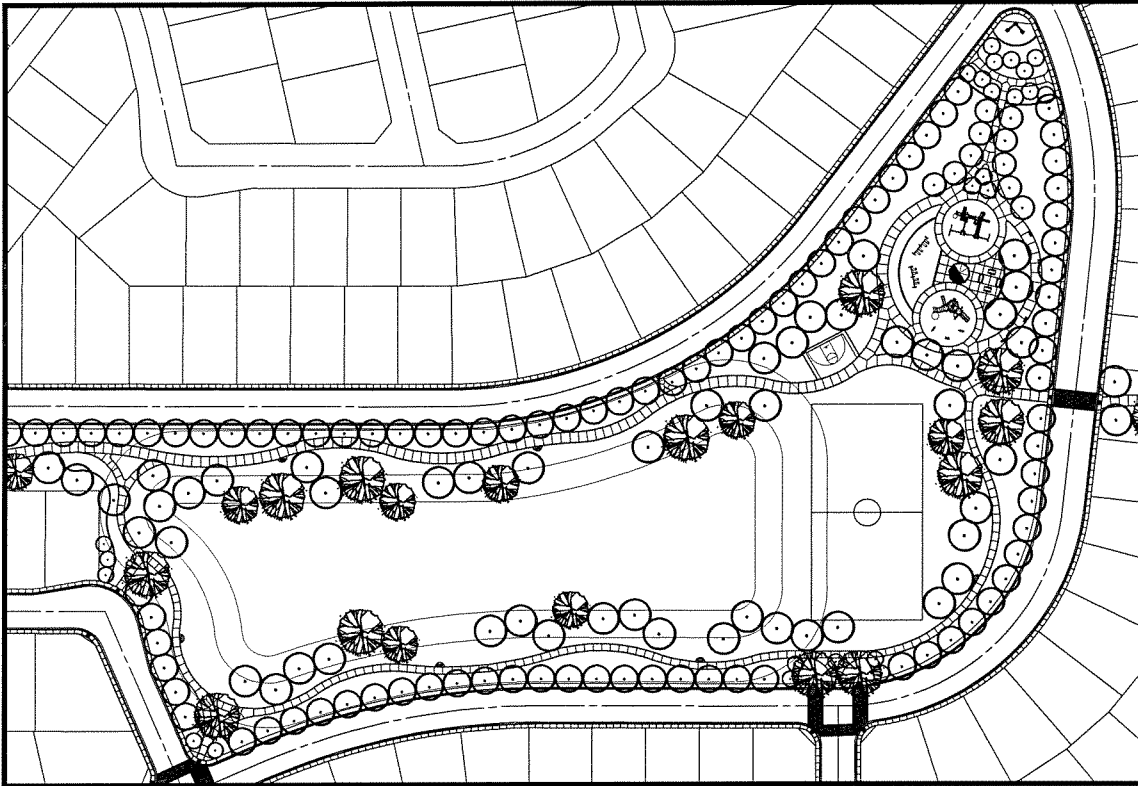


Figure E.4.1.3 Park Site C

E.4.1 Park Financing, Dedication and Maintenance

Park C, the open space trail system in , and the Tidewater Trail right-of-way will be dedicated to the City of Manteca for access by all City residents. Each shall be designed to permit development of the improvements identified in the conceptual park plans illustrated in Figures E.4.1.1, E.4.1.2 and E.4.1.3. The City acquires and improves parks through the collection of in-lieu fees as authorized under the Subdivision Map Act (Quimby Act). A developer may elect to dedicate or improve park sites in exchange for fee credits, or the City may utilize other collected fees to improve park sites. For planning purposes, Park C shall be considered a reservation of the site for future acquisition by the City of Manteca.

Parks A and B, and some portions of the open space trail system within Woodbridge, shall be constructed Pulte Home Corporation and maintained by a Home Owner's Association established by Pulte Home Corporation. Fees for the maintenance of these facilities, which shall be developed to meet specific recreational needs of the active adult community, will be the responsibility of the Home Owner's Association. The general public will have access to Park C, as well as the Open Space/Trail System located in Woodbridge by Del Webb. Park facility standards shall in all cases meet and/ or exceed City of Manteca standards.

E.4.2 Private Recreation Facilities

The recreation needs of an active adult community differ from those of a conventional community. Typically, a variety of uses are provided in park or community center catering to a diverse demographic of users groups and active uses generally outweigh the demand for passive uses. Conversely, in an active adult community less emphasis is placed on physically demanding activities, and more emphasis is placed on social interaction. A higher recreational priority is placed on smaller scale facilities that are aesthetically pleasing and promote leisure and fitness tailored to that age group.

Woodbridge by Del Webb provides for two private Parks A & B, and a 13.5-acre private recreational facility, at the center of the community (Refer to Figure E.4.1.5). The focus of the facility is a recreation lodge containing swim facilities, social rooms, work-out facilities, a library and craft-rooms. Active recreation opportunities within the center are tailored to the desires of an active adult community, and include a softball field, bocce courts, a tennis facility, and passive uses such as a contemplative garden, all surrounding a major lake feature. Fees for the maintenance of these facilities will be the responsibility of the Home Owner's Association. The general public will not have access to the recreation center, Park A & B, and associated facilities—access will be limited to residents and their guests.

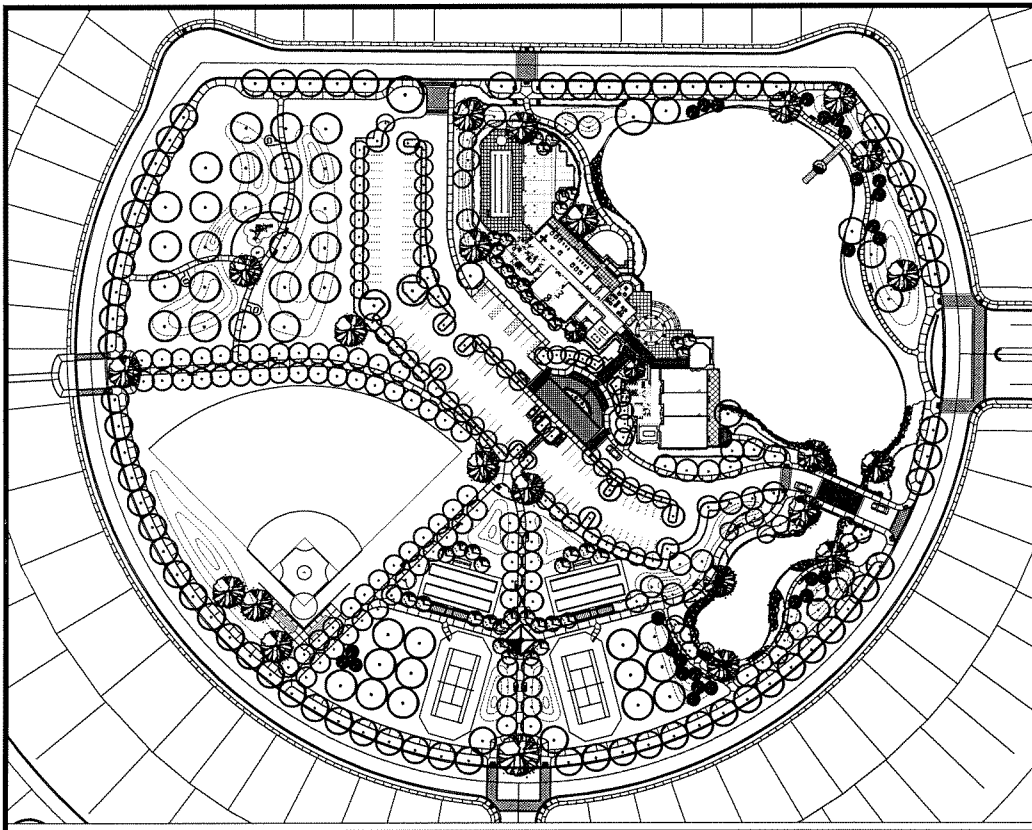


Figure E.4.1.5 Recreational Center

Section F. Infrastructure

F.1 Water Master Plan

The City of Manteca currently provides domestic water to its customers via a network of wells and transmission lines which draw groundwater and distribute it throughout the City. While the City of Manteca has historically met all of its water needs in this manner, it is currently involved in a joint project with the South San Joaquin Irrigation District, the City of Lathrop, the City of Tracy, and the City of Escalon to develop a surface water source which will supplement the current groundwater source. The project, named the South County Surface Water Supply Project (SCSWSP), is currently under construction and will include a water treatment plant and approximately 40 miles of pipeline that will deliver treated surface water to all of the aforementioned cities.

The SCSWSP deliver water in 2005. In order to develop more water resources to allow the existing City water system to meet the demands of the Union Ranch project, the project will include the construction of two new domestic water wells. One well will be constructed in the southwest corner of storm drain detention basin/Park A within the Union Ranch site. The other will be constructed in the northeast corner of the SCSWSP's water storage tank site, located on Lathrop Road east of Union Road. Upon completion of the SCSWSP, the wells will remain to supplement the City of Manteca's water supply. The City has determined that such supplementation is required.

The Union Ranch project will be served by the extension of two existing City water mains to the project site. The existing 12-inch water line in Lathrop Road will be extended to the project site. The existing 12-inch water line at the intersection of Lathrop Road and Airport Way will be extended northward in Airport Way adjacent to the project frontage. These extensions will result in a 12-inch line loop. This looped system will be the backbone network throughout the project site.

The Union Ranch project water distribution system will be developed in phases throughout the site. Each phase will connect to a 12-inch diameter water transmission line and other connection points in preceding phases. This continuously looped system of water mains will provide for the necessary fire flows and line pressures in conformance with City of Manteca standards. The system will be designed and constructed in conformance with City of Manteca standards for materials and installation. The Master Water Plan for Union Ranch is included herein as figure F.1.1

F.2 Sanitary Sewer Master Plan

The City of Manteca currently provides sanitary sewer service to its customers via a network of collection of gravity and force main sewer lines. Several pump stations and lift stations located throughout the City to augment this sewer line network. This conveyance system terminates at the City of Manteca Wastewater Quality Control Facility, located in the southwest area of the City. The facility has a capacity of 6.95 million gallons per day (mgd) and treats wastewater via a secondary activated sludge process. The facility will be expanded to a capacity of 10 mgd by 2005 and has an ultimate expansion capacity of 25 mgd.

The collection system for the Union Ranch project will consist of a network of gravity sewer lines ranging in size from 6" to 15" in diameter. The collection system will flow generally from east to west, more or less with the existing slope of the project site. A 15" line will terminate at Airport Way. Ultimately, it will connect to a larger sewer trunk line to be constructed at a future date pending completion and implementation of the City of Manteca's Sanitary Sewer Master Plan improvements. Union Ranch developments will pay sewer collection fees (PFIP) to cover the project's share of future use of the trunk lines. See figure F.2.1 Partial City Sewer Plan contained herein.

Until master plan improvements are complete, an interim solution for conveying wastewater generated by Union Ranch to the existing City of Manteca collection system is needed. The closest point of connection to the City's collection system is approximately 1000 feet north of the intersection of Airport Way and West Yosemite Avenue. This point of connection is approximately 11,000 feet south of the intersection of Airport Way and Lathrop Road. A temporary pump station sized to serve all of the Union Ranch development areas will be constructed at the southwest corner of the Union Ranch project, along the Airport Way frontage. It will pump wastewater via a 12" force main to the aforementioned connection point. Upon completion of the gravity trunk line in Airport way, the 12" force main and temporary pump station will be abandoned per the City's requirements.

The City of Manteca Standard Plans and Specifications were used to determine wastewater flows for this master plan. Per City of Manteca Standard Drawing No. S-2, an average flow of 330 gallons / residence / day was used (3.3 persons per lot @ 100 gallons / person / day). Per the proposed land plan, there will be approximately 2200 residential units in the Union Ranch project, resulting in approximately 7260 residents. A peaking factor of 2.9 was used per the chart on Standard Drawing No. S-2.

This Sewer Master Plan has been designed to accommodate 97 acres of Very Low Density Residential (2 dwelling units / acre) north of and adjacent to Union Ranch on the east side of Union Road. An Area of Benefit will be created to distribute appropriate cost sharing to development that benefits in the future. Additionally, wastewater flows from the centrally located community center of the Union Ranch project were calculated per City of Manteca Standard Drawing No. S-2 for commercial development. This resulted in 13.5 acres x 10,000 gallons / acre / day = 135,000 gallons per day peak flow, or the approximate equivalent of 140 residential units. This flow was added at manhole number 206 of this master plan.

The Union Ranch project sanitary sewer collection system will be developed in phases throughout the site. Each phase will discharge into the internal collection lines extending to the 15-inch diameter sewer trunk line and the temporary pump station. The 15-inch diameter sewer trunk line, temporary pump station, and 12-inch diameter force main will be constructed during the first phase of development. The Sewer Master Plan has been designed to receive and convey wastewater flows from the plan area to the temporary pump station and ultimately through the new 12-inch diameter force main and into the City's existing wastewater treatment plant. The system will be designed and constructed in conformance with City of Manteca standards for materials and installation. The Master Sewer Plan for Union Ranch is included herein as figure F.2.2 Master Sewer Plan.

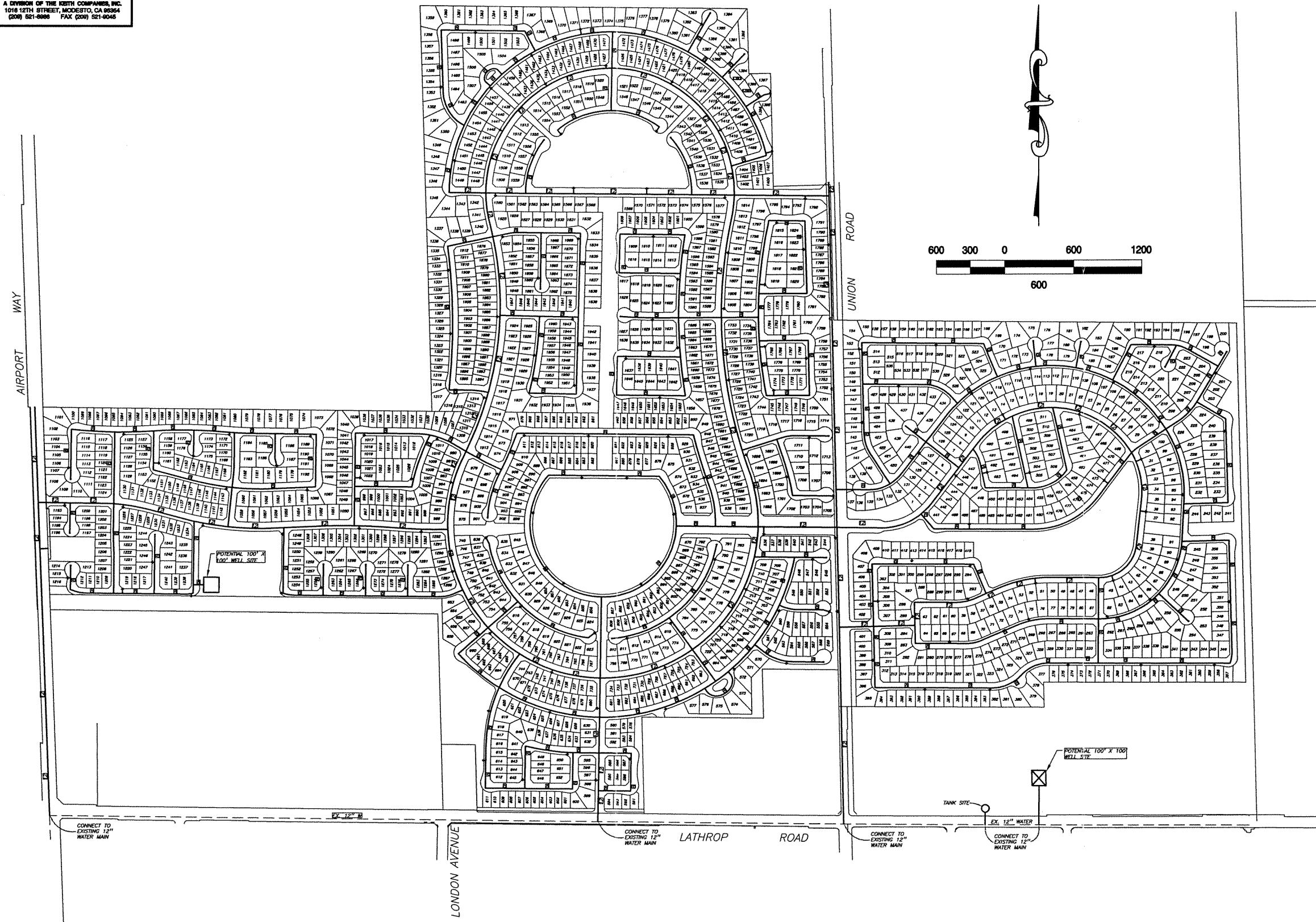


Figure F.1.1 Master Water Plan

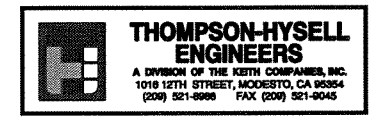
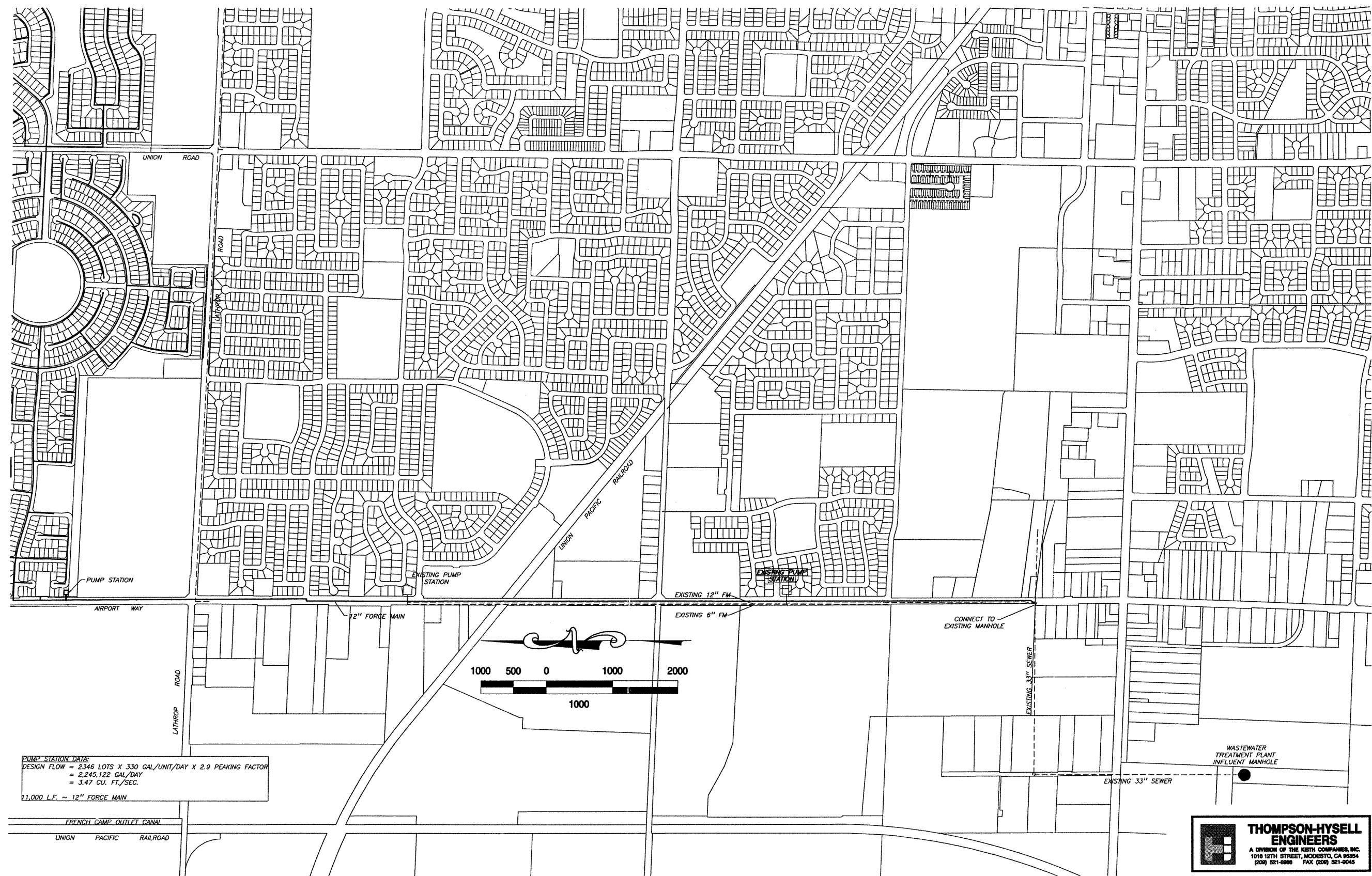


Figure F.2.1 Partial City Sewer Plan

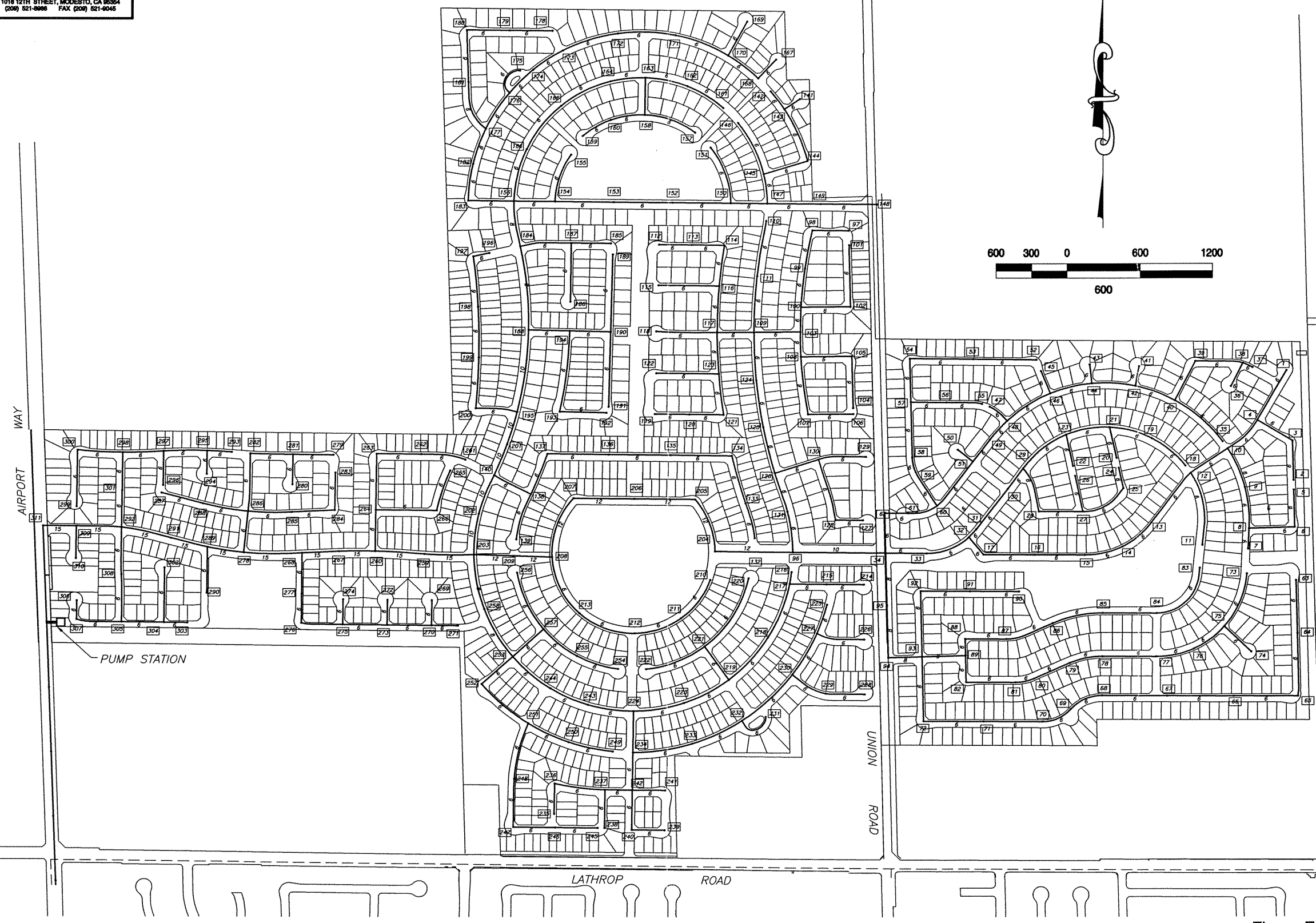


Figure F.2.2 Master Sewer Plan

F.3 Storm Drain Master Plan

The City of Manteca currently provides storm drainage via a system of gravity storm drain lines which terminate at detention or retention facilities. Existing detention facilities discharge into a network of open channel and underground pipes owned and maintained by the South San Joaquin Irrigation District (SSJID). SSJID facilities eventually drain into the French Camp Outlet Canal. Several of the aforementioned open channels and underground pipes owned by the SSJID bisect the Union Ranch project area. Some will need to be relocated and/or improved in order to construct the Union Ranch project and provide for terminal storm drainage. The existing drainage diagram is included herein as figure F.3.1 Existing Drainage information.

Currently, the City of Manteca is updating its Storm Drain Master Plan. Specific data on the extent of improvements to existing SSJID facilities is not available at this time. However, enough data is available to determine that Union Ranch will provide storm drainage via four separate collection systems which will terminate respectively at four separate detention basins. The collection systems and basins have been sized to collect storm runoff from a 10-year, 48-hour storm event. Eventually, each basin will empty into the nearest SSJID drain. Currently, it is anticipated that the Basins 1, 2, 3, and 4 will discharge into SSJID Drain 3A, Lateral RGC, Lateral DD, and Drain 3, respectively. Storm water discharge from the detention basins will be by pump stations.

Per the City of Manteca Standards, the storm drain basins have been designed with the following criteria:

1. Each basin provides storage for one 10-year storm over its respective tributary area.
2. Side slopes will not be steeper than 5:1.

STORM DRAIN BASIN VOLUME CALCULATIONS

REFERENCES:

1. City of Manteca Standard Plans and Specifications
2. City of Manteca Interim Percolation Basin Standards

$V = CAR/12$, where

$C = 0.30$

$A = \text{area, acres}$

$R = 3.56 \text{ inches}$

BASIN NO. 1:

$A = 151.9 \text{ acres}$

$$V = (0.30)(151.9 \text{ acres})(3.56") / (12" / \text{ft}) = 13.5 \text{ acre-feet}$$

BASIN NO. 2:

$$A = 145.7 \text{ acres}$$

$$V = (0.30)(145.7 \text{ acres})(3.56") / (12" / \text{ft}) = 13.0 \text{ acre-feet}$$

BASIN NO. 3:

$$A = 106.9 \text{ acres}$$

$$V = (0.30)(106.9 \text{ acres})(3.56") / (12" / \text{ft}) = 9.5 \text{ acre-feet}$$

BASIN NO. 4:

$$A = 97.6 \text{ acres}$$

$$V = (0.30)(97.6 \text{ acres})(3.56") / (12" / \text{ft}) = 8.6 \text{ acre-feet}$$

The Union Ranch project storm drain collection system will be developed in phases throughout the site. The storm collection system for each phase will discharge into the detention pond within its respective tributary area. The Storm Drain Master Plan collection and detention system has been designed in conformance with City of Manteca standards. The detention basins will be landscaped and grass-lined and have been designed to include recreation features for use during the dry months. Play fields, dog exercise areas, and walking paths are some of the amenities that can be found within each detention basin site.

The Storm Drain Master Plan includes water quality features designed in conformance with the standards of the Regional Water Quality Control Board for the Central Valley Region, the City of Manteca, and the SSJID. Storm water regulations for construction projects using Best Management Practices have been incorporated into the master plan. Discharge flow rates from each detention basin into the adjacent storm drain facilities have been designed in conformance with the requirements of the City of Manteca and SSJID. SSJID Drain 3 will be an open channel relocated to the southwest boundary of the project site. The open channel will include a 100-foot wide parcel that will receive and convey detained and treated runoff off site to the existing SSJID system of canals. A maintenance road will be constructed adjacent to the channel. A conceptual cross section plan is included herein as figure F.3.2. The master storm drain plan for Union Ranch is included herein as figure F.3.3 and figure F.3.4.

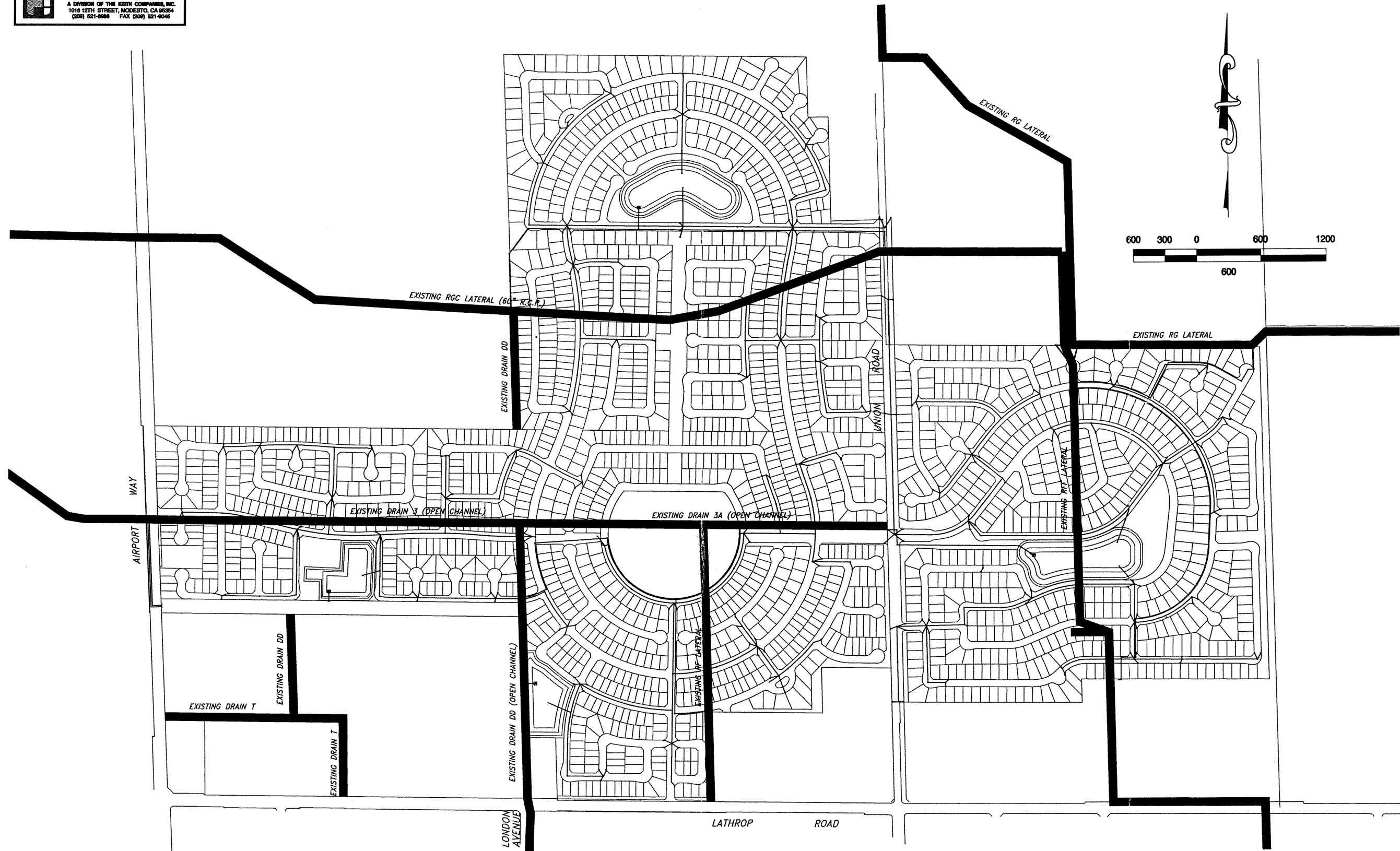


Figure F.3.1 Existing Drainage



STORM DRAIN BASIN SUMMARY			
BASIN NO.	TRIBUTARY AREA	REQUIRED STORAGE	PROVIDED STORAGE
1	151.9 ACRES	13.5 AC-FT	13.9 AC-FT
2	145.7 ACRES	13.0 AC-FT	13.0 AC-FT
3	106.9 ACRES	9.5 AC-FT	9.5 AC-FT
4	97.6 ACRES	8.6 AC-FT	8.9 AC-FT

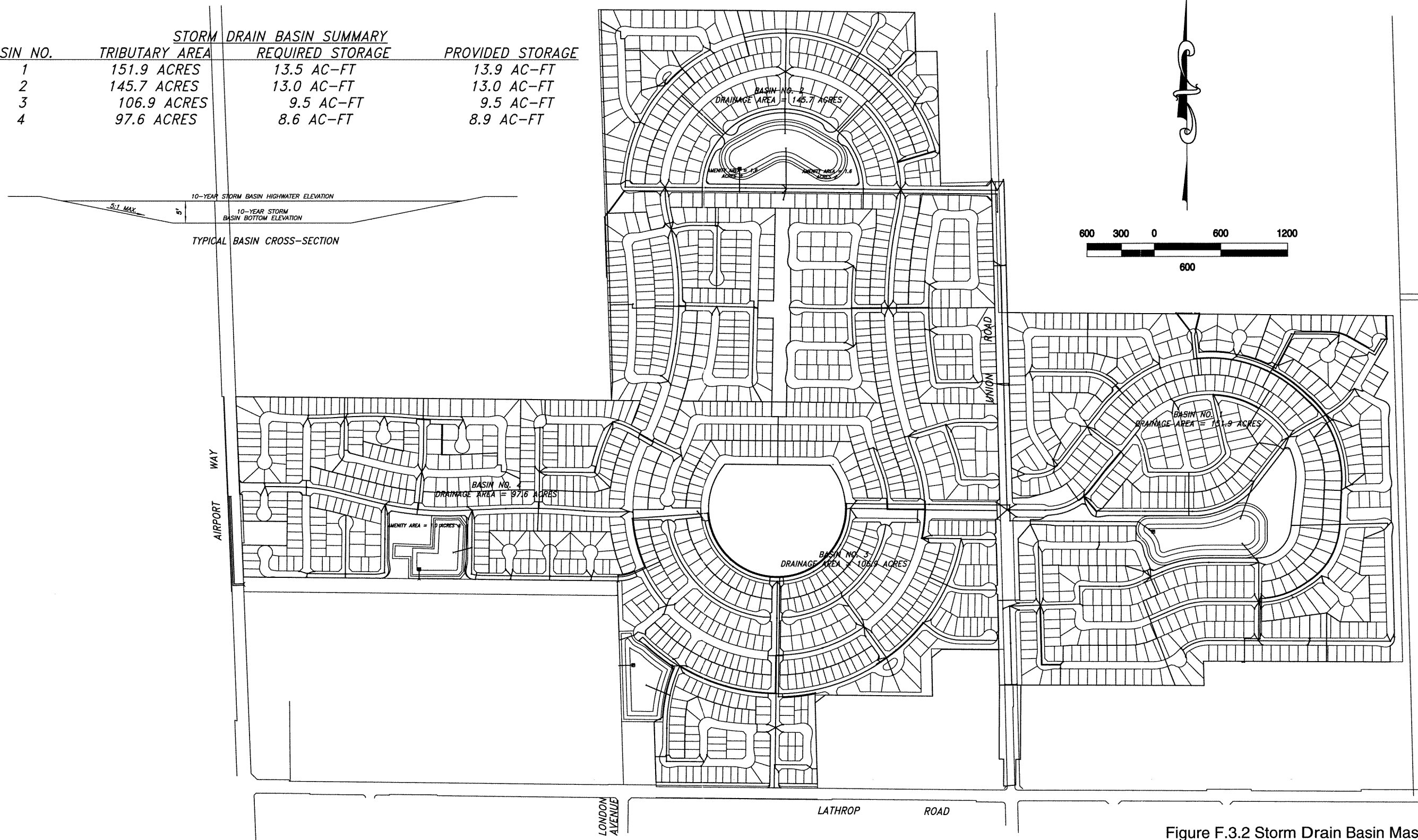


Figure F.3.2 Storm Drain Basin Masterplan

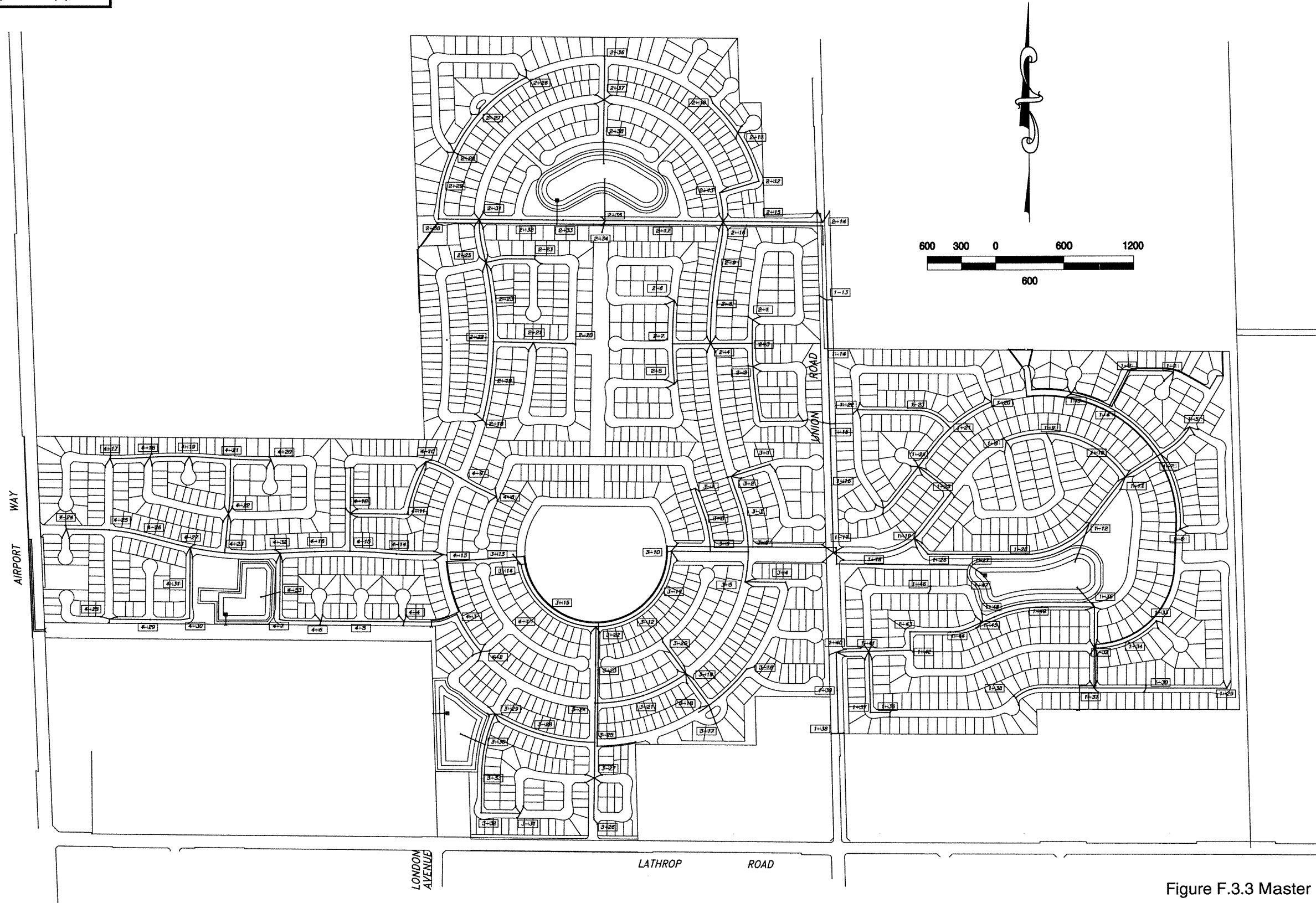
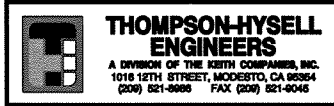


Figure F.3.3 Master Storm Drain Plan

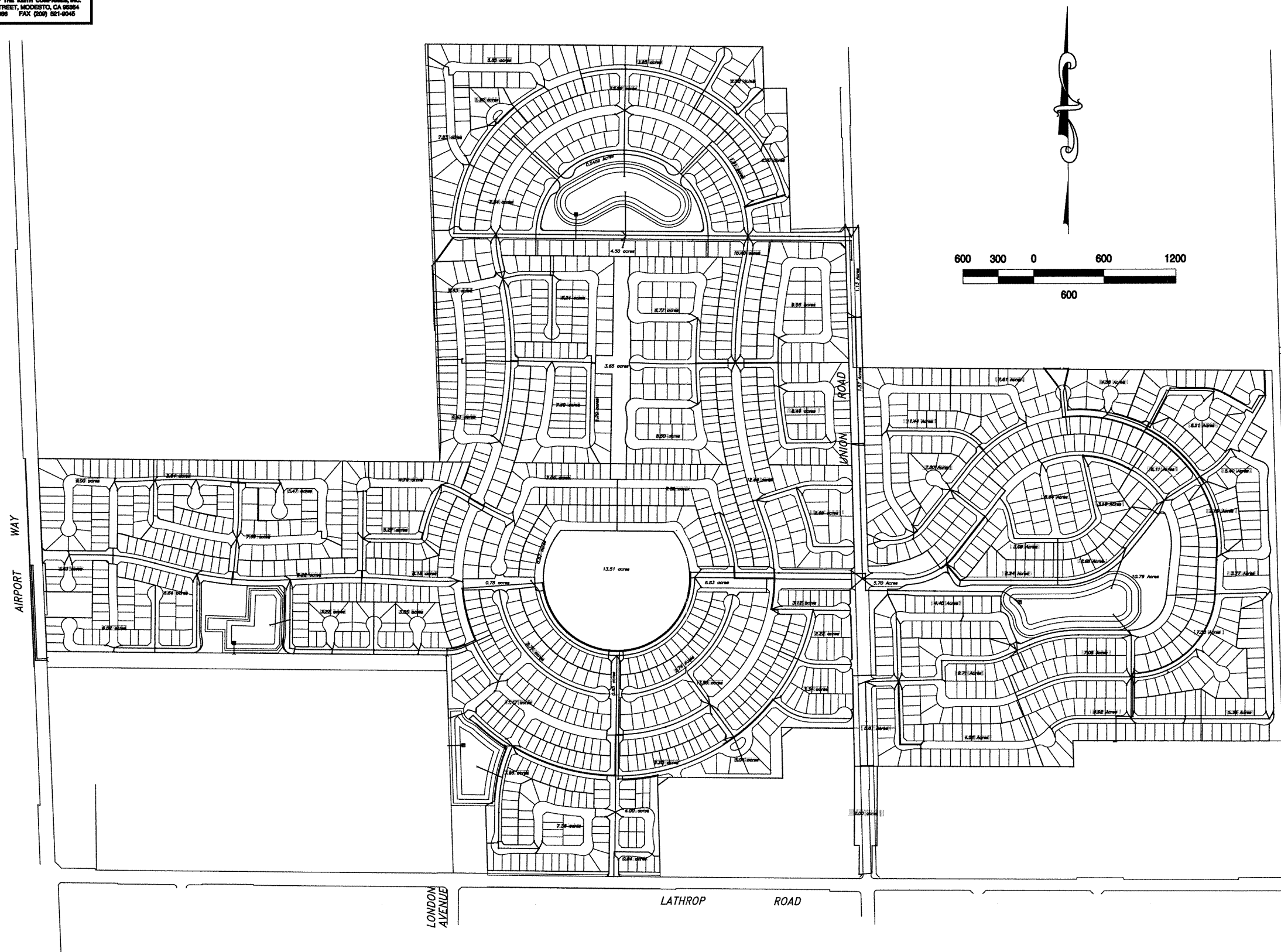


Figure F.3.4 Master Storm Drain Plan

F.4 Telephone

Telephone service will be provided to Union Ranch by Verizon Communications. Verizon currently owns and operates a telephone service network throughout the City of Manteca and will augment its existing facilities in the project vicinity and extend service into the project in order to serve Union Ranch.

F.5 ElectriCity

ElectriCity will be provided to Union Ranch by Pacific Gas and Electric. Pacific Gas and Electric currently owns and operates an electric service network throughout the City of Manteca and will augment its existing facilities in the project vicinity and extend service into the project in order to serve Union Ranch.

F.6 Natural Gas

Natural gas will be provided to Union Ranch by Pacific Gas and Electric. Pacific Gas and Electric currently owns and operates a natural gas service network throughout the City of Manteca and will augment its existing facilities in the project vicinity and extend service into the project in order to serve Union Ranch.

F.7 Cable Television

Cable Television will be provided to Union Ranch by Comcast. Comcast currently owns and operates a cable television network throughout the City of Manteca and will augment its existing facilities in the project vicinity and extend service into the project in order to serve Union Ranch.

Section G. Resource Planning

Natural and Cultural Resources

G.1 Biological Resources

The plan area is located on level terrain, which has been dominated by agricultural activity on the rural outskirts of the city of Manteca. A Biological Resources Constraints Analysis was prepared for the portion of the project area west of Union Road by Monk & Associates September 2003. An EDAW biologist conducted a general overview of the remainder of the project area on December 4, 2003. This section of the Specific Plan has been prepared based on those findings.

G 1.1 Wetlands

The project site has several agricultural irrigation ditches and is adjacent to an abandoned irrigation ditch on the east. While the agricultural ditches exhibit wetland characteristics, they only circulate pumped irrigation water. The only hydrological connection is to underground irrigation district pipes. These ditches were excavated in dry ground, and/or do not otherwise constitute straightened or channelized natural drainage ways. Based on these circumstances it is unlikely that the irrigation ditches would be considered Waters of the U.S. However, only USACE can make that determination and a Wetland Delineation would need to be conducted and approved by USACE as part of the project permitting process.

The abandoned irrigation ditch adjacent to the eastern project boundary supports riparian habitat, which is considered sensitive habitat by the California Department of Fish and Game (DFG) and is protected under Section 1602 of the Fish and Game Code. The potential need for protection buffers will be determined through the environmental review process.

G 1.2 Terrestrial Biology

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP)

The SJMSCP provides a strategy for balancing the desires to conserve open space in San Joaquin County, maintain the agricultural economy, and allow development. It was developed to avoid, minimize, and mitigate impacts on plant and wildlife habitat. Participation in the SJMSCP is voluntary for local jurisdictions and project proponents. This project would be eligible to participate in the SJMSCP. The San Joaquin Council of Governments (SJCOG) maps the area occupied by the project site as cropland. Under Section 5.3.1 of the SJMSCP, a fee of \$1,724 per acre would be paid by the applicant for the conversion of this category of land into residential development. This fee would fund most of the necessary mitigation for impacts to special-status species covered by the SJMSCP. The project applicant is committed to participating in SJMSCP and contributing the applicable fees under the SJMSCP.

Special-Status Species

Plants

Suitable habitat has been identified for special-status plant species that could potentially occur in the riparian areas onsite. These include Sanford's arrowhead, slough thistle, and rose-mallow. None of these species is state or federally listed as threatened or endangered. These three special-status plants are covered under the SJMSCP.

Wildlife

Based on the initial biological constraints analysis prepared by Monk & Associates (2003) for the western portion of the project area, suitable habitat for some special-status animals was identified. These include burrowing owl, Swainson's hawk, and other raptors.

Burrowing Owl

According to Monk & Associates (2003), no burrowing owls were observed during their site investigation, although there are numerous records of the animals in the vicinity of the project site and the California Department of Fish and Game (CDFG) would consider the project site to provide suitable habitat. This species is covered by the SJMSCP. Additional mitigation may be required if any owls could be taken directly by the project.

Swainson's hawk

The Swainson's hawk is state listed as a threatened species. Foraging habitat for this species is present on and adjacent to the site. The site also provides a few trees on the east side of Union Road that are considered low quality nesting sites for Swainson's hawk. There are numerous nesting records for this species in the project vicinity and Swainson's hawks were observed flying over the site during a biological survey conducted in August 2003 (Monk and Associates 2003).

Participation in the SJMSCP would mitigate impacts associated with the loss of foraging habitat for the Swainson's hawk. Additional mitigation may be needed to avoid direct take of any species' nest on the site.

Other Raptors

All raptors are protected under §3503.5 of the California Fish and Game Code, which prohibits the take or destruction of raptors, including their nests and eggs. Raptors that occur or could occur on the project site include northern harrier, white-tailed kite, and red-tailed hawk. The SJMSCP provides coverage for northern harrier and white-tailed kite. The site provides marginally suitable foraging and nesting habitat for the raptors listed above. If direct take of any of these species may occur, additional mitigation could be required.

G 1.3 Biological Resource Guidelines and Standards

The Specific Plan will remain consistent with the applicable Manteca General Plan (MGP) policies as listed above in Section G.1 Biological Resources. The project proponent will ensure the implementation of the MGP policies for the protection of biological resources. The project proponent will participate in the avoidance, minimization, and mitigation measures developed for special-status species in accordance with the California Fish and Game Code and those

of the SJMSCP. Additionally, a Mitigation Monitoring and Reporting Program will be prepared to ensure that any mitigation measures applicable to the protection of biological resources developed during the environmental review process will be implemented during the design and construction phases as appropriate for this project.

G.2 Water Quality

Water quality will be protected from the effects of contaminated urban runoff into streams, channels, and natural drainages. The Environmental Protection Agency administers the National Pollutant and Discharge Elimination System (NPDES) Program, which requires permitting for construction to protect water quality. As part of the permitting procedure a Storm Water Pollution Prevention Plan would be developed for construction activities.

G.2.1 Water Quality Resource Guidelines and Standards

The NPDES requirements and the implementation of Best Management Practices (BMPs) will be applied to the Specific Plan area and shall be required to minimize pollutant runoff. The project applicant is committed to the implementation of BMPs consistent with the City of Manteca's standards and ordinances and as outlined in the City's Storm Drain Master Plan. The Specific Plan will remain consistent with the applicable Manteca General Plan policies as listed above in Section C3.5d Water Quality and implementation of those policies for the protection of water quality. A Mitigation Monitoring and Reporting Program will be prepared to ensure that any mitigation measures applicable to the protection of biological resources as developed during the environmental review process are implemented as part of the project design and construction policies.

G.2.2 Proposed Lake Uses

The proposed lakes will be the focal point of the Active Adult Community Recreation Center. The lake will serve as the back drop to the main project entry. The water surface at the south portion of the lake will be approximately 2 feet and a recirculated waterfall is proposed downstream of the bridge crossing. There are several wooden structures adjacent to or within the lake limits. These structures provide additional view and access points for the residents to enjoy the lake.

G.2.3.Lake Physical Characteristics and Irrigation Reservoir

The lakes have a surface area of 2.2 acres. The average depth of the lakes is approximately eight feet with a maximum depth of fifteen feet. The lake shoreline is approximately 1,800 linear feet. The lake volume is 17.5 acre-feet or 5.6 million gallons.

The lake will be used as a reservoir for irrigation water. The lake recirculation pump station will include irrigation pumps, filters and controls to irrigate the \pm 4 acres of landscape area within the entire community recreation center park. This use of the lake as an irrigation reservoir will prevent minerals from accumulating in the lake water as a result of evaporation. Using the lake as an irrigation reservoir not only provides water quality enhancement, but it also collects stormwater and nuisance water runoff from the recreation center area will be collected, treated and reused within the lake to make-up evaporation and irrigation. The lake will be lined with clay or a suitable geomembrane such as P.V.C. or H.D.P.E.

The average annual evaporation rate is 50 inches per year. That equates to an average of approximately 8,200 gallons per day (total of 50,000 GPD for irrigation and lake evaporation). From a water usage standpoint, the lake will require less water than recreational turf landscape area of similar size.

The makeup water due to evaporation and irrigation will be from on-site wells. The flowrate required is less than 50 gallons per minute to make up for daily evaporation. The additional flowrate required from the wells for makeup water due to irrigation will need to be determined.

G.2.4 Lake Water Quality Management System(s) and Vector Control Plan

Aeration

In order to minimize potential reduction in lake water dissolved oxygen concentrations and to promote vertical water circulation an aeration system will be utilized. The aeration systems will add dissolved oxygen into the water directly via mass transfer from air bubbles into the lake water. Aeration systems also transport water from the lake bottom to the top using the surface tension of the air bubbles to bring water to the surface where it can then absorb the oxygen from the atmosphere.

Water Replacement

Due to the continual and daily nutrient loading occurring in lakes (from various sources including birds, landscaping, urban runoff, etc.) and the subsequent difficulty in maintaining low concentrations of nutrients which contribute to poor water quality, irrigation water will be taken out of the lakes to be replaced with makeup water with higher water quality.

Water Circulation

Recirculation is used in conjunction with the other methods described above to improve water quality by enriching oxygen-deficient areas and increasing mass transfer of constituents to oxygen-rich areas of the lake.

Lake Nutrient Removal

Biological filters (or biofilters) will be designed as the primary lake water quality nutrient removal system for this project. Biofilters typically designed for lake water quality enhancement are comprised of gravel bed in which water is pumped through. The gravel provides an ideal attached-growth media for a biological mass which resides on the gravel and removes the nutrients as the water is pumped through the gravel bed.

Vector Control

Mosquitoes, midges, and other vectors will be controlled through physical and chemical means. The lake water system will be designed with physical characteristics to minimize the habitat for propagation of mosquito larvae (by eliminating stagnant water surfaces and allowing the sun and wind to contact the open water surface, it is impossible for mosquito larvae to survive). In addition, habitat will be provided for predator species to control vectors. Lake operations and management personnel are trained to contact County Vector Control and apply the appropriate chemicals as necessary.

G.2.5 Lake Access and Public Safety

Residents and visitors will be notified that wading and swimming is not allowed. However in the event that someone ends up in the lake, the shoreline as designed will provide safe access out of the lake. A concrete safety shelf will be designed at the edge of the lake. If someone falls into the lakes, they will only be in 18" of water. The interior slope of the lake gradually goes down to the middle of the lake at a four to one slope (4 Horizontal: 1 Vertical). At the end of the shelf, individuals would be swimming instead of walking along the bottom of the lake.

G.2.6 Operations and Maintenance (O&M) Program

The following maintenance activities will be part of the lake O&M program:

Debris Removal

The servicing technician should physically remove any floating or shoreline debris from the lakes. Any larger branches from trees in the water or other debris too far from the shore should be removed with the use of a service boat. All debris should be bagged and placed in a designated dumpster on site.

Algae Control

If uncontrolled algae growth is observed it should be treated with the use of algaecides directly on the filamentous algae along the shorelines or sprayed on the lake surface for planktonic algae. A water colorant, Aquashade, may be applied on an as needed basis to minimize the growth of algae and aquatic weeds by reducing the ultraviolet light penetration.

Aquatic Weed Control

Aquatic weed growth may occur in the lakes. The weeds may be allowed to flourish until they come within six inches of the water surface or eight feet from the shoreline. At this time, mitigation procedures should be employed. To remove the unwanted vegetation, chemicals may be applied to reduce the re-growth potentials.

Pump Maintenance

All pumps should be inspected monthly. A maintenance log should be located in the pump house and each maintenance visit should be noted in the log. The technician should automatically perform all annual and semi-annual maintenance.

Biofilter Maintenance

The biofilter(s) should be backwashed and the media gravel rotated every six months.

Aeration System Maintenance

The aeration system pumps should be inspected each month. Necessary routine maintenance should be performed at that time. Aeration pumps with air filters should have the air filters cleaned monthly or more frequently as needed. Aeration disks should be inspected annually.

G.2.7 Lake System – Water Quality Management Program

Providing the storm water treatment function as part of an aquascape relies on recreating a natural ecosystem that can utilize biologic processes for treatment of urban pollutants in runoff as well as maintaining the normal health of the aquascape system. The primary elements that have been integrated into this unique type of treatment aquascape system include: (1) wetlands planters, (2) lake biofilter beds, (3) pretreatment wetland filters, (4) aeration, and (5) storm water retention volume/capacity, when successfully applied can achieve exceptional water quality results.

Lake biofilters consist of separate self-contained submerged gravel beds adjacent to the perimeter of the lake through which lake water is circulated and distributed underneath through a slotted pipe system. A naturally occurring biological mass (microorganisms) will coat the gravel and serve to strip the water passing through the filter of nutrients (nitrogen, phosphorous) that would otherwise promote algae growth. In addition, the recirculation pumping reintroduces oxygen into the lake system and increasing the overall dissolved oxygen content. The combination of limited food supply and aerobic conditions reduce the potential for lake eutrophication. A critical feature that needs to be incorporated in the biofilter design to ensure long term performance is the ability to effectively perform periodic backwashing in order to remove material that accumulates within filter voids and prevents adequate filtration. Simply reversing the direction of flow through the biofilter piping system is not sufficient to distribute flow and a separate backwash system should be used. Another important design aspect of the biofilters is the layout and location of these features in order to promote the maximum water quality benefit. Generally placement is recommended at terminal ends of the lake geometry which enhances the overall lake water circulation. The biofilters are generally designed so that the velocity does not exceed 0.5 gpm per square foot of biofilter, assuming minimum 24-inch thick gravel filter. The amount of biofilter needed to treat the lake system depends upon the amount of turnover or lake recirculation time for treatment, where industry averages for lake turnover rates without biofiltration range from 5 to 15 days.

A stabilized biological lake system requires maintenance of the dissolved oxygen levels which will eliminate the potential for odor problems and other lake operating issues. Maintaining the necessary dissolved oxygen levels is achieved through the application of a fine bubble diffusion system placed along the bottom of the constructed lake. Additional benefits of aeration include destratification of the lake's water column to reduce surface water temperature and enhancing the natural vertical movement or circulation patterns. The aeration utilizes low-pressure and sized to provide turn over every 3 to four hours. The ability to develop extremely fine bubbles can be achieved through the use of aeration disk pods constructed with a flexible rubber skin that precisely controls the size of the bubbles. The importance of the fine bubbles compared to the large bubbles from a simple perforated pipe system involves the increased contact area provided by the fine bubbles enhancing oxygen transfer. The size of the bubbler system is typically based upon the shape or geometry of the constructed lake as compared to the size; in order eliminate any dead zones. The movement of lake surface water from wind and other water feature elements such as waterfalls or fountains can provide additional aeration.

Separate wetland planters periodically located along the perimeter of the lake edge will assist in promoting the overall water quality objective for the lake system. The wetland planters can be constructed along shelves in the lake shoreline with walls separating the lake except for the crest to allow for submergence from the lake water level. The wetlands function to filter out waste from the lake water through various natural chemical and biological processes. Methods to determine the amount of wetland area required for treatment involve correlations related to the concentration or amount of nutrients in the lake water.

The normal lake operating water levels would have the ability to "retain" or store the design "storm water quality volume" as defined in the City of Manteca Stormwater Quality Manual.

G.3 Cultural Resources

The project area is located in a portion of the Central Valley fed by the San Joaquin River approximately 4 miles to the southwest, the Stanislaus River approximately 9.5 miles to the southeast, and several creeks and sloughs approximately 3-4 miles to the north and northeast. With plentiful resources and temperate climate, the Central Valley was well populated prehistorically and served as the location for some of the more substantial village sites known in California. Additionally, according to ethnographic accounts, the project area is located in an area, which was considered the territory of Northern Valley Yokuts during early Spanish exploration into northern California. The project area is flat terrain and is privately owned and occupied by farmsteads, orchards, and miscellaneous outbuildings associated with the agricultural use of the area. The City of Manteca was incorporated in 1918 during a period of growth in California and an expanding agricultural base. Some of the buildings and structures located in the project area could be considered historic resources.

A number of federal, state, and local regulations, statutes, and ordinances protect cultural resources in California. Management of cultural resources in the state is guided in large part by the National Historic Preservation Act (NHPA) of 1966 and the provisions of the California Environmental Quality Act (CEQA).

Although the treatment of cultural resources on this project is guided primarily by the provisions of CEQA, federal permitting would require compliance with Section 106 of the National Historic Preservation Act (NHPA).

G.3.1 Regulatory Framework and Thresholds

Federal

National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires that federal agencies take into account the effects of their actions on properties that may be eligible for listing or are listed on the NRHP, and afford the ACHP a reasonable opportunity to comment. To determine whether an undertaking could affect NRHP-eligible properties, all cultural sites that could be affected must be inventoried and evaluated for inclusion on the NRHP.

Native American Graves Protection and Repatriation Act

Native American human remains are protected under the Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 (25 United States Code [USC] 3001 et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items in their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government. Native American human remains also are protected under CEQA, as described below.

*State of California**California Environmental Quality Act*

CEQA has a much more broad and far-reaching environmental regulatory framework than the NHPA, but it also includes cultural resources as an important component of its oversight and management policies. Before discretionary projects are approved, the potential for significant impacts of the project on archaeological and historical resources must be considered under CEQA (§21083.2, §21084.1) and the State CEQA Guidelines (Title 14, §15064.5).

G.3.2 Cultural Resource Standards and Guidelines

The Specific Plan will remain consistent with the applicable Manteca General Plan policies and implementation of those policies for the protection of cultural resources. The project proponent will adhere to the guidelines and policies provided by CEQA, and if applicable, the NHPA and NAGPRA for the protection and preservation of historical and archaeological resources. A Mitigation Monitoring and Reporting Program will be prepared to ensure that any mitigation measures applicable to the protection of cultural resources as developed during the environmental review process are implemented as part of the project design and construction methods.

Section H. Phasing and Financing

H.1 Development Agreement

A Development Agreement will be entered into between the City of Manteca and the property owners. The agreement will be executed simultaneously with the adoption of this Specific Plan. Such agreement would assure the landowners the land uses and provisions specified in the Plan in exchange for providing the City of Manteca with the benefits identified in the agreement.

H.2 Phasing of Improvements

The installation of the infrastructure necessary to serve the Specific Plan will occur in phases. All Lathrop Road improvements associated with CMU parcels will be constructed when those parcels are developed. The envisioned phasing of the project is illustrated in the Phasing Exhibit. The improvements needed for development of the individual phases, for the project overall as well as the East and West portions, shall be those site improvements within the area of each identified phase.

PHASE 1 - OVERALL

1. Union Road Improvements: Lathrop Road intersection to approximately 2650± feet north of Lathrop Road (PFIP)
2. Water Well: Woodbridge location (PFIP)
3. Project Entry Landscape and Monumentation: Intersection of Union Road at Lathrop Road
4. Traffic Signal Modification: Union Road and Lathrop Road intersection (PFIP)
5. Traffic Signal Installation: Union Road at Project Entry
6. Airport Way Improvements: Approximately 1350± feet adjacent to Woodbridge project (PFIP)
7. Traffic Signal Installation: Airport Way at Woodbridge project entry
8. Off Site Sanitary Sewer Lift Station and Force Main: Airport Way
9. Storm Drain Channel Construction: Woodbridge (PFIP)
10. Underground Existing Irrigation Drains 3 & 3A: Woodbridge (PFIP)
11. Tidewater Bike Trail: Adjacent to Woodbridge storm drain channel; Adjacent to Park "C" and project entry at Union Ranch East

PHASE 1A – Woodbridge Phase 1

1. On-site Improvements: Woodbridge Phase 1 – 371 Homes
2. Woodbridge Recreation Center: Clubhouse, Ornamental Lake, Park, Ball Fields, Bocci Courts, Walking Paths
3. Storm Detention Basins (Park "A" and Southern Basin)
4. Underground Existing Irrigation Lateral PF
5. Park "A" Improvements (Subject to Fee Credits)

PHASE 1B – Union Ranch East Phase

1. On-site Improvements: Union Ranch East Phase 1 – 119 Homes
2. Underground Existing Irrigation Lateral RFF
3. Park “C” Improvements (Subject to Fee Credits)

PHASE 2 – OVERALL

1. Lathrop Road Improvements: Approximately 1100± feet adjacent to Woodbridge project (PFIP)

PHASE 2A – Woodbridge Phase 2

1. On-site Improvements: Woodbridge Phase 2 – 211 Homes
2. Storm Detention Basin

PHASE 2B – Union Ranch East Phase 2

1. On-site Improvements: Union Ranch East Phase 2 – 83 Homes

PHASE 3 – OVERALL

1. Tidewater Bike Trail: Lathrop Road north to Phase 3 boundary of Union Ranch East
2. Traffic Signal Installation: Lathrop Road at Tidewater Bike Trail Crossing (PFIP)
3. Water Well: Union Ranch East Location (PFIP)

PHASE 3A – Woodbridge Phase 3

1. On-site Improvements: Woodbridge Phase 3 – 239 Homes

PHASE 3B – Union Ranch East Phase 3

1. On-site Improvements: Union Ranch East Phase 3 – 65 Homes

PHASE 4 - OVERALL

1. Union Road Improvements: Approximately 1500± feet north from previous improvement boundary to north side of Woodbridge secondary entry road

PHASE 4A – Woodbridge Phase 4

1. On-site Improvements: Woodbridge Phase 4 – 315 Homes
2. Park “B” Improvements subject to Fee Credits
3. Storm Detention Basin
4. Underground Existing Irrigation Lateral RGC & Drain DD

PHASE 4B – Union Ranch East Phase 4

1. On-site Improvements: Union Ranch East Phase 4 – 70 Homes

PHASE 5A – WOODBRIDGE PHASE 5

1. On-site Improvements: Woodbridge Phase 5 – 289 Homes

PHASE 5B – UNION RANCH EAST PHASE 5

1. On-site Improvements: Union Ranch East Phase 5 – 44 Homes
2. Tidewater Bike Trail: Phase 3 North Line to Project Boundary

PHASE 6 – UNION RANCH EAST PHASE 6

1. On-site Improvements: Union Ranch East Phase 6 – 92 Homes
2. Underground Existing Irrigation Lateral RG

PHASE 7 – UNION RANCH EAST PHASE 7

1. On-site Improvements: Union Ranch East Phase 7 – 62 Homes

H.2.1 Description Of Major Infrastructure Improvements

A. Water Wells (2)

Two wells will be developed by the City of Manteca. Improvements will include the test well, drilling, well pumps, motors, electrical controls, booster pump(s), pump house, masonry walls, access drives and landscaping. The well and well site will be developed to City of Manteca standards by the City of Manteca.

B. Off-site Sanitary Sewer Pump Station and Force Main

A sanitary sewer pump station will be constructed near the intersection of Airport Way and the project entry. The force main extends southerly along Airport Way approximately 11,000 lineal feet. Improvements will include pump(s), sump structure, electrical controls, plumbing, 12" PVC force main, 20" steel casing at the RR crossing, site work, emergency signals and landscaping. The pump station and force main project will be developed to City of Manteca requirements.

C. Airport Way

Airport Way will be improved along that portion adjacent to the Woodbridge project. Improvements include center median with curb and gutter, sidewalks, masonry wall, traffic signal, and landscaping on the east side.

D. Lathrop Road

Lathrop Road will be improved in that portion adjacent to the project, tying into the existing improvements on the south side. Improvements include center median with curb and gutter, sidewalks, masonry wall, and landscaping on the north side.

E. Union Road

Union Road will be improved for the full width from the intersection with Lathrop Road to the north boundary of the Woodbridge and Union Ranch East projects. Improvements include center median, curb and gutter, sidewalk, multi-use path, masonry wall, traffic signal modifications and landscaping.

F. Storm Water Detention Basins

Four storm water detention basins are planned within the project. One of the basins (Park "C") is located east of Union Road and the other three (Parks "A" & "B" plus the Phase 2 basin) are located west of Union Road. The lake located within the Woodbridge Recreation Center is not a storm basin. Storm drain pump stations will be located in each basin. Improvements include pumps, electrical controls, plumbing, site work and emergency signals to the City of Manteca standards.

G. Class I Tidewater Bike Trail

The Class I Tidewater bike trail will traverse the project area in a north-south and east-west orientation. The pathway will be improved with a shared 12-foot multi-use path and will be fully landscaped.

H. Underground Existing Drains and Irrigation Laterals

The existing drains and laterals located within the site will be relocated into underground pipes, with the exception of the western portion of Drain 3, which will remain open channel. The new piping location will follow the proposed street alignments and installed in conformance with SSJID and City of Manteca standards. Each existing drain and/or lateral will be relocated concurrently with the phasing of the site development. Each new underground pipe alignment will be connected to the existing drain or lateral locations at the boundaries of the project.

I. Storm Drain Channel Construction

A new open storm drain channel will be constructed along the southwestern boundary of Phase 1 (Woodbridge). The new channel will replace the SSJID Drain 3 and will be constructed in conformance with SSJID and City of Manteca standards. Improvements include 100-foot wide drainage easement, 12-foot gravel maintenance road, fencing, multi-use trail, masonry wall and landscaping.

H.3 Cost of Improvements

There will be no public financing for the project improvements. The proponents will only seek reimbursement for PFIP items, as they benefit the public at large. The PFIP items for the Union Ranch Specific Plan area include the improvement of portions of Airport Way, Union Road and Lathrop Road, water wells (2), the storm drain master line, installation of a traffic signal at the Lathrop Road Bike Path crossing and the improved traffic signal at the intersection of Union Road and Lathrop Road. The estimated cost of all PFIP items is \$4,647,500 and may be reimbursed via fee credits or PFIP payments as consistent with the PFIP program.

The estimated cost of all major infrastructure improvements is summarized in the table below. With the exception of PFIP items, the improvements will be funded via private financing by the project proponents.

Table H.3.1 Engineer's Opinion of Probable costs, Union Ranch Off-Site Improvements

Engineer's Opinion of Probable Costs, Union Ranch Off-Site Improvements	Totals	PFIP Credit
Airport Way (Some Pfp 1350 Lf ± @ \$150±/ Lf)	\$1,060,176.00	\$202,500.00
Lathrop Road(Some Pfp 1100 Lf± @ \$50±/ Lf)	\$837,780.00	\$55,00.00
Union Road (Some Pfp 2650± Lf @ \$100±/lf)	\$3,775,284.00	\$265,000.00
Sanitary Sewer Pump Station & Force Main	\$2,377,200.00	\$0.00
Water Well - Woodbrigde (Pfp)	\$1,200,000.00	\$1,200,000.00
Water Well - Union Ranch East (Pfp)	\$1,200,000.00	\$1,200,000.00
Class I Bike Path, Incl. Landscaping	\$1,400,000.00	\$0.00
Storm Drain Master Line (Pfp)	\$1,525,000.00	\$1,525,000.00
Traffic Signal - Airport Way Entry	\$210,000.00	\$0.00
Traffic Signal - Lathrop & Union (Pfp)	\$60,000.00	\$60,000.00
Traffic Signal - Union Road Entry	\$180,000.00	\$0.00
Traffic Signal - Lathrop Road Bike Crossing (Pfp)	\$140,000.00	\$140,000.00
Grand Total	\$13,965,440.00	\$4,647,500.00

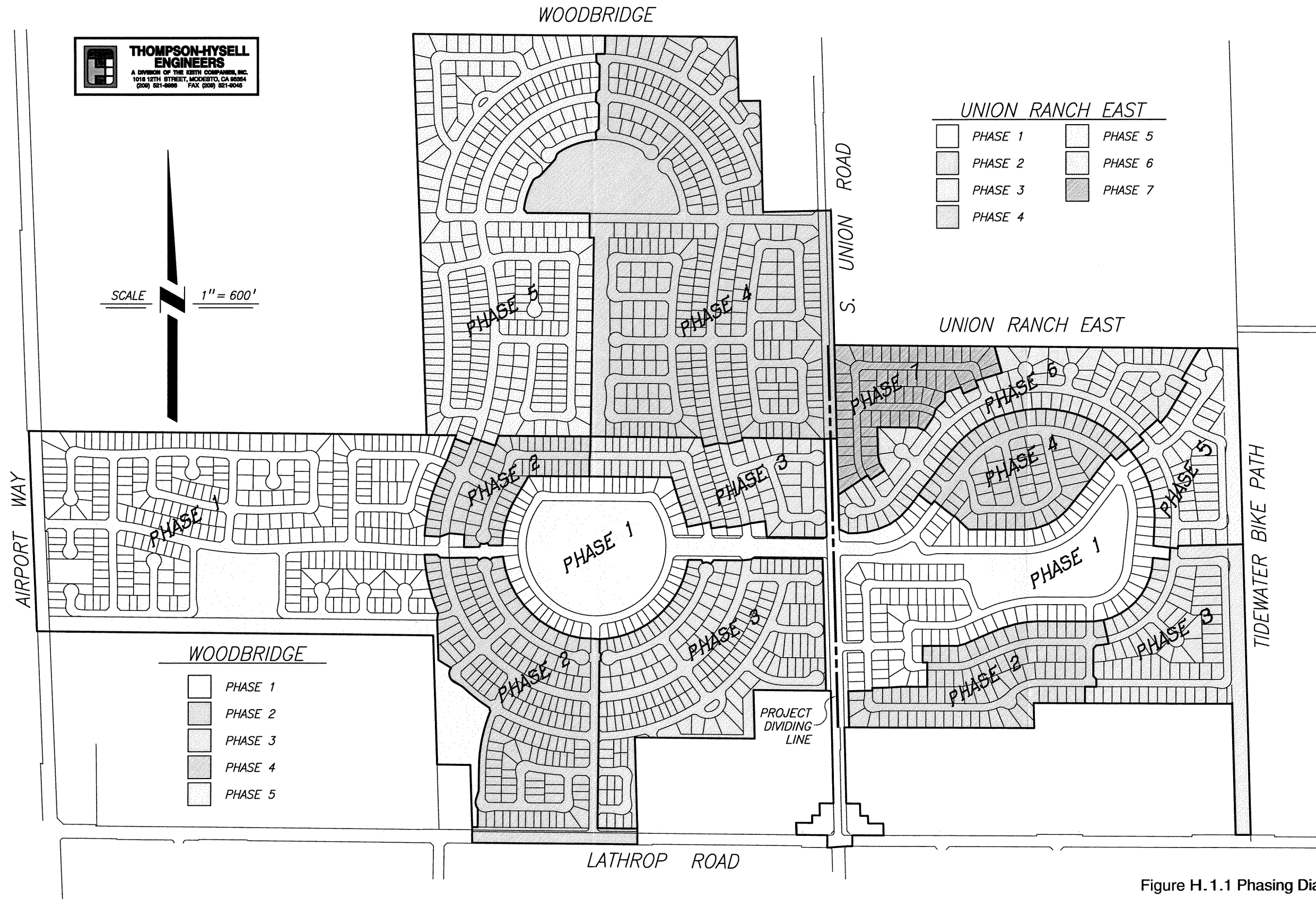


Figure H.1.1 Phasing Diagram

Section I. Implementation and Administration

I.1 Implementation of the Plan

The implementation program for this Specific Plan contains a number of procedural and administrative elements, which includes, but is not limited to annexation; adoption of the Specific Plan; rezoning; approval of tentative subdivision mapping; approval of development agreements; environmental review and monitoring; phasing plan; the adoption of design guidelines; and the administration of on-going maintenance.

The Specific Plan is the means of ensuring that future development is consistent with the General Plan. All individual development projects, including discretionary land use entitlements, within the Plan Area will be subject to the requirements of the Specific Plan. Subsequent projects within the Plan Area (including Tentative Maps, Conditional Use Permits, Minor Discretionary Permits and Minor Administrative Approvals must be consistent with this Specific Plan and the 2023 General Plan.

Maintenance of all parks and open space within Woodbridge, as well as arterial street landscaping fronting the project boundary, will be paid for by the community's Home Owner's Association. The general public will have access to Parks A and B and the bike trail, however the recreation center and some portions of the linear walking trail will be for the private use of Woodbridge residents. A Lighting and Landscape Maintenance District is not required for the Woodbridge project area maintenance.

In Union Ranch East, arterial street landscaping, linear walking paths and Tidewater Trail landscaping will be maintained by a Lighting and Landscape Maintenance District. The City will maintain the park basin (Park C) and associated amenities constructed by the developer.

Woodbridge and Union Ranch East will temporarily fund maintenance of landscaping adjacent to the CMU parcels, including project entry monuments at the intersection of Union Road and Lathrop Road, until the CMU parcels are developed. Woodbridge will fund landscaping on the west side via HOA. Union Ranch East will fund landscaping on the east side via Lighting and Landscape Maintenance District. Upon development, the CMU parcels will take over maintenance of landscaping along their frontage and fund it through a Lighting and Landscape Maintenance District. Monument maintenance will become a common expense for both residential and commercial development, and funded via the aforementioned designated means for each party.

I.2 Annexation

The Union Ranch Planning Area is partially located within the Primary Urban Services Boundary. This Boundary needs to be expanded based on the 2023 General Plan and this Specific Plan. The adopted Union Ranch Specific Plan will provide the basis for the City's application to the San Joaquin County Local Agency Formation Commission (LAFCO) for annexation of the entire Planning Area. Annexation must be completed before final approval by the City of Manteca, and recording, of the first subdivision map, or land use entitlement in the unincorporated portion of the Plan Area.

I.3 Adoption of the Specific Plan

The Union Ranch Specific Plan will be adopted by resolution by the Manteca City Council. Adoption makes the land uses and development standards of this Plan regulatory in nature.

The land use regulations for the Specific Plan are designed for implementation in conjunction with the Zoning Code of the City of Manteca. Where the Specific Plan specifies standards for particular uses, it shall be the regulatory authority. Where there are any inconsistency between the Manteca standards and the Specific Plan, the provisions of the Specific Plan shall be used to regulate development.

The Union Ranch Design Guidelines will be adopted in conjunction with the Specific Plan. The Design Guidelines provide additional criteria to guide the City of Manteca in their review of the proposed project. The Design Guidelines specify policy governing architectural treatment, site planning, landscaping, lighting and signage. The guidelines will help ensure a unified development character for the Plan area while providing flexibility and guidance for individual projects.

I.4 Entitlement Process

Approval of this Specific Plan establishes the land use entitlement for all land within the Plan Area. No further General Plan amendment or land use zoning is required for any project application within the Plan Area that is consistent with the land uses and standards described in the Specific Plan. The City of Manteca Zoning Ordinance is the underlying land use regulatory authority for the Specific Plan. In the event that a component or regulation of the Specific Plan differs from a requirement of the Code, the Specific Plan will take precedence. Where the Specific Plan is silent, the Zoning Ordinance will be used for the purposes of interpretation, or applied as appropriate.

I.5 Plan Review and Amendments

The Specific Plan shall be implemented through a method of Planned Development permits and site plan review and approval, which might include minor Specific Plan Amendments determined at a staff level, or Major Specific Plan Amendment requiring Planning Commission approval. A Planned Development permit is required for the commercial and multi-family land uses. Plans for the landscape and open space areas are subject to the review and approval of the Parks and Public Works Departments. Plans for the parks are to be reviewed by the Parks and Recreation Department, with final approval by the City Council.

Application for review of plans and permits shall be in the form established by the Planning Director at the time of application for the plan/permit. Plan and permit requests shall be evaluated for consistency with the adopted Specific Plan and Design Guidelines and for compatibility with adjacent projects, with emphasis being given to compatibility with other projects within the Specific Plan area. A written finding of consistency with the Specific Plan and compatibility shall be provided.

A Minor Specific Plan Amendment may be processed if it is determined by the Planning Director to be in substantial conformance with the overall intent of the Union Ranch Specific Plan, the applicable development agreements, the 2023 General Plan, or the Environmental Impact Report. Examples of possible Minor Specific Plan Amendment include, but are not limited to:

- Modifications to the Design Guidelines that do not impact the overall design intent.
- Changes to phasing boundaries that do not impact infrastructure sizing, financing districts or the provision of adequate service to existing developments, or impacts to the capacity to serve future development.
- Variations in permitted use-type and adopted development standards that do not substantially change the character of the Specific Plan.
- Minor lot adjustments and boundaries or street alignments.

If the Planning Director determines that a proposed amendment does not meet the criteria of a Minor Specific Plan Amendment a Major Specific Plan Amendment shall be processed and reviewed in the same manner as the initial Specific Plan adoption.

Section J. Design Guidelines

J.1 Introduction

The Union Ranch Design Guidelines have been provided within the Specific Plan document to serve as an outline for the overall theme, character and standards for development within the Planning Area. The design guidelines are assembled for the purpose of intelligently and cooperatively guiding the physical implementation of the goals and policies of the Specific Plan, as well as to create a distinctive character and quality image for both Woodbridge by Del Webb and Union Ranch East.

The guidelines provide detailed performance criteria and standards to be considered by City staff, Design Review Boards, Design Review Committees, Planning Commission, or City Council in the review of individual developments within the Plan Area. The guidelines are intended to encourage creativity in solutions to specific design opportunities. However, in order to meet the overall objectives of the Specific Plan, certain standards must be fulfilled, where the provisions of the Union Ranch Specific Plan Design Guidelines are more restrictive than the zoning ordinance the Union Ranch Specific Plan shall govern development.

The levels of development, which together, provide for the total community experience for Union Ranch, are:

- 1) Private development parcels, including acreage established for single-family residential housing and commercial mixed-use areas.
- 2) Public/Quasi-Public development parcels including acreage established for open space areas and landscape corridors, public parks and private recreation facilities.
- 3) Specialty components including lighting, signage, street furnishing, decorative paving, sound and decorative walls, street intersection treatments, vehicular entries and multi-use trails. These specialty features are the most important elements in establishing a community "signature", and as such will be dispersed throughout the Specific Plan Area.

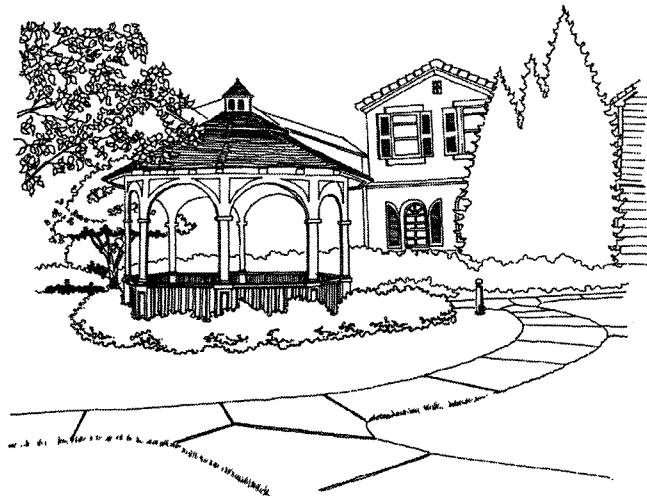


Figure J.1.1 Neighborhood Character

The Union Ranch design theme is rooted in the agricultural history of the area, with an emphasis on the traditional farming vernacular often associated with small town America. The general concept for the community elements shall borrow heavily from natural materials such as fieldstone for entry walls and pilasters, stucco in cool colors for wall faces, wood textured siding, and wood textures for arbors and fencing. An apt description of the overall design theme might be to say that the Union Ranch community design is *Norman Rockwell in origin, but California in execution.*

Basic elements are as follows:

- Stone, or stone veneer in cool natural colors, shall be the predominant accent material for wall accents and pilasters.
- Elements traditionally constructed of wood such as arbors, lattice screens and rail fencing shall be constructed of metal for durability and ease of maintenance. Finish colors shall be mainly lighter shades of natural or earthen colors to compliment the cool natural colors of the accompanying natural stone finishes.
- Stucco finishes will be employed liberally, but used as backdrops for signage on entry walls--it will also be a dominant finish for residential and commercial architecture.
- A palette of plants with an emphasis on color, texture and layered forms to add a distinctive richness to the landscape of Union Ranch.

The primary points of visual utilization of these signature design components will be within the public development parcels, open space and circulation uses. Private development parcels, through these guidelines, will support and enhance the signature of Union Ranch by employing the design features as outlined in the following pages. Proper implementation and enforcement of these guidelines will be the joint responsibility of the project proponent and the City of Manteca.

The following site development guidelines apply to all land uses. Though flexibility will be allowed, certain standards will be enforced to ensure a strong degree of continuity and quality throughout.

- 1) Plan Area access shall include community monuments and signage along with highly developed landscape corridors, which will reinforce the overall identity and image of community.
- 2) Planning Area access points shall be limited to those defined below to minimize traffic impacts, and to maximize landscape setbacks.
- 3) Three-way intersections and non-signalized intersections are encouraged to promote an efficient flow of traffic.
- 4) Landscape development setbacks will conform to the adjacent street landscape easement, with no parking facility, building, or other structure allowed in the easements.
- 5) Pedestrian circulation is encouraged throughout the Plan Area with an extensive network of multi-use paths through the landscape corridors, as well as sidewalks adjacent to all roadways. In the CMU parcels, and the private recreation center, circulation systems will be developed from parking areas to

these corridors, from the parking areas to the building entries, and from one site to another. A clear accessible path of travel will be evident within these circulation corridors.

- 6) Site furnishings will be designed to conform to site architectural elements and the material palette developed for the community. Site furnishings will be long lasting in nature. Pedestrian plazas within the CMU areas will serve to accent entries to facilities, and to provide for breaks from the work environment. All site furnishings should be simple and functional in design.
- 7) Screening requirements for storage, truck loading areas, and utility equipment such as gas meters, transformers, and backflow preventors will be screened from view from all rights-of-way, and will be minimized to all on site views via the use of landscaping or walls.

J.2 Residential Design Guidelines

Union Ranch provides a variety of housing types within two distinct communities, Woodbridge by Del Webb and Union Ranch East, each linked thematically with common landscape based design elements. To ensure the appropriate design of these communities, architectural and landscape design guidelines are provided to promote and maintain the character of the overall Union Ranch Plan Area.

Designs may include, but are not limited to, the following project products:

- Single Family Detached Homes in Union Ranch East and Del Webb
- Apartment/Townhomes (Attached) in the CMU designated parcel

J.2.1 Woodbridge by Del Webb Residential Design Character

The architectural and landscape design goals for Woodbridge are:

- a. The architectural theme and building form should be of an architectural character that is reminiscent of small town America, with particular emphasis placed on materials, finishes and design accents that reflect a rural estate vernacular.
- b. Natural materials, such as wood, stone, masonry, and stucco are encouraged as building or accent material.
- c. The “Norman Rockwell” design theme should prevail in graphics, signing, colors, street furniture, lighting, and landscaping.
- d. The architectural design of buildings should consider the site, relationship to other structures, climatic orientation, and solar access.
- e. Buildings with long uninterrupted exterior walls should be avoided. Walls should have varied forms to create shadows to soften the architecture. Four-sided architecture is required with accent trim and articulations required on all building sides.
- f. Roof flashing, rain gutters and downspouts, vents and other roof protrusions should be finished to match adjacent materials, colors, and textures.

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- g. The finish colors of general wall areas should be of natural earth tones or variations of these tones in cool hues. Limited accent colors of compatible schemes may be used for trim, window areas, balconies, and doors, also in cool hues rather than warm Mediterranean colors.
 - h. Strong variations of traditional architecture, massing, and forms, which create texture and shadow are encouraged.
 - i. Openings in units should be accented architecturally through indentation, framing, and roof variations.
 - j. Hip, gable, Dutch gable, and clipped gables are appropriate design elements for roofs. Minimum roof pitch will be 5/12.
 - k. Clay tile, concrete tile, and slate are appropriate roofing materials.
 - l. Dashed stucco, (not trowelled), masonry, natural stones, horizontal hardboard sidings, cedar siding, cedar shingles, and plywood board and batten are appropriate wall finish materials.
 - m. Standard side yard wing fencing for single-family detached homes will be of oversized material stained with natural finishes.
 - n. Mechanical equipment shall be screened from view in all residential areas. Air conditioning or heat units shall not be visible from the street.
 - o. Front porches and covered entries are encouraged.
 - p. The use of architectural detailing in the form of shutters, corbels, decorative lintels, and chimney tops are encouraged.
 - q. All fronts of all single-family residential lots will be landscaped with living plant materials upon occupancy.

J.2.2 Woodbridge by Del Webb Residential Design Criteria

- 1) Minimum front yard setbacks per Section C. shall be adhered to, however variations along street fronts are required to provide visual interest. Building offsets shall alternate a minimum of two feet along the primary house face from the minimum setback, alternating for each house in any given run of three houses or more.
- 2) All housing shall be single-story with all main entry doors facing the primary street frontage. Front entry detailing shall be a prominent feature of all house elevations.
- 3) House elevations, as made available by the builder, shall alternate with no two facades of the same style and colors to be placed side by side. In any given run of homes there shall not be more than two of the same elevation styles or two of the same color palettes within any five given run of residential units.
- 4) Residential units located on corner lots shall have installed specific corner fencing. Fencing shall return to abut the building face no less than three (3) feet and no more than (8) eight feet from the rear corner. Fences shall not be placed in front of any window of a primary living space unless it is a bedroom or bathroom.

- 5) Corner units shall have walkways that connect directly to side streets from the primary entry walk.
- 6) At corner units side entry garages are encouraged. In no case shall a garage wall front a side street.
- 7) Elevations shall be limited to traditional styles. Mediterranean elevations, such as Spanish Colonial, Tuscan or other Italianate styles are prohibited.
- 8) Building designs shall be energy efficient per the Section C.
- 9) Solar panels for an energy source are encouraged, however, they shall not be viewed from public right of ways.
- 10) Residential scale decorative lighting shall be provided on all unit fronts at garage entries and man-doors.
- 11) Roofing material is limited to cedar shake/shingle, clay tile (barrel style), and concrete/composite tile. Asphalt shingles are prohibited.



Figure J.2.1 Typical Single Family Home

J.2.3 Union Ranch East and CMU Residential Design Character

The architectural and landscape design goals for Union Ranch are:

- a. The architectural theme and building form should be of an architectural character that is reminiscent of small town America, with particular emphasis placed on materials, finishes and design accents that reflect a rural estate vernacular. Mediterranean influenced elevations are discouraged.
- b. Natural materials, such as wood, stone, masonry, and stucco are encouraged as building or accent material.
- c. Buildings with long uninterrupted exterior walls should be avoided. Walls should have varied forms to create shadows to soften the architecture. Four-sided architecture is required with accent trim and articulations required on all building sides that are visible from a street.

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- d. Roof flashing, rain gutters and downspouts, vents and other roof protrusions should be finished to match adjacent materials, colors, and textures.
 - e. The finish colors of general wall areas should be of natural earth tones or variations of these tones in cool hues. Limited accent colors of compatible schemes may be used for trim, window areas, balconies, and doors, also in cool hues rather than warm Mediterranean colors.
 - f. Openings in units should be accented architecturally through indentation, framing and roof variations.
 - g. Hip, gable, Dutch gable, and clipped gables are appropriate design elements for roofs. Minimum roof pitch will be 5/12.
 - h. Clay tile, concrete tile and slate are appropriate roofing materials.
 - i. Dashed stucco, (not trowelled), masonry, natural stones, horizontal hardboard sidings, cedar siding, cedar shingles, and plywood board and batten are appropriate wall finish materials.
 - j. Standard side yard wing fencing for single-family detached homes will be of oversized material stained with natural finishes.
 - k. Mechanical equipment shall be screened from view in all residential areas. No air conditioning or heat units shall be visible from the street.
 - l. Front porches and covered entries are encouraged.
 - m. The use of architectural detailing in the form of shutters, corbels, decorative lintels, and chimney tops are encouraged.
 - n. All fronts of all single-family residential lots will be landscaped with living plant materials upon occupancy.

J.2.4 Union Ranch East Design Criteria

- 1) Minimum front yard setbacks per R-1 standards shall be adhered to, however variations along street fronts are required to provide visual interest. Building offsets shall alternate a minimum of two feet along the primary house face from the minimum setback, alternating for each house in any given run of three houses or more.
- 2) Front entry detailing shall be a prominent feature of all house elevations.
- 3) House elevations, as made available by the builder, shall alternate with no two facades of the same style and colors to be placed side by side. In any given run of homes there shall not be more than two of the same elevation styles or two of the same color palettes within any five given run of residential units.
- 4) Houses backing onto to Union Ranch Road shall be single-story units only.
- 5) Residential units located on corner lots shall have installed specific corner fencing. Fencing shall return to abut the building face no less than three (3) feet and no more than eight (8) feet from the rear corner. Fences shall not be placed in front of any window of a primary living space unless it is a bedroom or bathroom.
- 6) Corner units shall have walkways that connect directly to side streets from the primary entry walk.

- 7) At corner units side entry garages are encouraged. In no case shall a garage wall front a side street.
- 8) Mediterranean elevations, such as Spanish Colonial, Tuscan or other Italianate styles are prohibited.
- 9) Building designs shall be energy efficient per the Section C.
- 10) Solar panels for an energy source are encouraged, however, they shall not be viewed from public right of ways.
- 11) Residential scale decorative lighting shall be provided on all unit fronts at garage entries and man-doors.
- 12) Roofing material is limited to cedar shake/shingle, clay tile (barrel style), and concrete/composite tile. Asphalt shingles are prohibited.



Figure J.2.2 Typical Single Family Home

J.2.5 CMU Residential Design Criteria

- 1) Lighting, although designed for safety, shall appropriately shield indoor living area windows from direct glare. In public areas along walkways, in parking lots and recreational areas (non-sport) a minimum of one foot-candle is required.
- 2) The materials palette described above, that reflects the design theme of the California farm vernacular is required to be used in the architectural palette. Mediterranean elevations, such as Spanish Colonial, Tuscan or other Italianate styles are prohibited.
- 3) A directory sign visible from the automobile with a turn out to view the sign shall be provided at each entry, and illuminated for nighttime viewing.
- 4) Building numbers and identification shall be in clear view and illuminated.
- 5) Landscape setbacks will be twenty (20) feet for multi-family residential or greater to accommodate specific right of ways or greenways.

- 6) Open space will be encouraged in multi-family residential developments to reinforce the image and feeling of those being developed throughout the community. In multi-family residential zones, recreation elements such as children's play areas swimming pools, sport courts, and exercise courses should be developed, but physically and visually screened from adjacent commercial interests.
- 7) A variety of building heights should be achieved by eliminating a continuous stacking of all units in structures. Variety in height is required adjacent to right of ways but limited to a maximum of three stories.
- 8) Heating and cooling units shall be screened from view and shall not be visible from any public right-of-ways.
- 9) Backflow preventors shall be screened from view using evergreen plant material.
- 10) Patio area and or balconies shall be provided for all residential units. Ground-floor units shall have a minimum of 100 square feet of outdoor spaces enclosed by a wall or wood screen with a minimum height of 4-feet.
- 11) Minimum setbacks between buildings as determined by the City of Manteca shall be adhered to at all times.
- 12) Walkways providing ADA accessibility (incl. Title 24) shall be provided between all buildings and parking areas, and all buildings and common area amenities.

J.3 Commercial Mixed Design Guidelines

The commercial Mixed Use Design Guidelines are provided to promote a multi-use project of premier quality, while harmonizing with the overall physical framework of the community. These architectural guidelines have been created to express "intent" rather than "absolutes," thereby allowing flexibility to provide design alternatives. It is paramount in a Specific Plan that architecture serves to satisfy aesthetic concerns as well as market and functional needs.

Consistency of materials ensures quality design. It is the intent of the Union Ranch Design Guidelines to provide clear directions and design criteria for users. Individual projects will be compatible with the common overall community elements; however, the need for separate identity, use of product type, or tenant preferences may dictate variations.

- a. The architectural theme and building forms should be reflective of an urban character blending with the site and be representative of the design character illustrated earlier.
- b. Building heights, signage, setbacks and other standards will be in conformance with City of Manteca standards.
- c. The architectural design of buildings should consider the site, relationship to other structures, streetscapes, and climatic orientations.
- d. Structures with long uninterrupted exterior walls should be avoided, where possible. Walls should have varied forms to create shadows and provide relief that "softens" the architecture.

- e. Natural materials such as stone, wood, granite, marble, and masonry will be encouraged. Materials such as textured or patterned concretes are compatible building accents. Stone and arbors shall be used in each architectural palette that reflects the farm vernacular and architectural character developed for Union Ranch.
- f. The character of commercial buildings should be compatible with adjoining structures. Buildings and structures should accentuate and promote an “urban plaza” character through consistent use of materials, color, and detailing.
- g. Buildings along major arterials should provide a variety of elevations with differing setbacks and varied orientations.
- h. Openings in buildings should be accentuated architecturally through indentation and roof variations.
- i. Architectural screens, fences, and structures should be compatible in materials, color, and texture to the main building. All service areas should be screened from major streets and adjacent residential areas.
- j. Dramatic “Pedestrian Oriented” architecture will be encouraged in the shopping areas to reinforce the residential scale of adjacent housing. Building forms of simple geometry with rectangular massing will be stressed.
- k. Colonnades, arches, plazas, arcades, awnings and courtyards will be utilized to create architectural and functional excitement, and to provide shade in the summer.
- l. Massed hip and gable roofs that create a strong architectural form will be used. Concrete and clay roof tiles are acceptable coverings. Recesses and covered pedestrian walkways that create shadow and visual interest will be encouraged.
- m. Residential units are allowed in the “Commercial Mixed Use Designation” – one residential unit per acre. These units are encouraged to be obtained by the use of “loft” units over commercial or office ground floor units.



Figure J.3.1 Typical Multi-Family Home

J.3.1 Commercial Parking Guidelines

Parking areas will be designed and dimensioned in accordance with the City of Manteca's zoning code as far as stall size, aisle size, and access driveways and in conformance with the Specific Plan development standards. These guidelines are designed to take the basic design guidelines and enhance them with embellishments regarding landscape treatment, coverage and use. All parking facilities will be designed to accommodate parking on site with no on street parking allowed. Parking will be visible, accessible, and easy to traverse, but will also be screened from public view. The following criteria will be observed:

- a. A screen of a minimum thirty (30) inches will be required for all parking areas. This height will be measured from the parking lot top of curb elevation adjacent the right-of-way. Screening will be accomplished by plant materials, and/or walls, land contouring, or a combination of these items. See Figure J.3.2.
- b. Plants compatible to Manteca will be utilized on this project. Trees will be selected from the Master Plant Palette.
- c. Six (6) inch high concrete curbing will be used to protect landscape areas.
- d. A continuous eight (8) foot landscape planter will be constructed between all double bays of parking. At the end of all parking rows, a ten (10) foot wide planter will extend to within three (3) feet of the total length of the parking stall. An eight (8) foot by nine (9) foot wide planter may be substituted at the required tree spacing in commercial centers. See Figure J.3.3.
- e. All parking island planters will be planted with live landscape material and shall meet the shade requirements of the City of Manteca. Refer to the appropriate City ordinance for more information.

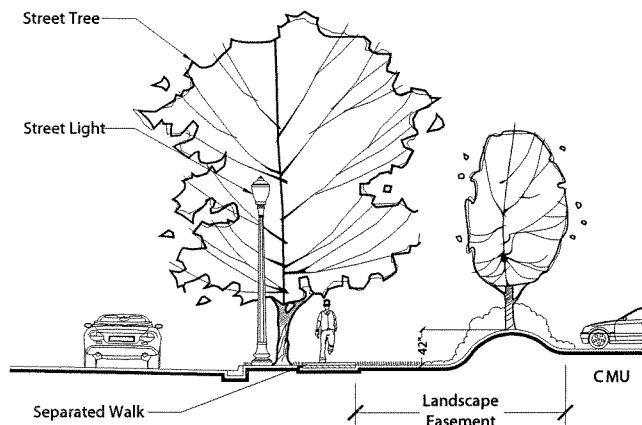


Figure J.3.2 Typical Parking Screen

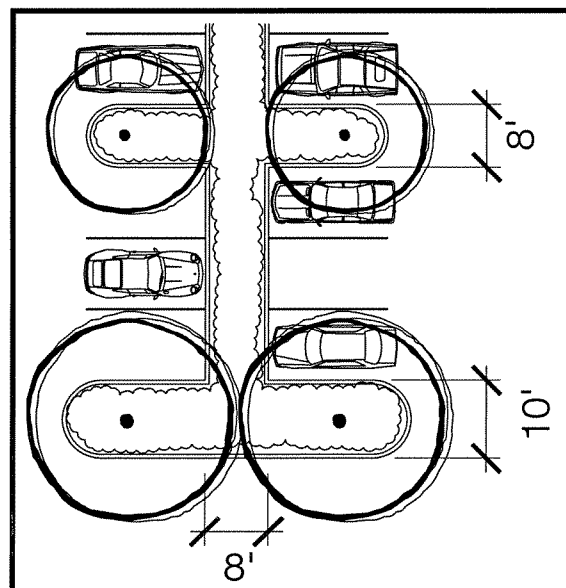


Figure J.3.3 Typical Parking Island Planter

J.4 Open Space Design Guidelines

The open space areas of Union Ranch include parks and a continuous greenway corridor system through Woodbridge and Union Ranch East. Landscape corridors provide the visual and physical linkage between parks and public right-of-ways.

- 1) The greenway corridors are designed to interconnect the land uses within the community. As linear extensions of the neighborhood and parks, these greenway corridors will provide passive and active recreational uses.
- 2) These greenway corridors will also include a twelve (12) foot wide meandering pedestrian/bicycle path. These paths will not only provide for recreational uses (i.e. jogging, biking, etc.), but will also provide an alternative to vehicular travel. Thus, this circulation/open space element will link neighborhood-to-neighborhood, and residential areas to commercial and public/quasi-public centers.
- 3) Public park facilities will include various recreational use areas for all age groups, thus not only will these parks include active recreational opportunities such as basketball, but also passive recreational opportunities, such as walking and children's play areas. For more information regarding park facility design refer to Section E. Public Facilities.
- 4) Greenway corridors and public parks provide an excellent opportunity for extensive tree plantings. Plantings will be treated in informal groves to reinforce a park-like quality.
- 5) Where greenway corridors and public parks are fronted by a street right-of-way, streetscape plantings will be kept continuous. Greenway corridor and park tree plantings will be subordinate tree masses behind streetscape plantings.

J.5 Landscape Concept

The Landscape Concept presents elements that will enhance the overall concept of Union Ranch. The intent is to develop a cohesive unit of design elements that express a theme of strength and permanence. This will be achieved by a strong delineation of street right-of-ways, corresponding landscape corridors, pedestrian/bicycle corridors, visual corridors, and gathering

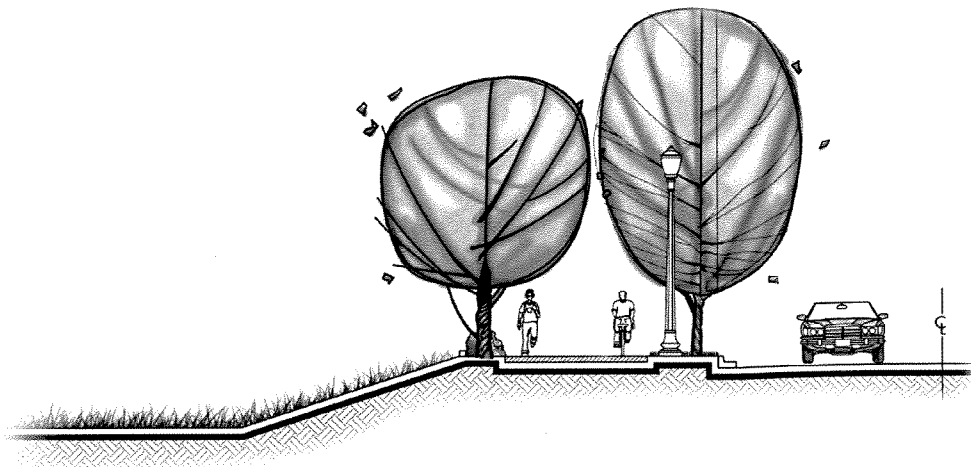


Figure J.4.1 Typical Drainage Section

points. These form an overall quality, consistency, and order for all improvements and uses within the development. The design will integrate the physical elements of a developed community with the integrity of the new cohesive elements of both plant material and hardscape elements. Plant palettes in simple compositions will continually be reinforced throughout the project.

J.6 Landscape Easements and Open Space

The overall landscape easement and open space concept is to ensure the uniformity and quality of the community. The easements will be part of the overall circulation design, as well as serve to help screen or mitigate unsightly elements such as loading areas and expansive parking facilities. Each individual easement will serve in the overall picture of the site development, from framing the external expression of the community, to identifying key entry points and areas of transition of travel within the limits of Union Ranch.

The landscape easements and open space areas are divided into various areas: streetscapes, major intersection, open space corridors, and public park/school facilities. The palette of plant materials will consist of the plants that form the landscape concept of the community.

J.7 Streetscapes

Though each streetscape is unique within the Union Ranch community, each will be consistent in the use of landscape plantings and other streetscape elements, which clearly define the hierarchy of automobile, bicycle and pedestrian circulation. For a complete description of lane configurations and typical road sections refer to Section D. Circulation.

Arterial Roads

Landscape improvements along Lathrop Road, Union Road and Airport Way will have elements consistent with the general guidelines listed below, the only variation being the width of the landscape easements. The following general guidelines shall apply to these three arterials:

- 1) The ground plane material will be a mix of turf and drought tolerant groundcover, located within a varied easement width from back of curb to the soundwall at the property line.
- 2) Sidewalks shall be bifurcated at the widths indicated in Section D. Circulation. Refer to Section D. for typical street sections for each of Lathrop Road, Airport Way and Union Road.
- 3) A single row of street trees, in a single species for each arterial road, shall be planted at the back of the sidewalk or within parkway planter strip at a minimum of 30-foot on center spacing. Secondary street trees shall act as accent and shall occur in informal groupings planted between the sidewalk and the soundwall. Mixed massings of flowering trees and evergreen species are encouraged.
- 4) Adjacent to soundwalls shall be layered plantings of shrub massings in large groupings. Vines shall be planted at minimum of 15-foot on-center spacing along all soundwalls.

- 5) Plantings in medians shall include accent trees as well as large canopy shade trees. Groundcover plantings of evergreen shrubs shall be massed. Nosings less than 3-foot in width shall receive enhanced paving of unit-pavers, or colored stamped concrete. Grouted river rock is prohibited.
- 6) Where arterials parallel residential lots, a six (6) foot minimum wall height will be required along rear and side yards.

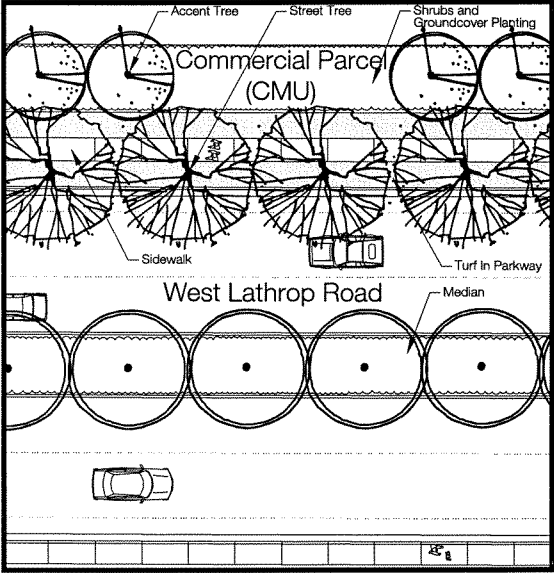


Figure J.7.1 Typical Arterial Street Section

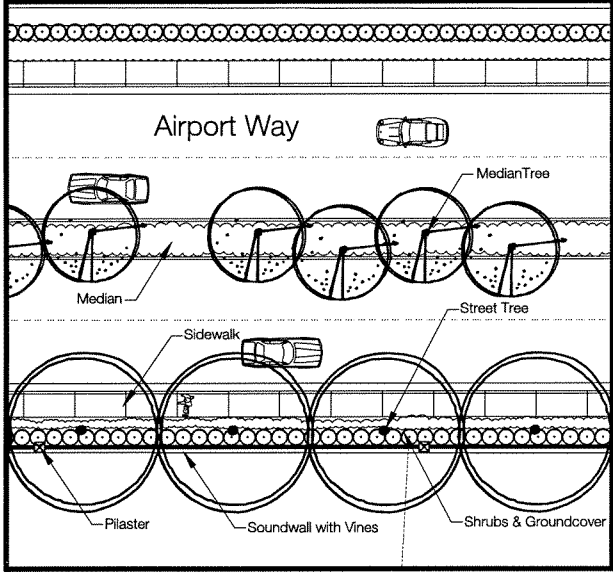


Figure J.7.2 Typical Arterial Street Section

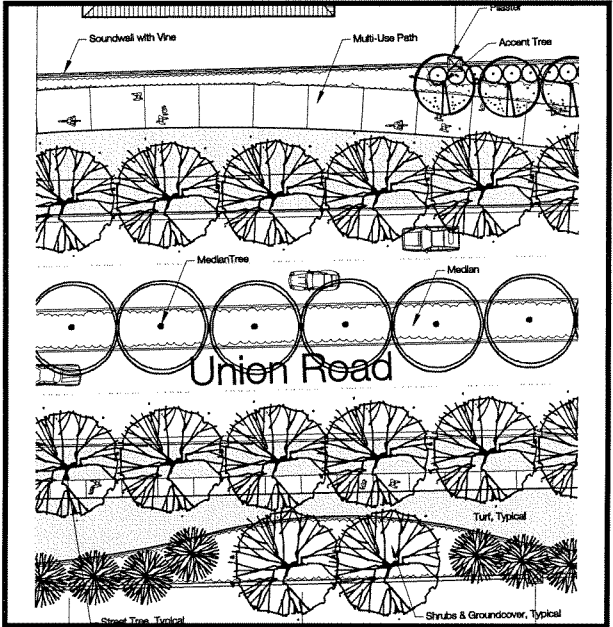


Figure J.7.3 Typical Arterial Street Section

Residential Collectors

Landscape improvements along residential collectors will have elements consistent with the general guidelines listed below:

- 1) Residential collector streets will vary from arterial streets and residential local streets in travel lane configurations, and may contain landscaped medians.
- 2) Sidewalks shall be bifurcated at the widths indicated in Section D. Circulation.
- 3) A single row of street trees, in a single species for each arterial road, shall be planted at the back of the sidewalk or within parkway planter strip at 30-foot on-center minimum spacing. Secondary street trees shall act as accent and shall occur in informal groupings planted between the sidewalk and the soundwall. Mixed massings of flowering trees and evergreen species are encouraged

- 4) Adjacent to soundwalls or wood side and rear yard fencing shall be layered plantings of shrub massings in large groupings. Vines shall be planted at minimum of 15-foot on-center spacing along all soundwalls and fences.

- 5) Where collectors parallel residential lots, a six (6) foot minimum wall will be required along rear and side yards.

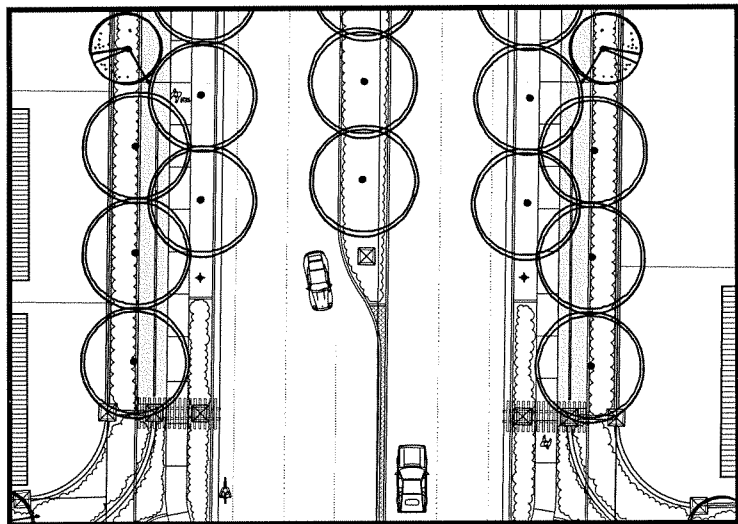


Figure J.7.4 Typical Collector Street Section

Residential Streets

Landscape improvements along residential streets will have elements consistent with the general guidelines listed below:

- 1) Residential streets will vary from arterial and collector streets in travel lane configurations, and overall right-of-way widths. For a detailed illustration of typical residential street right-of-ways refer to Section D. Circulation.
- 2) Residential neighborhood streets will be characterized by consistent street trees, which will provide a unity of landscape character. Trees will be consistent on each street, but may vary from street to street.
- 3) Residential streets shall have either a monolithic or bifurcated sidewalk. The width of which shall vary.

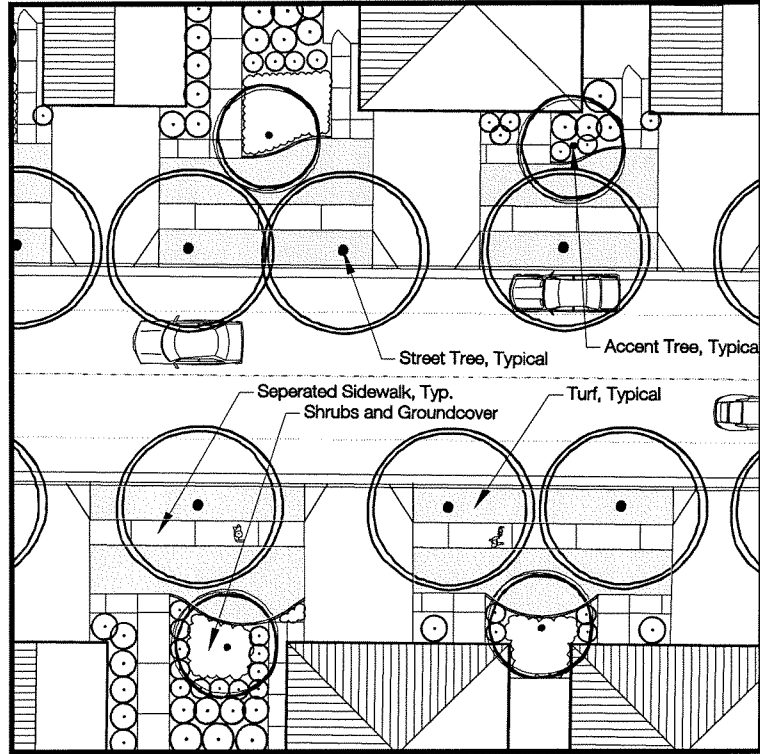


Figure J.7.5 Typical Residential Street Section

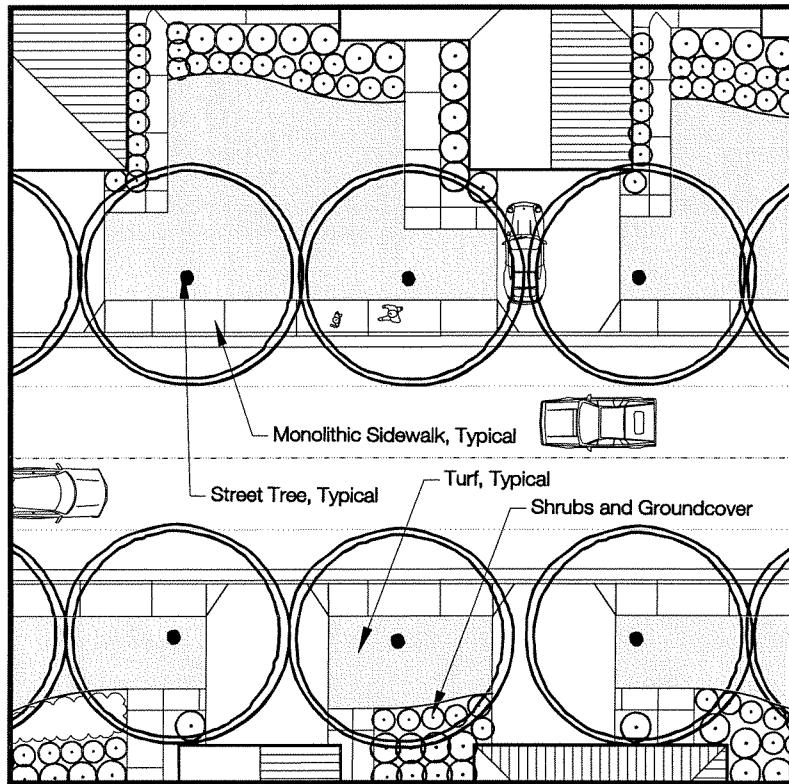


Figure J.7.6 Typical Residential Street Section

Multi-use Paths:

Landscape improvements within the greenways will have elements consistent with the general guidelines listed below:

- 1) Easement widths vary within the greenways. Typical right-of-ways within the easement shall include a 12-foot multi-use concrete path, striped for lane separation.
- 2) A knockdown bollard shall be placed wherever the path intersects public roadways.
- 3) Site furniture shall include benches and trash receptacles at nodes or intersections of pathways with other paths or public roadways.
- 4) The easement shall also include pedestrian scale lighting to a minimum of ½ foot candle with lamp deflectors placed to prevent light from shining directly into adjacent residential uses.
- 5) The easements shall be bordered by either soundwall, wood rear yard fencing, or tubular steel view fencing.
- 6) Plantings shall include shade trees placed at consistent intervals at a minimum of 40-feet on center, groundcover planting including turf, evergreen shrub massing along walls and fences, and vines on soundwalls.

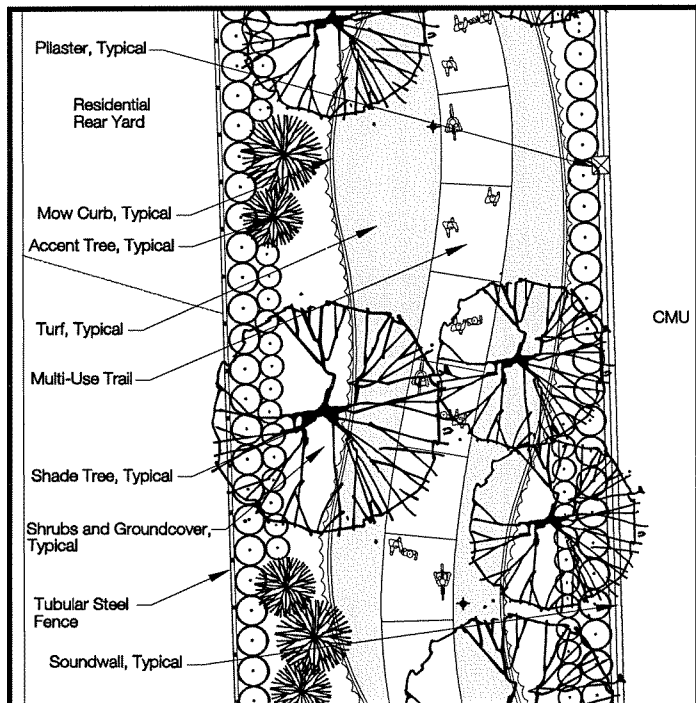


Figure J.7.7 Typical Multi-Use Path Section

J.8 Streetscape Elements**Entry Monuments and Gateway Elements**

Uniformity and consistency of built objects and plantings is essential to ensure that the goals and objectives of the Design Guidelines are carried throughout the Union Ranch community. Standards that are equitable for all concerned will ensure protection of property values and architectural uniformity. Each entry monument or gateway element will highlight and strengthen the overall community design theme with a consistent material and landscape palette. A hierarchy of entry monuments and gateway elements has been established and are located as illustrated in Figure J.8.1. A summary is as follows:

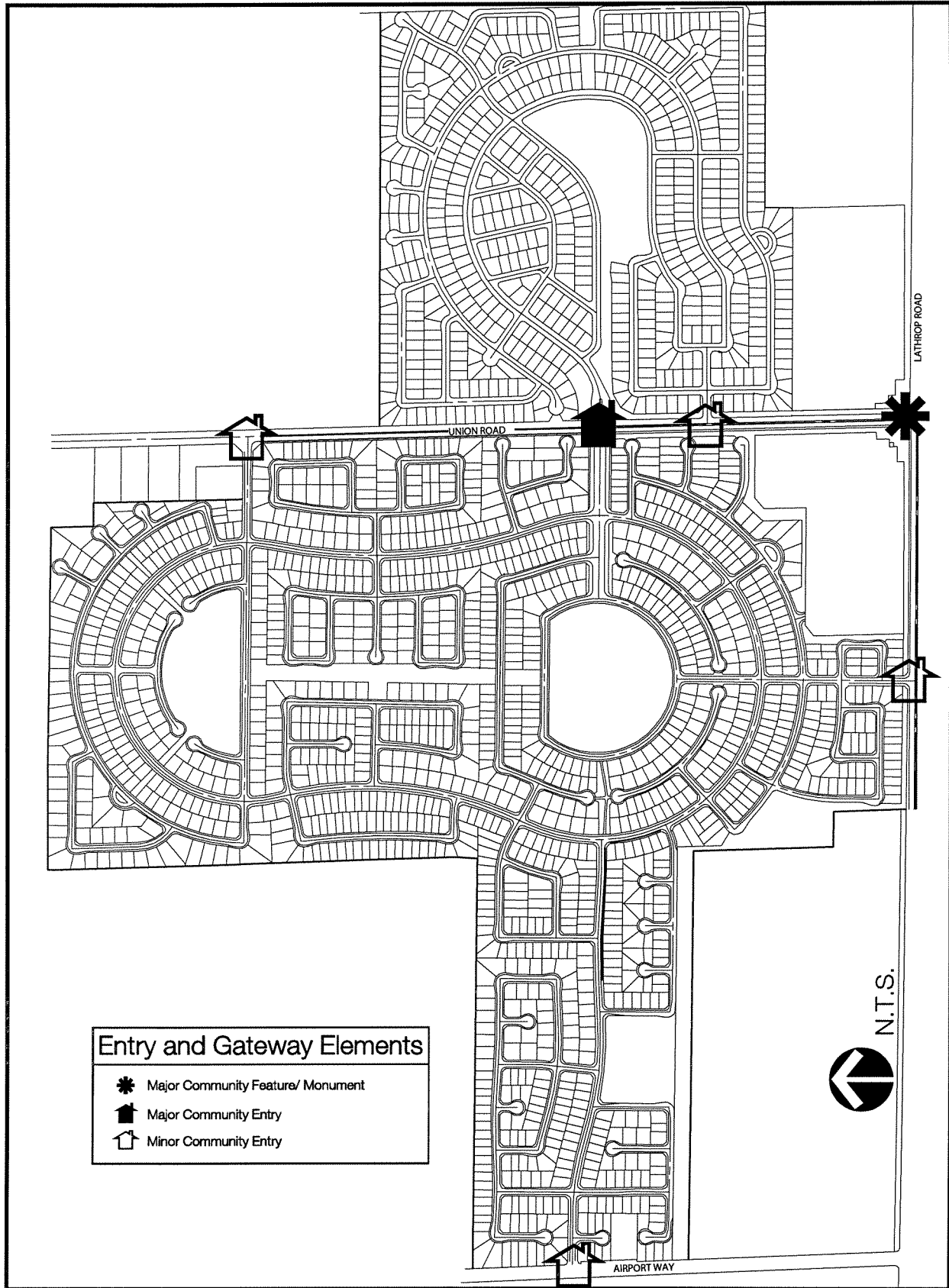


Figure J.8.1 Entry and Gateway Map

Major Community Entry

Located at the intersection of Union Road and W. Lathrop, the Major Community Entry will flank both sides of Union Road, with radiating sign walls complete with pilasters and pre cast concrete caps, signage, and plantings. This major entry and gateway feature will be the signature monument for the Union Ranch area and will also serve as the primary commercial entry as illustrated in Figure J.8.2.

Base materials shall include:

- Natural stone-like veneers on low decorative walls and pilasters;
- Dashed stucco and painted finish on sign walls;
- Rail fencing constructed of painted steel;
- Aluminum lettering for signage complete with an enamel paint finish;
- Landscape planting shall be layered with uniform ground plane plantings of a single species of evergreen and flowering plant material, massings of flowering shrub material in two or more layers, and accent tree plantings of flowering species reminiscent of an orchard environment;
- Sign wall lettering shall be up-lighted with ground- mounted fixtures. Lettering shall not be box or back lighted.

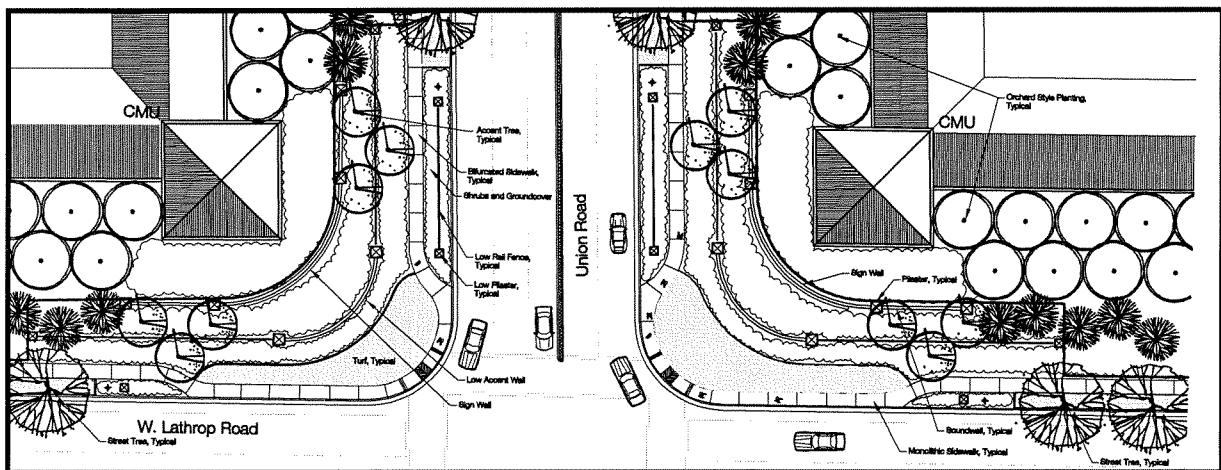


Figure J.8.2 Major Community Entry Plan View

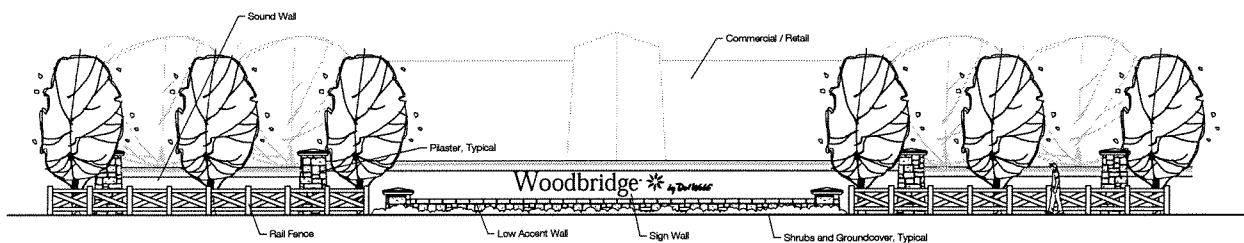


Figure J.8.3 Major Community Entry Section

Primary Woodbridge Community Entry

Located along Union Road the Primary Community Entry to Woodbridge by Del Webb will flank both sides of Union Road, with radiating sign walls complete with pilasters with pre cast concrete caps, overhead arbors and lattice screens. Signage and lighting is also proposed as illustrated in Figure J.8.4.

Base materials shall include:

- Natural stone-like veneers on low decorative walls and pilasters;
- Dashed stucco and painted finish on sign walls;
- Rail fencing constructed of painted steel;
- Overhead arbors and lattice screens constructed of painted steel or aluminum. Wood shall not be used.
- Aluminum lettering for signage complete with an enamel paint finish;
- Landscape planting shall be layered with uniform ground plane plantings of a single species of evergreen and flowering plant material, massings of flowering shrub material in two or more layers, and accent tree plantings of flowering species reminiscent of an environment;
- Sign wall lettering shall be up-lighted with ground- mounted fixtures. Lettering shall not be box or back lighted. Decorative lighting using carriage style fixtures shall be applied to each entry pilaster supporting the overhead arbor.

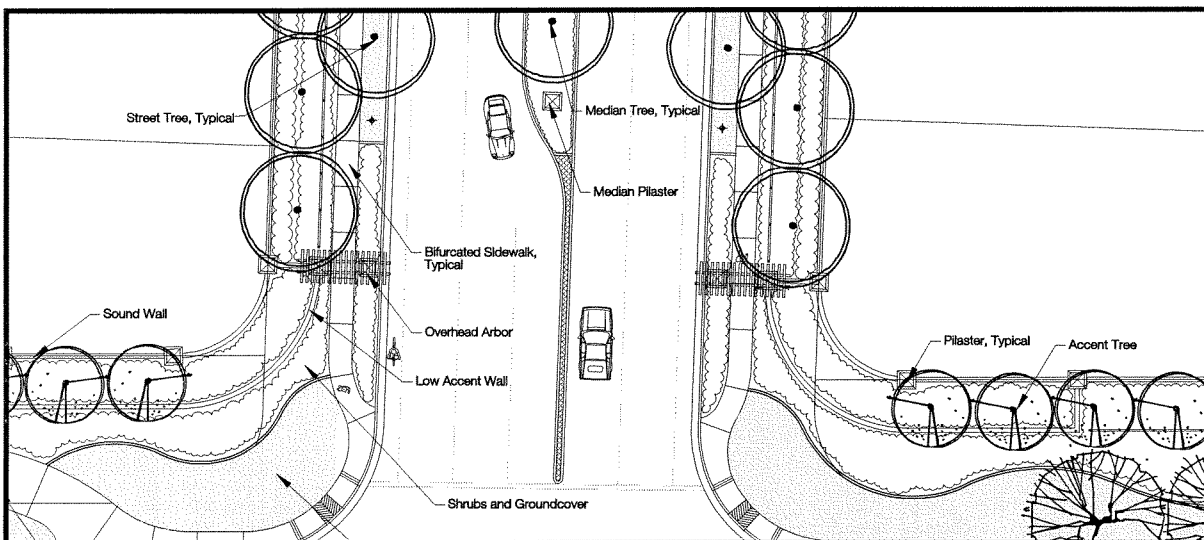


Figure J.8.4 Primary Woodbridge Entry Plan View

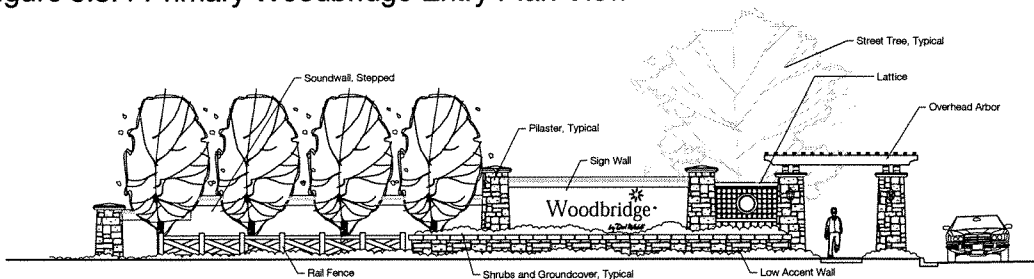


Figure J.8.5 Primary Woodbridge Entry Section

Primary Union Ranch East Community Entry

Located along Union Road the Primary Community Entry to Union Ranch East will flank both sides of Union Road, with a colonnade of pilaster supporting a trellis as the major signature feature. Low sign walls complete with pilasters with pre cast concrete caps will be placed on either side of the entry and will provide an opportunity for signage. A major bike trail connection will be made along the southern gateway as proposed and illustrated in Figure J.8.6.

Base materials shall include:

- Natural stone-like veneers on entry pilasters;
- Dashed stucco and painted finish on sign walls;
- Rail fencing constructed of painted steel;
- Overhead arbors to be constructed of painted steel or aluminum. Wood shall not be used.
- Aluminum lettering for signage complete with an enamel paint finish;
- Landscape planting shall be layered with uniform ground plane plantings of a single species of evergreen and flowering plant material, massings of flowering shrub material in two or more layers, and accent tree plantings of flowering species reminiscent of an environment;
- Sign wall lettering shall be up-lighted with ground- mounted fixtures. Lettering shall not be box or back lighted. Decorative lighting using carriage style fixtures shall be applied to each entry pilaster supporting the overhead arbor.

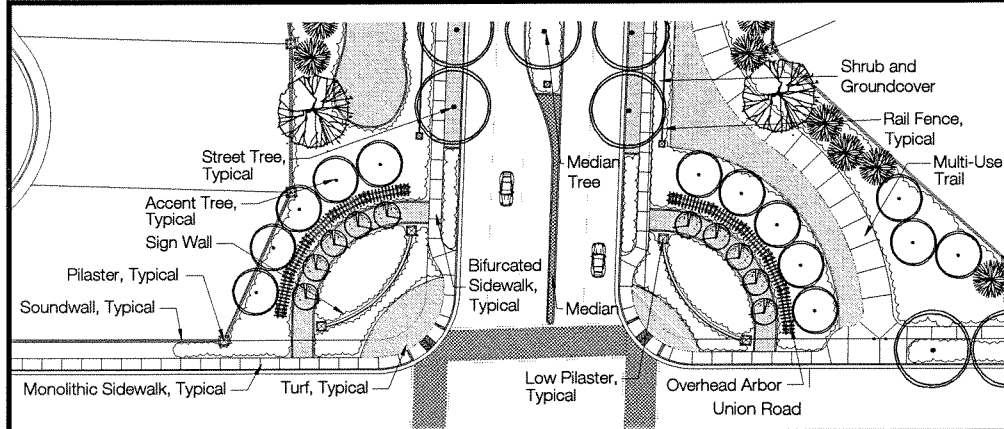


Figure J.8.6 Primary Union Ranch Entry Plan View

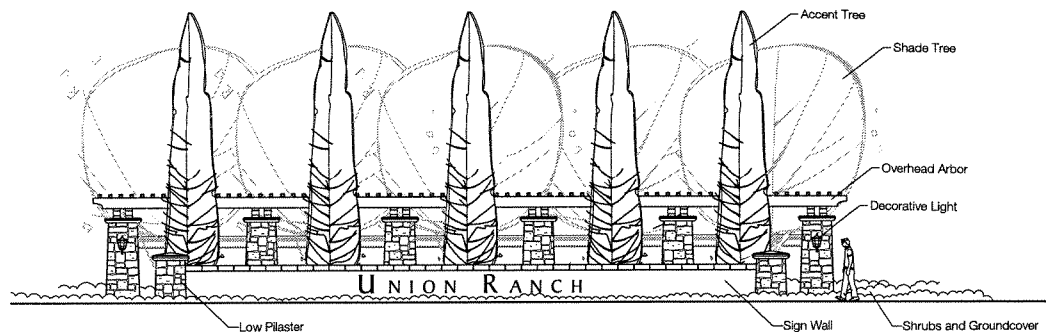


Figure J.8.7 Primary Union Ranch Entry Section

Secondary Woodbridge Community Entries

Typical secondary entries to Woodridge shall be located on W. Lathrop Road, Airport Way, and on Union Road north of the primary Woodbridge entry. Smaller in scale than the primary entry they shall employ the same core elements and be fabricated of the same primary materials. Soundwalls shall have rounded at the corners at the entries and shall also form the sign walls. At the beginning and end of each curve a pilaster shall be placed. Pilasters shall have a stone-like veneer and pre cast cap as illustrated in Figure J.8.8.

Base materials shall include:

- Natural stone-like veneers on entry pilasters;
- Dashed stucco and painted finish on sign walls;
- Rail fencing constructed of painted steel;
- Aluminum lettering for signage complete with an enamel paint finish;
- Landscape planting shall be layered with uniform ground plane plantings of a single species of evergreen and flowering plant material, massings of flowering shrub material in two or more layers, and accent tree plantings of flowering species reminiscent of an environment;
- Sign wall lettering shall be up-lighted with ground- mounted fixtures. Lettering shall not be box or back lighted.

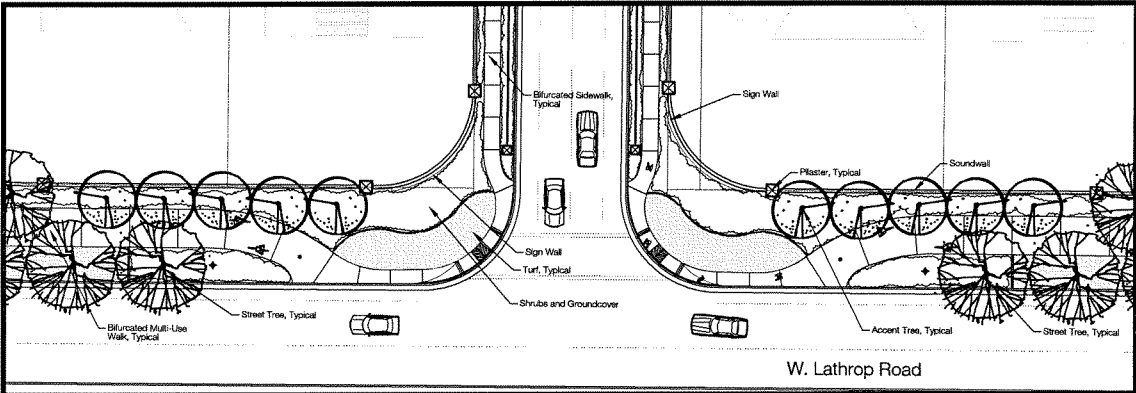


Figure J.8.8 Secondary Woodbridge Entry Plan View

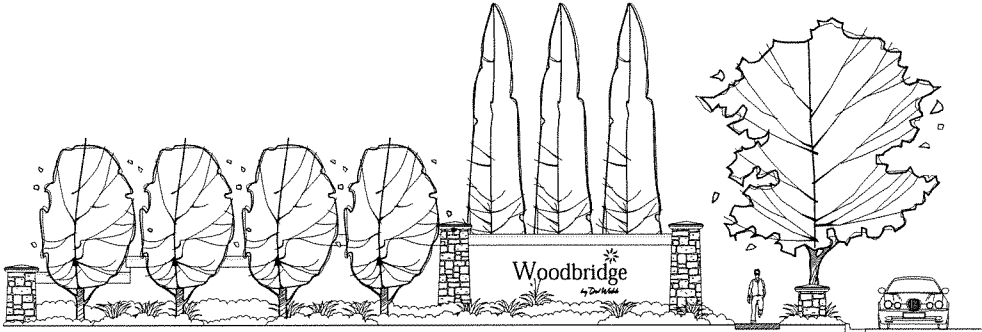


Figure J.8.9 Secondary Woodbridge Entry Section

Secondary Union Ranch Community Entry

A secondary entry to Union Ranch shall be located on Union Road north of the primary Union Ranch East entry. Smaller in scale than the primary entry it shall employ the same core elements and be fabricated of the same primary materials. Soundwalls shall have rounded corners at the entry and shall also form the sign wall. At the beginning and end of each curve a pilaster shall be placed. Pilasters shall have a stone-like veneer and pre cast cap as illustrated in Figure J.8.10.

Base materials shall include:

- Natural stone-like veneers on entry pilasters;
- Dashed stucco and painted finish on sign walls;
- Rail fencing constructed of painted steel;
- Aluminum lettering for signage complete with an enamel paint finish;
- Landscape planting shall be layered with uniform ground plane plantings of a single species of evergreen and flowering plant material, massings of flowering shrub material in two or more layers, and accent tree plantings of flowering species reminiscent of an environment;
- Sign wall lettering shall be up-lighted with ground- mounted fixtures. Lettering shall not be box or back lighted.

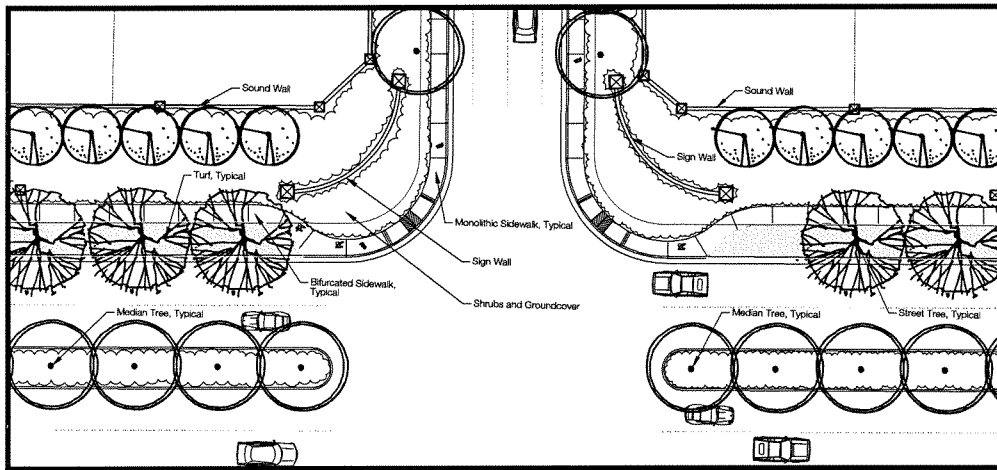


Figure J.8.10 Secondary Union Ranch Entry Plan View

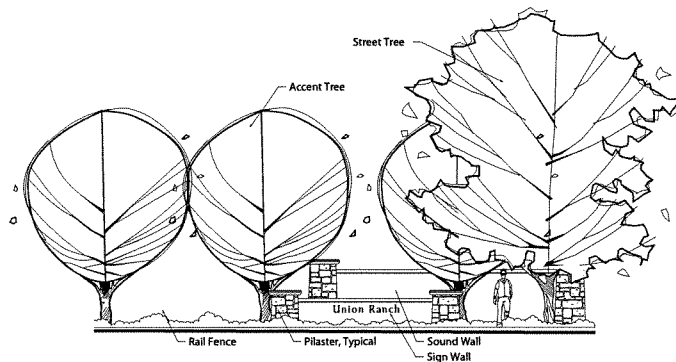


Figure J.8.11 Secondary Union Ranch Entry Section

J.9 Signage

Major Community Entry

Lettering shall be computer cut aluminum with an acrylic paint finish. Lettering shall be surface mounted, and held a minimum of ½-inch off of face of wall to provide visual relief and shadow. Font shall be Centaur MT at the approximate sizing indicated in Figure J.9.1.

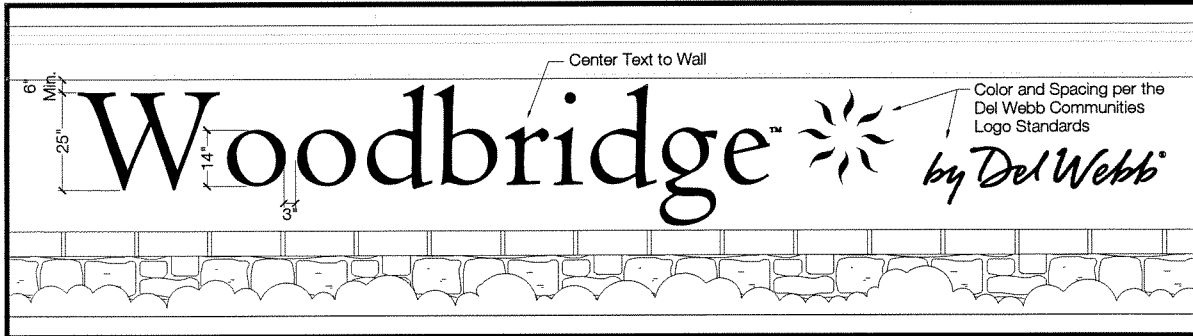


Figure J.9.1 Major Community Entry Signage

Primary Woodbridge Community Entry

Lettering shall be computer cut aluminum with an acrylic paint finish. Lettering shall be surface mounted, and held a minimum of ½-inch off of face of wall to provide visual relief and shadow. Font shall be Centaur MT at the approximate sizing indicated in Figure J.9.2.

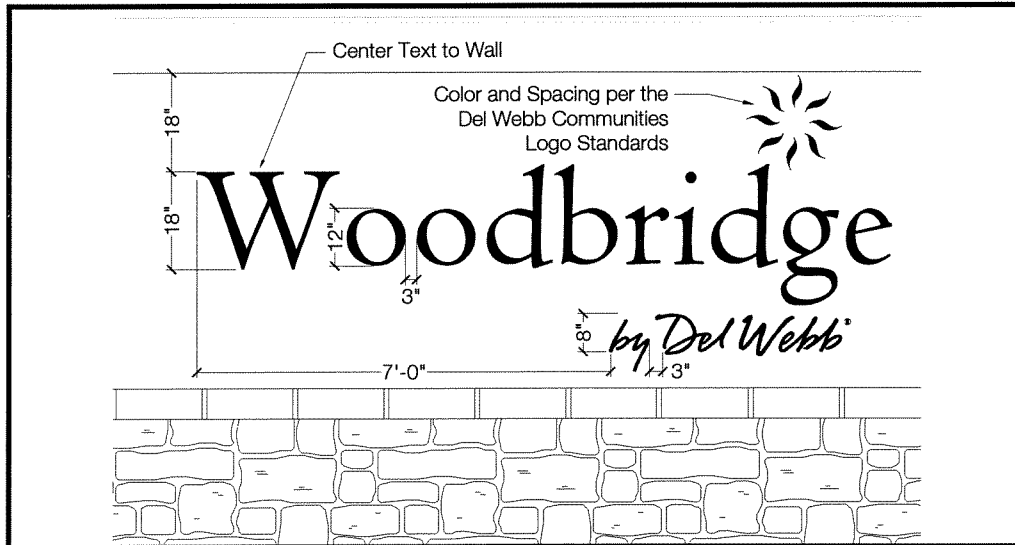


Figure J.9.2 Primary Woodbridge Community Entry Signage

Primary Union Ranch Community Entry

Lettering shall be computer cut aluminum with an acrylic paint finish. Lettering shall be surface mounted, and held a minimum of ½-inch off of face of wall to provide visual relief and shadow. Font shall be Baker Signet at the approximate sizing indicated in Figure J.9.3.

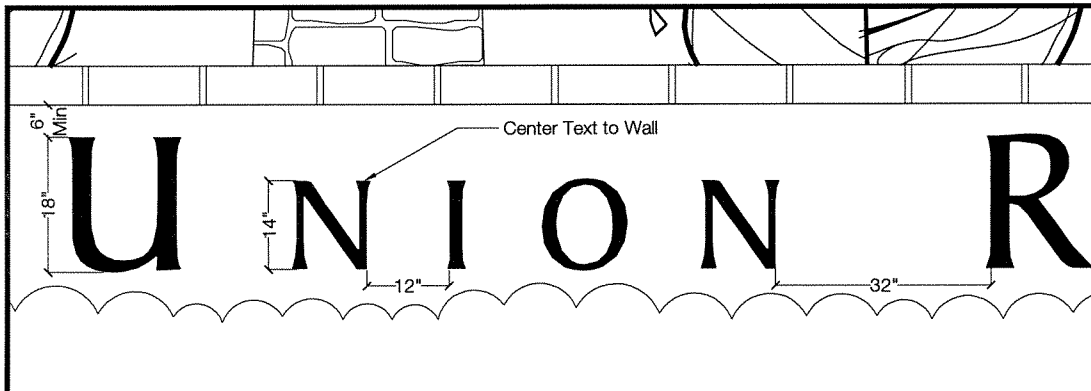


Figure J.9.3 Primary Union Ranch Community Entry Signage

Secondary Woodbridge Community Entry

Lettering shall be computer cut aluminum with an acrylic paint finish. Lettering shall be surface mounted, and held a minimum of ½-inch off of face of wall to provide visual relief and shadow. Font shall be Centaur MT at the approximate sizing indicated in Figure J.9.4.

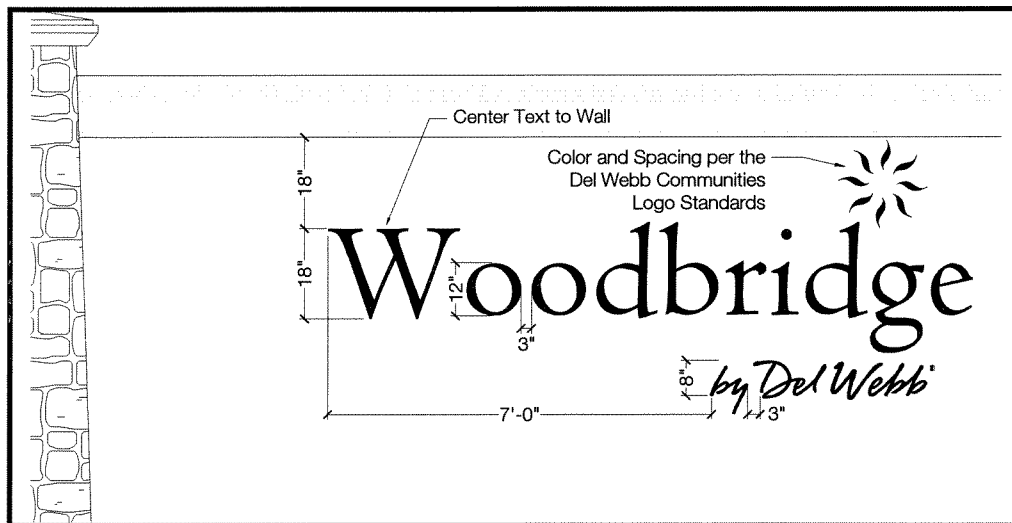


Figure J.9.4 Secondary Woodbridge Community Entry Signage

Secondary Union Ranch Community Entry

Lettering shall be computer cut aluminum with an acrylic paint finish. Lettering shall be surface mounted, and held a minimum of ½-inch off of face of wall to provide visual relief and shadow. Font shall be Papyrus at the approximate sizing indicated in Figure J.9.5.

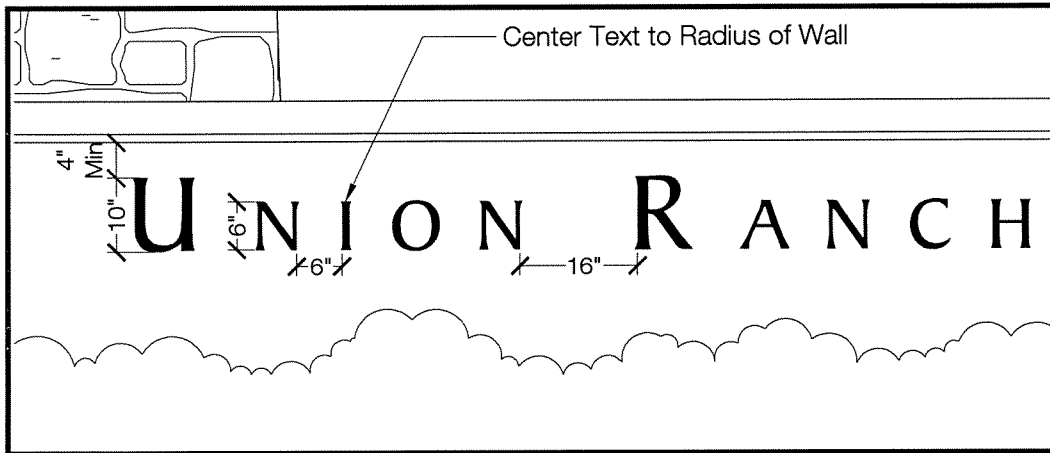


Figure J.9.5 Secondary Union Ranch Community Entry Signage

CMU and Merchant Signage

All commercial signage, including gas station signage, and building and canopy signs shall conform to the requirements of the City of Manteca Municipal Code, Section 17, Zoning. The guidelines indicated in the following figures are for design reference only and are provided to ensure conformity to the community design theme.

a. Major Commercial Signage

One large free standing major commercial sign shall be permitted per aggregate of CMU parcels on either side of Union Road, for a total of two in the Plan Area. Signs shall be located outside the public right-of-way and shall not impede clear views for safe pedestrian and vehicular traffic. Signs shall be located a minimum of 200-feet clear of the intersections of W. Lathrop and Union Road, as dimensioned from back of curb on Union Road. Materials shall be consistent the elements described above, including stone-veneer at the base, pre-cast concrete caps for ledges and lintels, and stucco finish on field areas in colors to match the overall community palette. Interior illumination is permitted. See Figure J.9.6 for a general illustration.

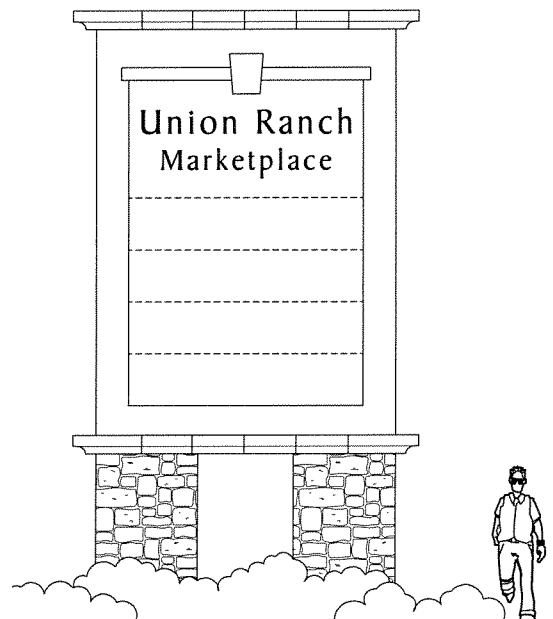


Figure J.9.6 Major Commercial Signage

b. Freestanding Commercial/Merchant Signage

One free standing commercial/merchant sign is permitted for each vehicular entry to the CMU parcels. Signs shall be located outside the public right-of-way and shall not impede clear views for safe pedestrian and vehicular traffic. Materials shall be consistent the elements described above, including stone-veneer at the base, pre-cast concrete caps for ledges and lintels, and stucco finish on field areas in colors to match the overall community palette. Interior illumination is permitted. See Figure J.9.7 for a general illustration.

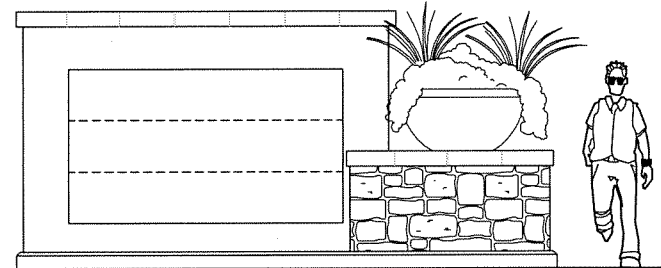


Figure J.9.7 Freestanding Commercial Signage

c. Price Sign (Gas Station)

One free standing price sign shall be permitted per gas station. Sign shall be located outside the public right-of-way and shall not impede clear views for safe pedestrian and vehicular traffic. Materials shall be consistent the elements described above, including stone-veneer at the base, pre-cast concrete caps for ledges and lintels, and stucco finish on field areas in colors to match the overall community palette. Interior illumination is permitted. See Figure J.9.8 for a general illustration.

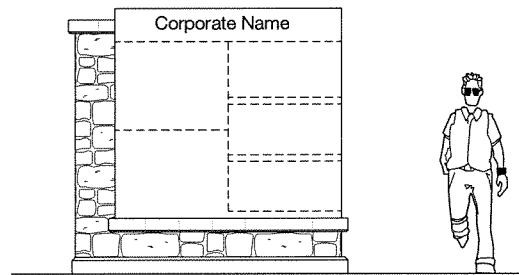


Figure J.9.8 Gas Station Signage

Public Street Signage & Traffic Signs

- a. Street signage will identify each street and shall be located at the intersections of all right-of-ways, including the multi-use paths located in greenways. Street signs shall be constructed of cast aluminum, black in color, with white reflective lettering. Poles shall be decorative, with traditional styling as illustrated by Figure 9.9.
- b. Traffic signs shall be installed as needed to conform to City and State traffic regulations. Poles shall be decorative cast aluminum to match public street signage, black paint finish
- c. Traffic signals, pole mounting and extension areas shall be constructed to City and State Standards. Paint finish shall be black to match Public Street Signage and Traffic Signs.

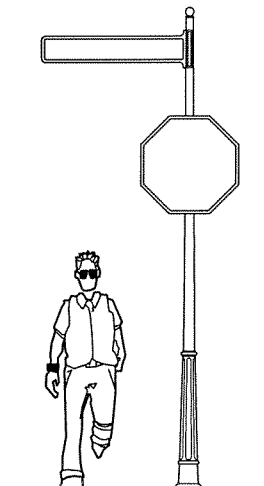


Figure J.9.9 Traffic Signs

Marketing Signs

These signs will identify the project from the major arterials. One sign per intersection is permitted for each of Union Ranch East and Woodbridge by Del Webb.

- a. Sign shall be wood construction with a painted surface and shall be structurally sound.
- b. Signs shall be limited in size to a maximum of ten (10) feet in height by eight (8) feet in length and may be double faced.
- c. Removal must occur after a 3-year timing frame or whenever 90% of lots have sold, whichever event occurs first.
- d. Signs may not be located in the public right-of-way and shall not impede clear visibility for pedestrian or vehicular traffic.

Directional Signs

These signs shall provide on-site directional information to the location of the different residential projects.

- a. Sign shall be wood construction with a painted surface and shall be structurally sound.
- b. Signs shall be limited in size to six (6) feet in height by six (6) feet wide.
- c. Removal must occur after a 3-year period or when 90% of the lots have sold, whichever event occurs first.
- d. Signs may not be located in the public right-of-way and shall not impede clear visibility for pedestrian or vehicular traffic.

Prohibited Signs

- a. Any signs located on vacant or unoccupied property that was erected for a business which no longer exists, or any sign which pertains to a time, event or purpose which no longer exists, shall be removed by the property owner within 7 days after the use has been abandoned.
- b. Signs constituting potential traffic hazard or which simulate or imitate in size, color, lettering or design any traffic sign or signal.
- c. Animated or moving signs: signs consisting of any moving, swinging, rotating, flashing, blinking or otherwise animated components.
- d. Roof signs: any sign erected, constructed and maintained upon or over the roof of any building, unless it is a projecting under-canopy sign.
- e. Other prohibited signs: advertising signs and billboards, inflatable signs or balloons, inflatable animals or similar signs.
- f. Window signs are allowed only in retail and commercial areas and are limited to a maximum of three square feet each, with the total window signage covering less than 10% of the window area. Examples of such permitted signs are open/closed, store hours, help wanted, sales, and other similar minor signs.

Specialty Features

The Specialty Design Features of Union Ranch are reoccurring “signatures” throughout the Specific Plan Area and the application of such is proposed to provide a continuity of community design and integrity. Materials and finishes within the Plan Area shall conform to these general guidelines. A summary of the specialty features is as follows:

- Decorative or Enhanced Paving
- Streetscape Furnishings
- Public Lighting
- Sound Walls
- Pilasters and Low Decorative Walls
- Fencing

J.10 Decorative or Enhanced Paving

The use of decorative or enhanced paving is encouraged at pedestrian road crossings, major intersections of collector roads, at the entry to parks and CMU parcels, and at vehicle drop-offs and turnarounds. It is required in median nosing where the overall median width is less than three feet as measured from inside of curb. Decorative or enhanced paving shall be cast-in-place stamped and integrally colored concrete, or concrete unit paving, in a herringbone pattern for field areas with a soldier course used for all border or perimeter paving.

J.11 Streetscape Furnishings

A consistent palette of streetscape furniture is required throughout the Plan Area. This shall include, but is not limited to benches, trash receptacles, bicycle racks, and non-lighted bollards. Furniture shall be traditional in style, as illustrated in Figure J.11.1, and constructed of durable long lasting materials such as steel with powder coat paint finishes. Paint finishes in black are discouraged as is the use of wood construction. Acceptable colors include grey, forest green, or white.

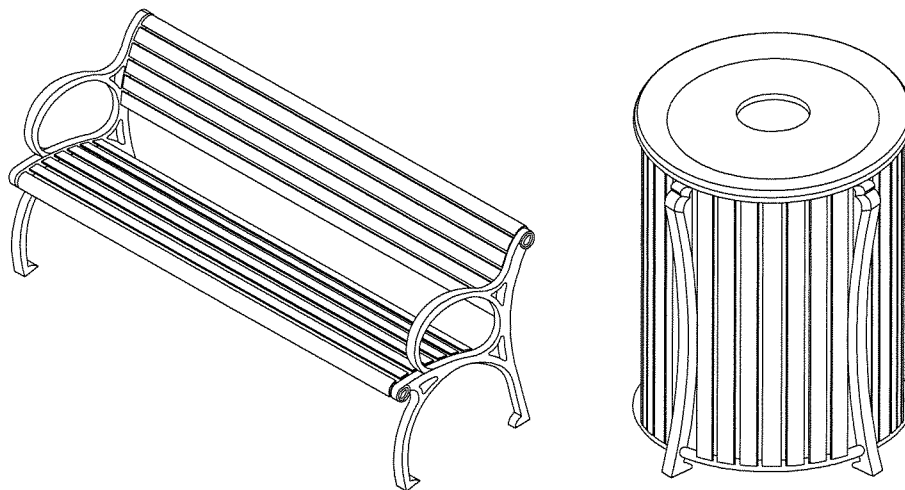


Figure J.11.1 Site Furnishings

J.12 Public Lighting

Pedestrian scale lighting is encouraged along all residential streets, including residential collectors, along multi-use paths in the greenways including the Tidewater Trail, and in the parks. Acorn-style pole mounted fixtures are required as illustrated in Figure J.10. Pole mounted fixtures shall be metal with black painted finish. Similar style carriage-type fixtures are encouraged for wall-mounted lights in the CMU developments and private recreational facilities. Arterial streets shall be lighted using pole fixtures standard to the City of Manteca, with black paint finish.

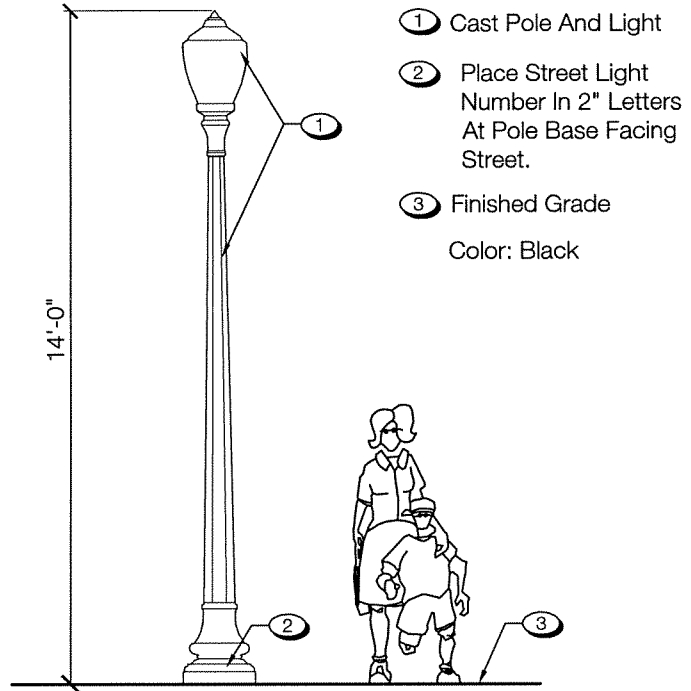


Figure J.12.1 Street Lights

J.13 Soundwalls

Soundwalls are proposed to reduce the noise impact of adjacent roadways and to assist in defining the overall boundaries or limits of the Plan Area. Soundwalls shall serve as a visual and physical separation between land uses. The proposed soundwall for the entire Union Ranch community, including Woodbridge by Del Webb, shall be pre-cast concrete with a paint finish, as illustrated in Figure J.11.1. Product shall be “Lighthouse by Sierra Precast, or equal. (For the location of soundwalls, as well as typical fencing refer to Figure J.11.2. Typical soundwall height shall be six feet as measured from the base of the wall at finish grade from either the residential side or the public right-of-way. Wall heights may vary. At typical community entries wall heights may be eight to ten feet for sign walls. In such cases the soundwall shall step down to six foot in height within three hundred feet of any community entry.

Soundwalls shall be clipped or rounded as they approach residential lots, as illustrated in Figure J.8.iv. Soundwalls shall be placed along property lines and shall not impede the view of pedestrians or vehicles at road crossing or other intersections.

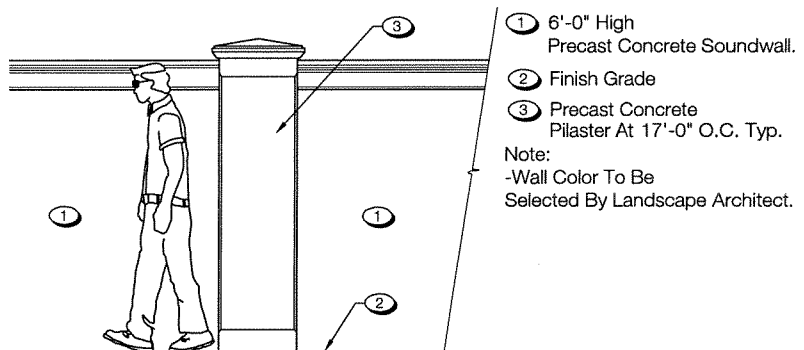


Figure J.13.1 Soundwalls

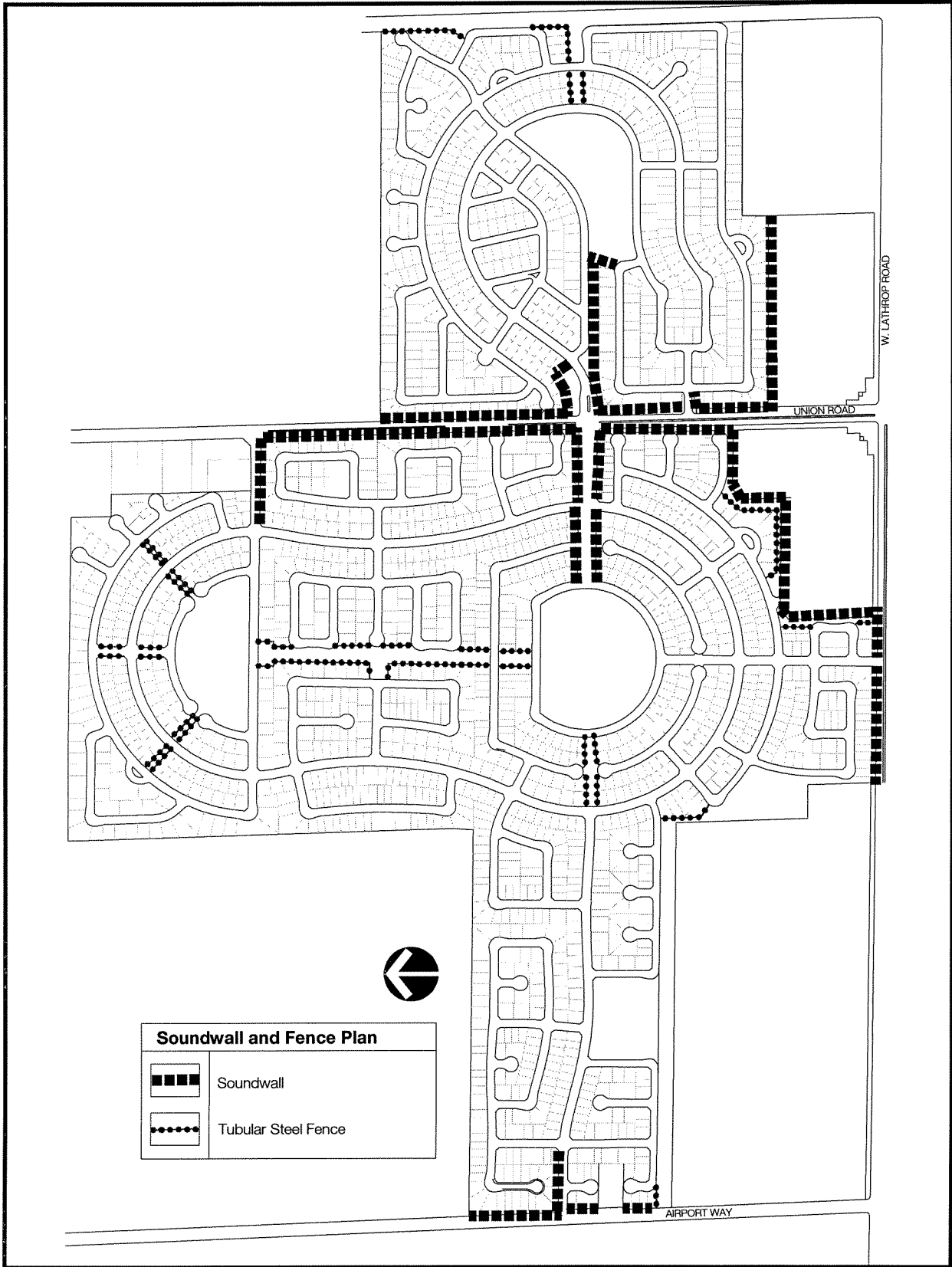


Figure J.13.2 Soundwall and Fencing Map

J.14 Pilasters and Low Decorative Walls

Decorative pilasters and low (non-structural) walls shall be constructed of concrete masonry units, placed on structurally sound concrete footings. Stone veneer shall be Cultured Stone, San Francisco Cobblefield by Stone Products Corporation (CSV-2036), or equal. Mortar color shall match. Stone veneer shall be applied per manufacturer's instructions. Pilaster caps shall be pre-cast integral color concrete, mortared in place. Low walls shall have stone veneer chiselled wall cap (Cultured Stone), Gray AS-1201 by Stone Products Corporation, or equal.

Pilasters shall be located at the beginning or terminus of all soundwalls, or changes in direction. In-wall placement of pilasters shall occur every 100-feet, or closest proximity thereof. Finishes shall be on all four sides. Low decorative walls are typically found at community entries, or within public right-of-ways. Refer to Figure J.14.1 for a general illustration of a typical pilasters and low wall arrangement.

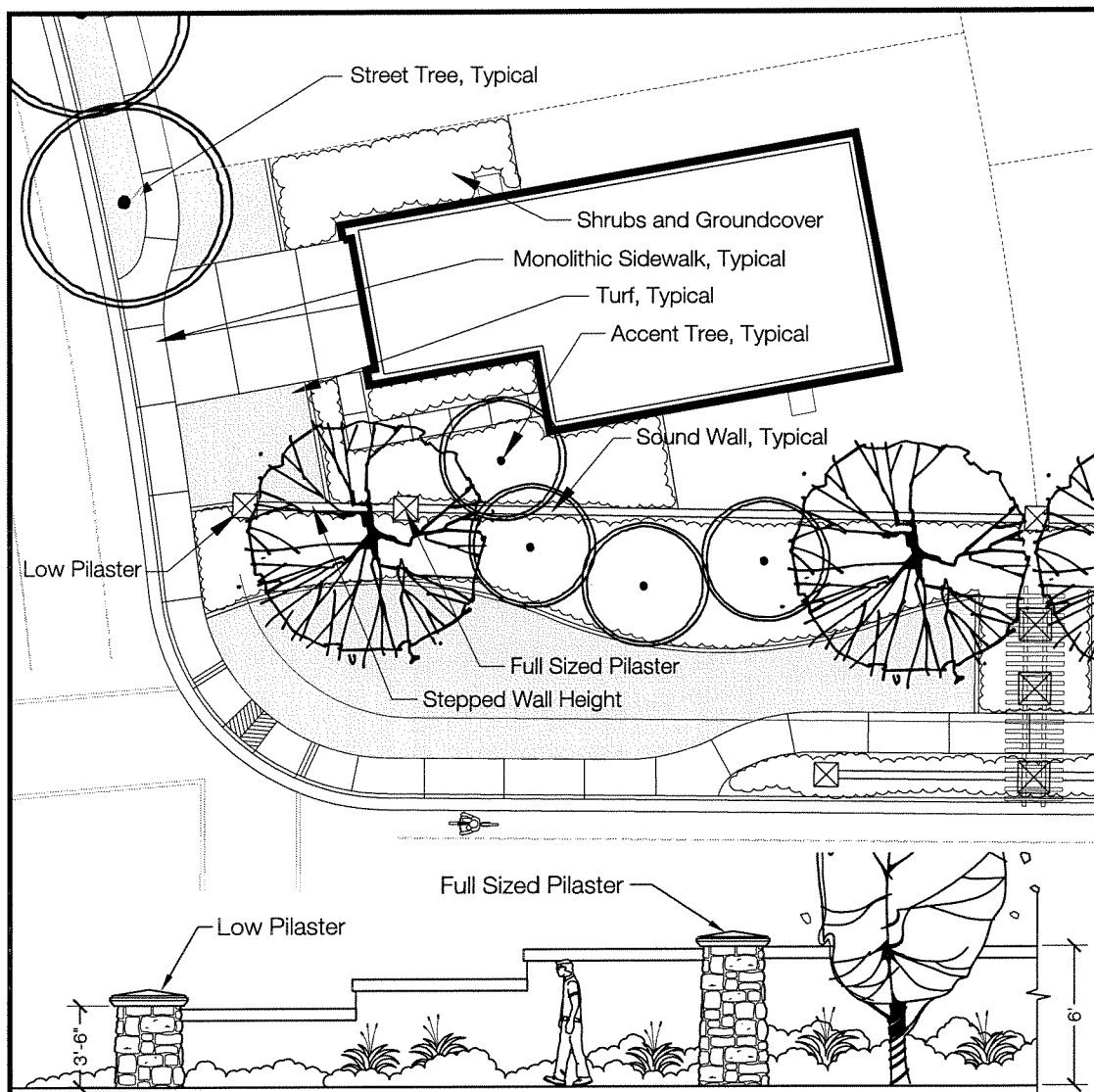


Figure J.14.1 Soundwall and Pilaster Diagram, Plan & Section

J.15 Fencing

Four fencing types are proposed for Union Ranch.

- a. **Decorative View Fence**- Constructed of tubular steel with a black painted finish, as illustrated in Figure J.13.1. The decorative view fence shall be located at rear lots backing on to greenways and open space areas, as indicated in Figure J.11.2. 2" x 2" posts shall be secured in the ground with a concrete footing; top and bottom rails shall be a minimum of 1" in size, and pickets shall be a minimum 3/4-inch.

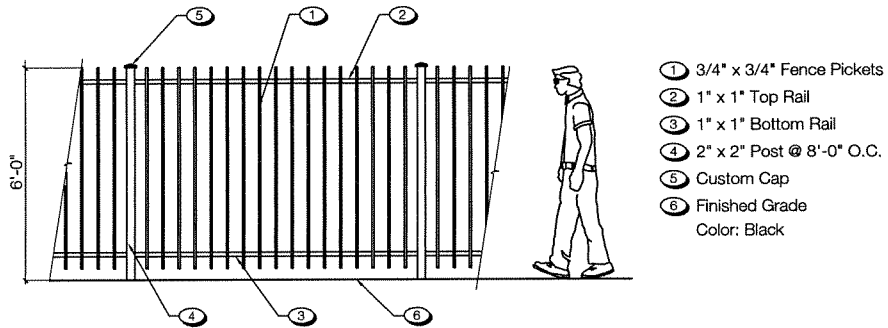


Figure J.15.1 Decorative View Fence

- b. **Low Accent Fence** - The low accent fence shall be a rail type fence, reminiscent of a traditional farm fence, as illustrated in Figure J.13.2. Constructed of tubular steel with a gray/white paint white finish the rail fence shall be typically used at community entries and adjacent to sign walls, as well as in public right-of-ways.

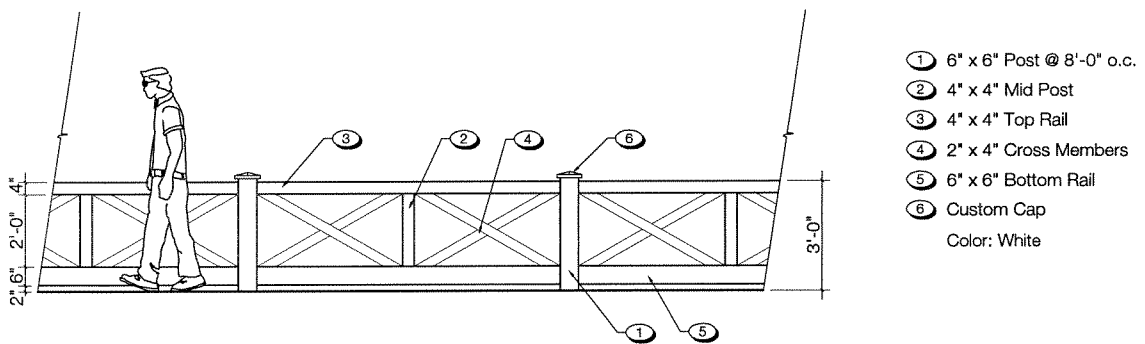


Figure J.15.2 Low Accent Fencing

c. Front, Side Yard, and Rear Fence

Constructed of wood or vinyl, the typical fence shall be used to separate residential rear and side yards. All wood fencing shall receive a minimum of two coats of semi-transparent stain, Mushroom #910 by Olympic Stain, or equal.

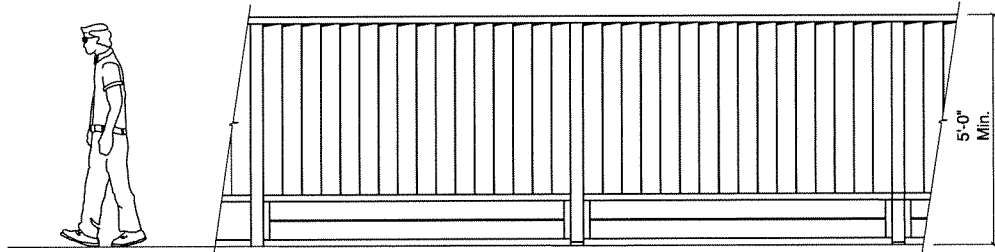


Figure J.15.3 Front, Side Yard, and Rear Fence

J.16 Landscape Palette

The landscape palette developed for the Union Ranch Specific Plan has been developed to insure a cohesive element of design throughout the community. The proposed plant palette is designed to achieve a strong delineation of street rights-of-way, corresponding landscape easements, open space corridors, greenways, and community focal points. Basic criteria for the selection and use of specific plant material is as follows:

- 1) All proposed plant material has been selected for its compatibility with the environmental conditions of Manteca.
- 2) Plant material selection and planting locations will consider the site, relationships to building structures, and solar/climatic orientation as well as utilizing water-wise materials and practices for water conservation.
- 3) Plant material selections for project perimeters, streetscapes, intersections, parks, open spaces are to be achieved with those plants listed in the corresponding plant palette.
- 4) All installed plant materials will be located to provide clear views for traffic and public safety.
- 5) All installed landscapes will be irrigated by an automatic irrigation system utilizing water-conserving design.
- 6) All trees will be a minimum twenty-four inch (24) box container size, unless specified otherwise. All shrub plantings will contain a fifty (75) percent minimum of five (5) gallon container size plant material, and the balance one (1) gallon container size plant material.

J.16.1 Master Plant Palette

The Master Plant List, as found in Appendix A.1, for Union Ranch itemizes the intended plant palette. It is recognized that market conditions may affect availability. Substitutions, although not encouraged, may be approved. Based upon characteristics most similar to those materials indicated on the master Plant List.

J.17 Soil Conditioning Guidelines

- 1) Existing topsoil from grading, road excavations and other building development should be stockpiled for future placement in designated landscape areas. These soils will be amended and used as backfill as a planting media.
- 2) It is required that landscape installations reflect amendment for fertility per the requirements of a soils fertility testing to be completed prior to construction.

J.18 Irrigation Improvements Criteria

Given the quantity of landscaped open spaces within the Union Ranch Specific Plan Area, water conservation will be an important long-range factor. For this reason, the following recommendations shall be addressed in the development of irrigation improvements.

- 1) The increased use of shrub and groundcover materials, in-lieu of large open turf areas, will create the opportunity for drip, modified-drip and bubbler flood irrigation improvements as opposed to spray/surface irrigation techniques.
- 2) Rain sensors are required in order to eliminate excessive watering or irrigation operation during rainfall events.
- 3) All installed landscapes will be irrigated by an automatic irrigation system utilizing water-conserving design.

J.19 Landscape Maintenance

The landscape areas, whether owned by public agencies or private developments, shall be maintained to the highest possible standards of reasonable care. Without proper maintenance the major community elements, and associated landscapes, may deteriorate affecting the overall aesthetic qualities that this document is promoting. The intent of the landscape maintenance guidelines is to give direction for the standards of maintenance for all landscape areas in all land uses throughout the community. Proper horticultural practices must be utilized on a site-by-site basis.

These maintenance guidelines apply to all land use designations except for low density, residential, median density residential and public/quasi public land uses.

J.19.1 Turf Care

- 1) **Mowing/Edging**
Cool season grasses such as ryegrass, and fescues will be mowed at least once every seven (7) days during the growing season and as needed during the cold, rainy seasons. Mowing heights will 2-2.5 inches in spring/summer and 1.5-2 inches in fall/winter. All clippings will be disposed of off-site. Large turf areas in parks may mulched directly back to source.
- 2) **Watering**
Turf areas will be watered at such frequency, as weather conditions require, to replenish soil moisture below the root zone. Watering shall always be done at night by an electrically controlled irrigation system. Water moisture sensing devises will be used as part of the irrigation control system. Water runoff across pavements and into gutters will be avoided.

- 3) **Fertilization**

Lawns will be fertilized with a total of at least six (6) pounds of actual nitrogen per 1,000 square feet per year. The number of applications and type of nitrogen used will depend upon appropriate fertilizer formulation based on individual site and seasonal conditions. If soil PH drops below 6.0, then a basic fertilizer such as calcium nitrate may be preferable to an acidic fertilizer. A soil fertilization analysis recommendation shall be followed when deficiencies appear.
- 4) **Weed, Pest, and Disease Controls**

Qualified personnel will make regular inspection of turf areas for pests and diseases. Approved herbicides will be applied to control broadleaf weeds. Early spring applications of a pre-emergent herbicide will be used for crabgrass control. Post-emergent applications for crabgrass will be applied prior to germination.
- 5) **Chemical Controls**

Qualified personnel under the supervision of a licensed applicator will apply all chemical controls.
- 6) **Aerification**

Aerify all compacted turf areas to improve water penetration whenever required.
- 7) **Trash Control**

Remove all trash and other debris from landscape areas weekly.

J.19.2 Tree and Shrub Care

Maintain trees and shrubs in a healthy, growing condition by performing all necessary operations including the following:

- 1) **Pruning**

Prune trees and shrubs in a healthy, growing condition by performing all necessary operations including the following:

 - a. Select and develop permanent scaffold branches that are smaller in diameter than the trunk or branch to which they are attached.
 - b. Maintain vertical spacing of eighteen to forty-eight (18-48) inches with a radial orientation so as not to overlay one branch to another.
 - c. Eliminate diseased or damaged growth and narrow V-shaped branch forks that lack strength.
 - d. Reduce toppling and wind damage by thinning out crowns.
 - e. Under no circumstances will stripping of lower branches (“raising up”) of young trees be permitted. Lower branches will be retained in a “tipped back” or “pinched” condition with as much foliage as possible to promote caliper trunk growth (tapered trunk). Lower branches will be cut flush with the trunk only after the tree is able to stand erect without staking or other support.

- f. Evergreen trees will be thinned out and shaped when necessary to prevent wind and storm damage. The primary pruning of evergreen trees will be done during the dormant season. Damaged trees, or those which constitute health or safety hazards, will be pruned at any time of the year as required.
- g. Shrubs – The objectives of shrub pruning are the same as for trees. Shrubs will not be clipped into balled or boxed forms unless such is required by the design.
- h. Staking and Guying – When trees attain a trunk caliper of two (2) inches, remove existing stakes and guys. If unstable at this time, replacement will be recommended to the owner. Stakes and guys are to be inspected at least two (2) times per year to prevent rubbing which causes bark wound. Adjust tree stakes, ties, and guy lines as required.

2) Weed Control

Keep basins and areas between plants free of weeds. All trees in lawns will have a twenty-four (24) inch diameter circle of open soil maintained around the base of the trunk. This will encourage tree vigor and minimize damage to tree trunks and roots by machinery. Use recommended, legally approved, herbicides to control growth in this open area. Avoid frequent soil cultivation, which destroys shallow roots and breaks the seal of pre-emergent herbicides.

3) Insect and Disease Control

Regular inspection of trees and shrubs for pests and diseases will be performed. Apply chemical control as required.

4) Fertilization

Fertilize recently established plants as needed, but at least annually for trees, and four (4) times per year for shrubs, with a soluble nitrate fertilizer.

Avoid applying fertilizer to the rootball and base of main stem; rather, spread evenly under plant's dripline. Rates will vary from about a cup of nitrate fertilizer (depending on nitrogen percentage) around a newly installed small plant to about one-half (1/2) pound of actual nitrogen per inch of trunk diameter measure four (4) feet from the ground for mature trees.

5) Watering

Plants should not be watered until a moisture check has been made of representative plants in the landscape. The need for water will dictate the frequency of watering by an automatic irrigation system.

For areas not under irrigation, maintain a large enough water basin around the plants so enough water can be applied to establish moisture through the major root zone. When hand watering, a water wand shall be used to break the water force. In the rainy season open basins to allow surface drainage away from the root crown where excess water may accumulate.

J.19.3 Ground Cover Care

Foster attractiveness at all times by the following:

- 1) **Weed Control**
Control weeds, preferably with pre-emergent herbicides, but also with selected systemic or contact herbicides and hand labor. Hoe weeds as little possible since this may result in plant damage.
- 2) **Fertilization**
Apply five (5) pounds of actual nitrogen per year, in four (4) applications, during the first year of a new planting or if the ground cover is showing signs of nitrogen starvation. One (1) application will be in early spring when growth begins. Reduce to three (3) pounds actual nitrogen in following years, or as needed to maintain vigorous growth and good color. Complete fertilizers are not necessary unless soil test shows specific nutrient deficiencies.
- 3) **Watering**
Water enough that moisture penetrates throughout the root zone and only as frequently as necessary to maintain healthy growth.
- 4) **Trash Control**
Remove trash from landscape areas on a weekly basis.

J.19.4 Annual Flower Beds

Annual flowers should be replaced four (4) times per year with annuals according to the season. Soil will be thoroughly prepared prior to planting by incorporating slow-release fertilizer, which encourages proper flowering. Nitrified redwood soil conditioners, or similar materials, will be added for improving soil conditions.

J.19.5 Irrigation System

Maintenance contractors will inspect and adjust sprinkler heads, valves, and controllers on a regular basis for proper operation. All irrigation heads will be adjusted as required for unimpeded coverage and to eliminate overspray onto sidewalks, walls, etc.

Automatic controllers shall be set and programmed for seasonal water requirements.

J.19.6 Hardscape Care

All hardscape shall be maintained in a neat and attractive appearance throughout the year by following these practices:

- 1) **Decorative paving shall be pressure washed at least two times during the dry season and checked for unsafe conditions. Litter and other debris shall be removed on a weekly basis. Landscape areas that "wash out" onto paving shall be corrected at the first evidence of a problem.**
- 2) **Any and all graffiti which may appear on walls or other hardscape elements, including those associated with utilities, shall be removed immediately. Walls and fences shall be planted with trailing vines to cover exposed surfaces to deter graffiti.**

Appendix A.1

Streetscape Plantings			
BOTANICAL NAME	COMMON NAME	NOTES	SIZE
Primary Street Trees-Backbone			
Quercus virginiana	Southern Live Oak		24" Box
Zelkova serrata "Village Green"	Village Green Zelkova		24" Box
Secondary Street Tree-Backbone			
Magnolia grandiflora	Southern Magnolia		24" Box
Pinus canariensis	Canary Island Pine		24" Box
Pyrus calleryana "Chanticleer"	Chanticleer Pear		24" Box
Sequoia sempervirens 'Soquel'	Coast Redwood		24" Box
Major Accent Trees- Entries			
Magnolia grandiflora	Southern Magnolia		60- 72" Box
Quercus agrifolia	Coast Live Oak	Multi & Standard	72" Box
Accent Tree- Backbone & Entries			
Betula pendula	Weeping European Birch		24" Box
Laurus X saratoga	Saratoga Laurel		24" Box
Carpinus betulus 'Fastigiata'	Pyramidal European Hornbeam		24" Box
Lagerstroemia X fauriei	Crape Myrtle var.	Multistem	24" Box
Pistacia chinensis	Chinese Pistache		24" Box
Shrubs			
Agapanthus africanus "Peter Pan"	Peter Pan Agapanthus		1 gallon
Agapanthus africanus 'Queen Anne'	Queen Ann Agapanthus		5 gallon
Dietes vegeta	Fortnight Lily		5 gallon
Hemerocallis 'Stello D'Oro'	Stello D'Oro Daylily		1 gallon
Hypericum moserianum	Gold Flower		5 gallon
Juniperus chinensis 'Aurea'	Gold Coast Juniper		5 gallon
Phormium 'Bronze Baby'	Bronze Baby New Zealand Flax		5 gallon
Phormium tenax 'Atropurpureum'	Purple New Zealand Flax		15 gallon
Pittosporum tobira 'Variegata'	Variegated Mock Orange		5 gallon
Photinia x fraserii	Photinia		5 gallon

Prunus laurocerasus 'Otto Luyken'	Otto Luyken English Laurel		5 gallon
Raphiolepis indica 'Ballerina'	Ballerina Indian Hawthorn		5 gallon
Raphiolepis indica 'Jack Evans'	Jack Evans Indian Hawthorn		5 gallon
Rhamnus californica 'Eve Case'	Eve Case Coffeeberry		5 gallon
Rosa HT var.	Hybrid Tea Roses (TBD)		5 gallon
Groundcover/Vines			
Juniperus horizontalis 'Plumosa'	Andorra Juniper		5 gallon
Rosa, var.	Groundcover/Climbing Roses		5 gallon
Rosmarinus officinalis 'Huntington Carpet'	Huntington Carpet Rosemary		1 gallon
Trachelospermum jasminoides	Star Jasmine		1 gallon
Ficus pumila	Creeping Fig	Staked	5 gallon
Parthenocissus tricuspidata	Boston Ivy	Staked	5 gallon

Clubhouse Planting			
BOTANICAL NAME	COMMON NAME	NOTES	SIZE
Accent Trees at Clubhouse			
Betula pendula	Weeping European Beech		24" Box
Prunus cerasifera 'Thundercloud'	Purple Leaf Plum		24" Box
Lagerstroemia X fauriei	Crape Myrtle var.	Multi & Standard	24" Box
Chaemaerop humilis	Mediterranean Fan Palm	3-4' Clumps	24" Box
Parking Lot Shade Trees			
Fraxinus oxycarpa 'Raywood'	Raywood Ash		15 Gallon
Ulmus Parvifolia 'True Green'	Chinese Evergreen Elm		24" Box
Shrubs/Groundcovers			
Agapanthus africanus "Peter Pan"	Peter Pan Agapanthus		1 gallon
Agapanthus africanus 'Queen Anne'	Queen Ann Agapanthus		5 gallon
Camellia sasanqua	Camellia var. (TBD)		5 gallon
Cycas revoluta	Sago Palm		15 gallon
Dietes vegeta	Fortnight Lily		5 gallon
Hypericum moseranum	Gold Flower		5 gallon
Juniperus chinensis 'Aurea'	Gold Coast Juniper		5 gallon
Lavendula stoechas	Spanish Lavender		5 gallon
Phormium 'Bronze Baby'	Bronze Baby New Zealand Flax		5 gallon
Pittosporum tobira 'Wheeler's Dwarf'	Wheeler's Dwarf Mock Orange		5 gallon
Prunus laurocerasus 'Otto Luyken'	Otto Luyken English Laurel		5 gallon
Raphiolepis indica 'Ballerina'	Ballerina Indian Hawthorn		5 gallon
Raphiolepis indica 'Jack Evans'	Jack Evans Indian Hawthorn		5 gallon
Rosa HT var.	Hybrid Tea Roses (TBD)		5 gallon
Rosa, var.	Groundcover/Climbing Roses		5 gallon
Trachelospermum jasminoides	Star Jasmine		1 gallon

Front Yard Typical Planting			
BOTANICAL NAME	COMMON NAME	NOTES	SIZE
Residential Street Trees			
Acer rubrum 'Sunset'	Sunset Red Maple		24" Box
Celtis sinensis	Chinese Hackberry		24" Box
Platanus acerifolia 'Bloodgood'	London Plane Tree		24" Box
Tilia cordata 'Greenspire'	Greenspire Linden		24" Box
Residential Accent Trees			
Acer palmatum	Japanese Maple		15 gallon
Magnolia soulangeana	Saucer Magnolia		15 gallon
Lagerstroemia x fauriei	Crape Myrtle	Multistem	15 gallon
Arbutus maritima	NCN	Multistem	15 gallon
Sequoia sempervirens	Costal redwood		15 gallon
Shrubs/Groundcovers/Vines			
Agapanthus africanus "Peter Pan"	Peter Pan Agapanthus		1 gallon
Azalea 'Southern Indica'	Azelea var.		5 gallon
Camellia japonica	Camellia var. (TBD)		5 gallon
Dietes vegeta	Fortnight Lily		5 gallon
Ficus pumila	Creeping Fig	Staked	5 gallon
Hemerocallis Evergreen var.	Evergreen Daylily		1 gallon
Lavandula stoechas	Spanish Lavender		5 gallon
Liriope gigantea	Giant Lilyturf		1 gallon
Parthenocissus tricuspidata	Boston Ivy	Staked	5 gallon
Phormium 'Bronze Baby'	Bronze Baby New Zealand Flax		5 gallon
Prunus laurocerasus 'Otto Luyken'	Otto Luyken English Laurel		5 gallon
Raphiolepis indica 'Ballerina'	Ballerina Indian Hawthorn		5 gallon
Raphiolepis indica 'Jack Evans'	Jack Evans Indian Hawthorn		5 gallon
Rhamnus californica 'Eve Case'	Eve Case Coffeeberry		5 gallon
Rosa, var.	Groundcover Roses		5 gallon
Trachelospermum jasminoides	Star Jasmine		1 gallon