

**4.8 NOISE**

This section analyzes the noise impacts due to and upon development of the Villa Ticino West Development project. This noise analysis focuses on the potential noise impacts at existing and proposed noise-sensitive land uses resulting from surface traffic on the regional and local area roadway network, railroad operations, existing water wells located on the project site, and commercial noise sources associated with the proposed commercial uses. The noise assessment of the project was prepared by Bollard and Brennan, Inc.

#### 4.8.1 EXISTING SETTING

##### BACKGROUND AND TERMINOLOGY

Noise is often described as unwanted sound. Sound is defined as any pressure variation in air that the human ear can detect. If the pressure variations occur frequently enough (at least 20 times per second), they can be heard and hence are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second, called Hertz (Hz).

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to the reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (Leq), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The Leq is the foundation of the composite noise descriptor, Ldn, and shows very good correlation with community response to noise.

The Day-night Average Level (Ldn) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because Ldn represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

##### EFFECTS OF NOISE ON PEOPLE

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by weighing the frequency response of a sound level meter by means of the standardized A-weighting network. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment, and is used in this document.

The effects of noise on people can be placed in three categories:

## 4.8 NOISE

- Subjective effects of annoyance, nuisance, dissatisfaction;
- Interference with activities such as speech, sleep, learning; and,
- Physiological effects such as hearing loss or sudden startling.

There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists, and different tolerances to noise tend to develop based on an individual's past experiences with noise. Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise levels, a 3 dBA change is considered a just-perceivable difference, a 5 dBA is required before any noticeable change in human response would be expected, and a 10 dBA change is subjectively heard as approximately a doubling in loudness, which can cause adverse response. Some land uses are considered more sensitive to ambient noise level changes than others, sensitivity being a function of noise exposure and the types of activities involved. Residential land uses are generally more sensitive to noise than commercial and industrial land uses.

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, typically attenuate (decrease) at a rate of 6 dB per doubling of distance from the source. Other conditions such as atmospheric, noise barriers, etc., affect the transmission of sound between the source and receiver. **Table 4.8-1** contains definitions of acoustical terminology used in this section.

**TABLE 4.8-1**  
**ACOUSTICAL TERMINOLOGY**

Term	Definition
<b>Acoustics</b>	The science of sound.
<b>Ambient Noise</b>	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
<b>Attenuation</b>	The reduction of noise.
<b>A-Weighting</b>	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
<b>Decibel or dB</b>	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
<b>CNEL</b>	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
<b>Frequency</b>	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz.
<b>Ldn</b>	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
<b>Leq</b>	Equivalent or energy-averaged sound level.

**TABLE 4.8-1**  
**ACOUSTICAL TERMINOLOGY**

Term	Definition
<b>Lmax</b>	The highest root-mean-square (RMS) sound level measured over a given period of time.
<b>Loudness</b>	A subjective term for the sensation of the magnitude of sound.
<b>Noise</b>	Unwanted sound.
<b>Threshold of Hearing</b>	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
<b>Threshold of Pain</b>	Approximately 120 dB above the threshold of hearing.

Community noise is commonly described in terms of the "ambient" noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level ( $L_{eq}$ ), which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually one hour). The  $L_{eq}$  is the foundation of the composite noise descriptor,  $L_{dn}$ , and shows very good correlation with community response to noise.

The Day-night Average Level ( $L_{dn}$ ) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because  $L_{dn}$  represents a 24-hour average, it tends to disguise short-term variations in the noise environment.

#### EXISTING LAND USE IN THE PROJECT VICINITY

Existing land uses in the project vicinity consist of single-family residential, agricultural fields, office buildings, a commercial distribution center, and a truck service yard. The project site is bordered to the north by Louise Avenue, to the south by single-family residences, to the west by Union Pacific Railroad (UPRR) tracks, and to the east by Airport Road.

#### GENERAL AMBIENT NOISE LEVEL SURVEY

A short-term ambient noise survey was conducted in the immediate project vicinity during daytime hours on October 12, 2003. **Figure 4.8-1** shows the locations of the ambient noise measurement sites. A Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meter was used for the ambient noise level measurement survey. The meter was calibrated before and after use with an LDL Model CA200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

Villa Ticino West Development  
Manteca, CA

Manteca Unified School  
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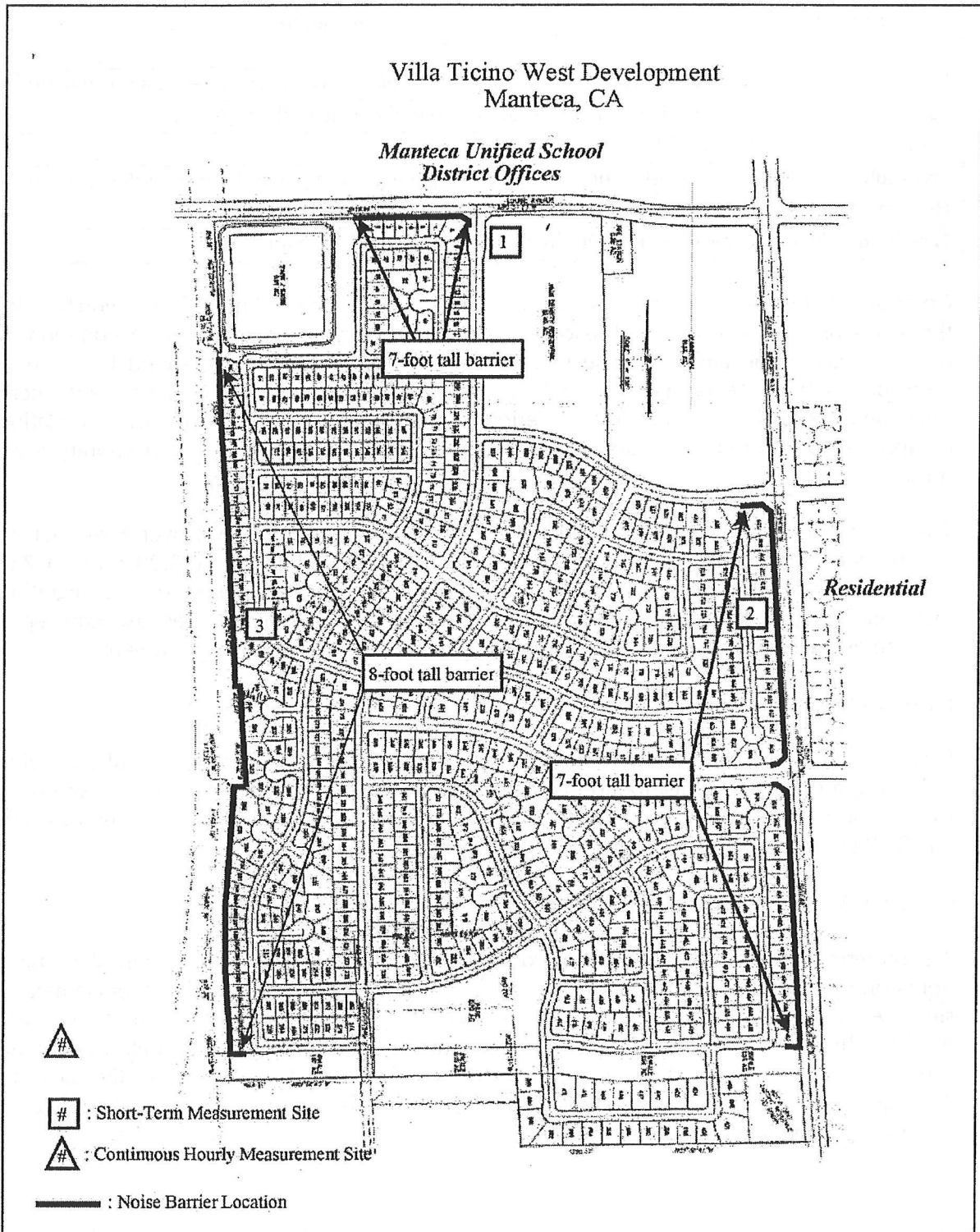


FIGURE 4-8.1

NOISE MEASUREMENT SITES AND MITIGATION

The noise level meter was programmed to record the maximum and average noise levels at each site during the survey. The maximum value, denoted L<sub>max</sub>, represents the highest noise level measured. The average value, denoted L<sub>eq</sub>, represents the energy average of all of the noise received by the sound level meter microphone during the monitoring period. The ambient noise level measurement results are provided in **Table 4.8-2**.

**TABLE 4.8-2**  
**AMBIENT NOISE MONITORING RESULTS**  
**VILLA TICINO WEST DEVELOPMENT SITE - OCTOBER 15, 2003**

Site	Location	Measured Sound Level, dBA	
		Average (L <sub>eq</sub> )	Maximum (L <sub>max</sub> )
1	North end of project site, 100 feet from Louise Ave	60	74
2	East end of project site, 100 feet from Airport Road	63	78
3	West end of project site, near UPRR tracks	51	59

Source: Bollard & Brennan, Inc.

The ambient noise survey results indicate that the measured daytime ambient noise levels at the project site are fairly typical of urban areas affected primarily by nearby traffic noise sources (when trains are not present). A specific assessment of existing, existing plus project, and cumulative plus project traffic noise levels is provided later in this section, as is a separate evaluation of railroad noise.

During the October noise level survey, the existing water wells located on the project site (identified on Figure 4.8-1) were identified. However, noise level data associated with those wells was not collected at that time because it was believed that those wells were being removed to accommodate the project. Although the southern well has been removed, the northern two wells would reportedly remain operational. As a result, additional noise level measurements of the wells were conducted on April 8, 2004 to quantify the noise emissions of that equipment. Those noise level measurements indicate that the wells generate a sustained noise level of 68 dB L<sub>eq</sub> at a distance of 25 feet from the pump equipment.

#### EXISTING TRAFFIC NOISE ENVIRONMENT

To predict noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L<sub>eq</sub> values for free-flowing traffic conditions. To predict noise levels in terms of L<sub>dn</sub>, the daytime and nighttime distribution of traffic must be included in the computations.

Traffic volumes were obtained from T.Y. LIN International/CCS Transportation Consultants in the form of peak morning and afternoon hour intersection movements. The p.m. peak hour traffic

## 4.8 NOISE

volumes were compiled into segment volumes and converted to daily traffic volumes using a factor of 10. Truck usage on the local area roadways was estimated from published Caltrans traffic counts and Bollard & Brennan, Inc. site observations.

**Table 4.8-3** shows the predicted existing traffic noise levels in terms of the Day/Night Average Level descriptor (Ldn) at a standardized distance of 100 feet from the centerlines of the existing project-area roadways for existing conditions, as well as distances to existing traffic noise contours. The extent by which existing land uses in the project vicinity are affected by existing traffic noise depends on their respective proximity to the roadways and their individual sensitivity to noise.

**TABLE 4.8-3  
EXISTING TRAFFIC DATA, NOISE LEVELS AND DISTANCES TO CONTOURS**

Intersection	Direction	Ldn @ 100 Feet	Distance to Contours		
			70 dB Ldn	65 dB Ldn	60 dB Ldn
Louise Ave & Airport Rd	West	63	33	71	152
	South	63	34	73	158

Notes: Source: FHWA-RD-77-108 with inputs from T.Y. LIN International/CCS (p.m. peak hour \*10) and Bollard & Brennan.

Distances to traffic noise contours are measured in feet from the centerlines of the roadways.

### 4.8.2 REGULATORY FRAMEWORK

#### FEDERAL AND STATE

Federal and state governments have established noise standards and guidelines to protect citizens from potential hearing damage and other adverse physiological and social effects associated with noise. The federal government regulates noise levels in the work place, aircraft noise, and noise emitted by certain products of the time of manufacture. The State of California regulates noise levels of motor vehicles and freeway noise affecting classrooms, sets standards for sound transmission control and occupational noise control, and identifies noise insulation standards and airport noise/land use compatibility. Local communities generally regulate land use/noise level compatibility, allowable levels on private property and levels associated with the use of certain types of sources.

#### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

The City of Manteca General Plan provides the following goals and policies relative to noise. **Table 4.8-4** summarizes the project's consistency with the General Plan Noise Element.

**TABLE 4.8-4  
PROJECT CONSISTENCY WITH THE GENERAL PLAN NOISE ELEMENT**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Goal N-1.</b> Protect the residents of Manteca from the harmful and annoying effects of exposure to excessive noise.	Yes	The project would not create noise level increases at existing residences within Manteca, and mitigation will be included in

**TABLE 4.8-4  
PROJECT CONSISTENCY WITH THE GENERAL PLAN NOISE ELEMENT**

General Plan Goals and Policies	Consistency with General Plan	Analysis
		the project design to protect the residents proposed within the Villa Ticino development.
<b>Goal N-2.</b> Protect the quality of life in the community and the tourism economy from noise generated by incompatible land uses.	Yes	With mitigation, the project is compatible with neighboring land uses.
<b>Goal N-3.</b> Ensure that the downtown core noise levels remain acceptable and compatible with commercial and higher density residential land uses.	Yes	The project would not appreciably affect downtown core noise environments.
<b>Goal N-4.</b> 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.	Yes	The project does not contribute towards a significant increase in noise.
<b>Goal N-5.</b> 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.	N/A	This project does not propose new transportation facilities.
<b>Policy N-P-1.</b> Areas within Manteca exposed to existing or projected exterior noise levels exceeding 60 dB Ldn or exceeding the performance standards in <b>Table 9-1</b> shall be designated as noise-impacted areas.	Yes, with mitigation	With mitigation, noise levels are not predicted to exceed 60 dB Ldn at noise-sensitive land uses within the project site.
<b>Policy N-P-2.</b> New development of 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 <b>Table 9-1</b> .	Yes	Noise mitigation measures have been developed to ensure compliance with City noise standards.
<b>Policy N-P-3.</b> 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 <b>Table 9-2</b> . Noise mitigation may be required to meet <b>Table 9-2</b> performance standards.	Yes	Subsequent development of the Commercial uses at the corner of Airport and Louise will require a project-specific assessment of noise sources and mitigation measures to ensure compliance with City noise standards.
<b>Policy N-P-4.</b> 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 <b>Table 9-2</b> .	Yes	Subsequent development of the Commercial uses at the corner of Airport and Louise will require a project-specific assessment of noise sources and mitigation measures to ensure compliance with City noise standards.
<b>Policy N-P-5.</b> The City shall regulate construction-related noise to reduce impacts on adjacent uses.	Yes	Construction noise impacts are evaluated in this report.

**TABLE 4.8-4  
PROJECT CONSISTENCY WITH THE GENERAL PLAN NOISE ELEMENT**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<p><b>Policy N-P-6.</b> 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:</p> <ul style="list-style-type: none"> <li>• Be the responsibility of the applicant.</li> <li>• Be prepared by a qualified acoustical consultant experienced in the fields of environmental noise assessment and architectural acoustics.</li> <li>• Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.</li> <li>• Estimate existing and projected (20 years) noise levels in terms of the standards of <b>Table 9-1</b> or <b>Table 9-2</b>, and compare those levels to the adopted policies of the Noise Element.</li> <li>• Recommend appropriate mitigation measures to achieve compliance with the adopted policies and standards of the Noise Element.</li> <li>• Estimate noise exposure after the prescribed mitigation measures have been implemented.</li> <li>• Describe a post-project assessment program that could be used to monitor the effectiveness of the proposed mitigation measures.</li> </ul>	Yes	This analysis conforms to the City's requirements as described here.
<p><b>Policy N-P-7.</b> Noise level criteria applied to land uses other than residential or other noise-sensitive uses shall be consistent with recommendations of the <i>Guidelines for the Preparation and Content of the Noise Element of the General Plan</i>.</p>	Yes	Subsequent development of the Commercial uses at the corner of Airport and Louise will require a project-specific assessment of noise sources and mitigation measures to ensure compliance with City noise standards.
<p><b>Policy N-P-8.</b> The City shall enforce the Sound Transmission Control Standards of the California Building Code concerning the construction of new multiple occupancy dwellings such as hotels, apartments, and condominiums.</p>	Yes	Specific review of all high-density residential developments will be required by the City Building Department.

**TABLE 4.8-4  
PROJECT CONSISTENCY WITH THE GENERAL PLAN NOISE ELEMENT**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Policy N-P-11</b> In residential subdivisions backing on to 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, in accordance with City development standards.	Yes, with mitigation	Noise barriers are prescribed in this analysis to mitigate excessive railroad and traffic noise levels.
<b>Policy N-P-12.</b> The City shall require new roadways to be mitigated so as not to exceed the noise levels specified in <b>Table 9-1</b> . Widening or other improvement projects of existing roadways shall be mitigated to the most practical extent.	N/A	This project does not propose any major new roadways. Internal roadways will not carry sufficient traffic volumes to warrant noise mitigation measures at adjacent residential uses.

### 4.8.3 IMPACTS AND MITIGATION MEASURES

#### PROJECT-RELATED TRAFFIC NOISE LEVEL INCREASES

California Environmental Quality Act (CEQA) guidelines define a significant impact of a project if it "increases substantially the ambient noise levels for adjoining areas". In practice, significant noise impacts are usually identified in CEQA analyses if the project would result in a perceptible ambient noise level increase, commonly considered to be 3 dB.

#### SIGNIFICANCE STANDARDS

CEQA guidelines state that implementation of the project would result in significant noise impacts if the project would result in either of the following:

- Exposure of persons to or generation of noise levels in excess of standards established in the Manteca General Plan. Specifically, exterior and interior noise levels of 60 and 45 dB Ldn, respectively, for traffic and railroad noise. In addition, exterior noise levels associated with non-transportation noise sources in excess of 50 dB L50 during daytime hours, and 45 dB L50 during nighttime hours, shall be considered significant.
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, defined as 3 dB.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, defined as 3 dB.

## 4.8 NOISE

- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, where the project would expose people residing or working in the area to excessive noise levels.
- For a project within the vicinity of a private airstrip, where the project would expose people residing or working in the project area to excessive noise levels.

Because this project is not located in an area which is impacted by aircraft noise, items "e" and "f" listed above would not apply. In addition, because there are no existing or proposed significant sources of groundborne vibration associated with this project, analysis of item "b" above is not warranted.

### METHODOLOGY

#### Traffic Noise Sources

To assess noise impacts due to project-related traffic increases on the local roadway network, traffic noise levels are predicted at a representative distance for both existing and future, project and no-project conditions. Noise impacts are identified at existing noise-sensitive areas if the noise level increases which result from the project exceed the 3 dB significance threshold.

To describe existing and projected noise levels due to traffic, the Federal Highway Administration Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly Leq values for free-flowing traffic conditions. To predict traffic noise levels in terms of Ldn, it is necessary to adjust the input volume to account for the day/night distribution of traffic.

Traffic volumes for existing and future conditions and scenarios were obtained from T.Y. LIN International/CCS Transportation Consultants. **Table 4.8-5** shows the predicted increases in traffic noise levels on the local roadway network for existing and future conditions which would result from the project. Appendix F contains the FHWA Traffic Noise Prediction Model Inputs for the project. These Tables are provided in terms of Ldn at a standard distance of 100 feet from the centerlines of the project-area roadways.

**TABLE 4.8-5  
PREDICTED TRAFFIC NOISE LEVEL AND PROJECT-RELATED TRAFFIC NOISE LEVEL INCREASES**

Intersection	Direction	Ldn @ 100 Feet					
		Existing	Existing + Proj.	Change	Cumulative	Cumulative + Proj.	Change
Louise Ave & Airport Wy	West	62.7	64.3	1.6	64.9	64.9	0
	South	63.0	65.2	2.2	65.2	65.2	0

Source: Bollard & Brennan, Inc., FHWA RD-77-108 Traffic Noise Prediction Model and T.Y. LIN International/CCS Data.

### Railroad Noise Sources

The Union Pacific Railroad (UPRR) traverses along the western boundary of the project site. The centerline of the railroad track is 160 feet to the west of the nearest residential lot lines. Bollard & Brennan, Inc. conducted continuous hourly noise measurements on the project site on Wednesday November 7, 2001 (BBI Project# 2001-183). The noise level measurements were conducted at a distance 175 feet east of the railroad track centerline. The sound level meter was programmed to collect hourly average (Leq), hourly maximum (Lmax) and other statistical noise level data. In addition, the sound level meter was programmed to collect single noise events which exceeded 65 dB for a period of more than 5 seconds. This provided single event noise level data associated with train operations. **Figure 4.8-1** shows the location of the noise measurement site. Appendix F of this document contains a graph showing the results of the hourly noise measurements and the single event train noise levels, which are described by the sound exposure level (sel).

**Table 4.8-6** shows the results of the noise level measurements. The results indicated that the single measured train operation resulted in an average sound exposure level (SEL) of 97 dB at a distance of 175 feet. This includes trains which utilize warning horns. Maximum noise levels due to train passbys ranged between 75 dB and 100 dB.

Based upon the noise measurement data, approximately 18 trains per day operate along the track, with approximately 23% of the trains operating during the nighttime hours (10 p.m. to 7 a.m.) and 77% of the trains operating during the daytime hours (7 a.m. to 10 p.m.). No information on future operations were available from the UPRR.

To determine the Ldn value associated with the railroad operations on the project site, the following formula can be used:

$Ldn = SEL + 10 \log Neq - 49.4 \text{ dB}$ , where:

SEL is the mean measured SEL of the train events (97 dB), Neq is the sum of the day plus 10 times the number of nighttime (10 pm to 7 am) train events, and 49.4 is ten times the logarithm of the number of seconds per day. Using a conservative estimate of 20 trains per day, with 25% of the trains operating during the nighttime hours, the Ldn value due to trains operations was calculated. Based upon this information, the Ldn is calculated to be 66 dB at a distance of 175 feet. Table 4.8-6 shows the predicted distances to the railroad operations Ldn contours, and the predicted noise levels at the nearest residences.

**TABLE 4.8-6**  
**PREDICTED RAILROAD NOISE LEVELS**

Distance to Noise Contours*		Predicted Ldn at Outdoor Activity Area (175 feet from Railroad Centerline)
60 dB Ldn	65 dB Ldn	
420 feet	195 feet	66 dB

\*Predicted distances to noise level contours are from the railroad track centerline.

## 4.8 NOISE

Based upon the analysis, the predicted exterior noise levels will exceed the City of Manteca 60 dB Ldn exterior noise level criterion. Bollard & Brennan, Inc. used typical barrier performance analysis methodology to determine the insertion loss and resulting noise level provided by different barrier heights at the first rows of lots affected by railroad noise. Based upon field observations, the barrier analysis assumes that the project site is 4-feet below the railroad bed elevation. **Table 4.8-7** shows the results of the barrier analysis. The barrier heights are relative to the building pad elevation.

**TABLE 4.8-7  
PREDICTED RAILROAD NOISE LEVELS AT THE FIRST ROW OF OUTDOOR ACTIVITY AREAS  
WITH 8-FOOT TALL BARRIER HEIGHT**

Barrier Location	R.R. Noise Level Without Barrier	Barrier Height	R.R. Noise Level With Barrier
Property Line	65.7 dB Ldn	8-feet	60 dB Ldn

Noise reduction from barriers are only at first floor receivers.

### Construction Noise

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in **Table 4.8-8**, ranging from 85 to 90 dB at a distance of 50 feet. Pile driving activities would generate even higher noise levels. Construction activities would be temporary in nature and are anticipated to occur during normal daytime working hours.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration, and would likely occur primarily during daytime hours.

**TABLE 4.8-8  
CONSTRUCTION EQUIPMENT NOISE**

Type of Equipment	Maximum Level, dB at 50 feet
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

Source: Environmental Noise Pollution, Patrick R. Cunniff, 1977.

### Water Well Noise

To assess noise impacts associated with the operation of the two water wells currently located on the project site, the noise level of 68 dB measured at a reference distance of 25 feet was projected to the property lines of the nearest residences, which appear to be located immediately adjacent to the well sites. Significant noise impacts are identified where those well-related noise levels are predicted to exceed the project standards of significance.

## PROJECT IMPACTS AND MITIGATION MEASURES

**Impact 4.8.1 Project-Related Increase in Existing Traffic Noise Levels. [LS]**

The project will generate increased traffic on the existing roadway network. The project-generated traffic is expected to result in traffic noise level increases over existing baseline levels ranging from 0.0 to 2.2 dB Ldn on the existing project area roadways, as indicated by **Table 4.8-5**.

A substantial increase in traffic noise levels is defined as 3 dB. Due to the relatively small number of trips which are predicted to be generated by the proposed project when compared to no-project traffic volumes, traffic noise level increases are predicted to be insignificant on all segments of the local roadway network evaluated in this analysis. Because the project-generated traffic will not cause significant traffic noise level increases along the existing roadway network, this impact is considered to be **less than significant**.

**Impact 4.8.2: Construction Noise. [PSM]**

Activities associated with construction at the project site will result in elevated noise levels in the immediate area. Activities involved in construction will typically generate maximum noise levels ranging from 85 to 90 dB at a distance of 50 feet, as indicated in **Table 4.8-8**. Construction activities will be temporary in nature and will likely occur during normal daytime working hours.

Because the noise-sensitive classroom areas of the adjacent school site are located internally within the school site, those nearest classrooms are separated from the project construction areas by distances ranging from approximately 200 to 400 feet. At such distances, maximum noise levels associated with construction activities would be approximately 75 dB or less outside the classrooms, and about 50 dB Lmax or less within the classroom. Because the normal voice level of a teacher within a classroom is at least 60 dB, no speech interference or classroom interruption is anticipated due to project-related construction activities. Therefore, construction noise impacts at the school area are predicted to be **less than significant**.

If construction activities occur outside the normal daytime hours, construction related noise could result in sleep interference at the residences constructed in the early phases of this development. This impact is considered **potentially significant** and subject to mitigation.

Mitigation Measures

**MM 4.8.2** Construction activities should adhere to the requirements of the City of Manteca policies with respect to hours of operation, muffling of internal combustion engines, and other factors which affect construction noise generation and it's effects on noise-sensitive land uses.

*Timing/Implementation: Prior to Improvement Plan approval.*

*Enforcement/Monitoring: City of Manteca Department of Public Works.*

Implementation of the mitigation measure would reduce the noise levels associated with construction and the potential impacts to the residences constructed in the early phases of this development. Impacts after mitigation would be **less than significant**.

## 4.8 NOISE

### Impact 4.8.3: Traffic Noise Levels at Proposed Single-family Residences on the Project Site. [SM]

The project site will be exposed to future plus project (cumulative) traffic noise levels from Airport Way and Louise Avenue which will exceed the City of Manteca 60 dB Ldn noise level standard applicable to new residential land uses at the residences proposed adjacent to those roadways. As result, this impact is considered **significant** and subject to mitigation.

#### Mitigation Measures

**MM-4.8.3a.** Noise barriers should be constructed along the boundaries of the residences proposed adjacent to Airport Way and Louise Avenue, at the locations shown on Figure 4.8-1. Table 4.8-9 shows the predicted noise levels for barriers of various heights. That Table shows that a barrier 7 feet in height (relative to back yard elevation) would be required to reduce future traffic noise levels to 60 dB Ldn or less at the nearest backyards proposed adjacent to those roadways. Barriers can take the form of earthen berms, solid walls, or a combination of the two. Appropriate materials for noise walls include precast concrete or masonry block. Other materials may be acceptable provide they have a density of approximately 4 lbs per square foot.

**MM-4.8.3b.** Standard residential construction practices conducted in accordance with local building codes provide approximately 25 dB exterior to interior noise level reduction with windows closed, and approximately 15 dB reduction with windows open. Because future traffic noise levels are not predicted to exceed 70 dB Ldn at the building facades of the residences proposed nearest to Louise Avenue and Airport Way, standard construction practices would be sufficient to achieve compliance with the City of Manteca 45 dB Ldn interior noise level standard, provided that windows can be closed. Therefore, mechanical ventilation (air conditioning) should be provided for all residences constructed within this development adjacent to Louise Avenue and Airport Way to allow those occupants to close doors and windows as desired for additional acoustic isolation.

**TABLE 4.8.9**  
**PREDICTED FUTURE TRAFFIC NOISE LEVELS AT THE FIRST ROW OF OUTDOOR ACTIVITY AREAS**  
**WITH VARYING BARRIER HEIGHTS**

Location	Barrier Height	Future Traffic Noise Level, Ldn
Lots Adjacent to Louise Avenue and Airport Way	0	65
	6	61
	7	60
	8	59

Notes: Noise barriers can take the form of earthen berms, solid walls, or a combination of the two.

*Timing/Implementation: Prior to Improvement Plan approval.*

*Enforcement/Monitoring: City of Manteca Department of Public Works.*

### Significance After Mitigation

Implementation of this noise mitigation measure would reduce this impact to a **less than significant level**.

#### **Impact 4.8.4: Traffic Noise Levels at Future Multi-Family Residences on the Project Site. [SM]**

The project proposed high-density residential uses along Louise Avenue, as indicated in **Figure 4.8.1**. The high-density residential site will be exposed to future plus project (cumulative) traffic noise levels from Louise Avenue which will exceed the City of Manteca 60 dB Ldn noise level standard applicable to new residential land uses. As result, this impact is considered **significant** and subject to mitigation.

#### Mitigation Measures

**MM-4.8.4a** When specific development plans have been provided for the high-density residential site, those plans should be reviewed by an acoustical consultant to ensure that the common outdoor activity areas are sufficiently shielded from Louise Avenue (by barriers or residential structures) to ensure compliance with the City of Manteca 60 dB Ldn exterior noise level standards.

**MM-4.8.4b** Standard residential construction practices conducted in accordance with local building codes provide approximately 25 dB exterior to interior noise level reduction with windows closed, and approximately 15 dB reduction with windows open. Because future traffic noise levels are not predicted to exceed 70 dB Ldn at the high-density residential development site located adjacent to Louise Avenue, standard construction practices would be sufficient to achieve compliance with the City of Manteca 45 dB Ldn interior noise level standard, provided that windows can be closed. Therefore, mechanical ventilation (air conditioning) should be provided for all residences constructed within the high-density residential portion of this development to allow occupants to close doors and windows as desired for additional acoustic isolation.

*Timing/Implementation: Prior to Improvement Plan approval.*

*Enforcement/Monitoring: City of Manteca Department of Public Works.*

Implementation of the above mitigation measures would reduce traffic noise levels at proposed single family residences on the project site. Impacts after mitigation would be **less than significant**.

#### **Impact 4.8.5: Railroad Noise Levels at Proposed Single-family Residences on the Project Site. [SM]**

## 4.8 NOISE

The project site will be exposed to future railroad noise which will exceed the City of Manteca 60 dB Ldn noise level standard applicable to new residential land uses at the residences proposed adjacent to those roadways. As result, this impact is considered **significant** and subject to mitigation.

### Mitigation Measures

**MM-4.8.5a.** Noise barriers should be constructed along the boundaries of the residences proposed adjacent to the railroad tracks, at the locations shown on **Figure 4.8-1**. **Table 4.8-10** shows the predicted noise levels for barriers of various heights. That Table shows that a barrier 8 feet in height (relative to back yard elevation) would be required to reduce future traffic noise levels to 60 dB Ldn or less at the nearest backyards proposed adjacent to the railroad tracks. Barriers can take the form of earthen berms, solid walls, or a combination of the two. Appropriate materials for noise walls include precast concrete or masonry block. Other materials may be acceptable provide they have a density of approximately 4 lbs per square foot.

**MM-4.8.5b.** Standard residential construction practices conducted in accordance with local building codes provide approximately 25 dB exterior to interior noise level reduction with windows closed, and approximately 15 dB reduction with windows open. Because future railroad noise levels are not predicted to exceed 70 dB Ldn at the building facades of the residences proposed nearest to the railroad tracks, standard construction practices would be sufficient to achieve compliance with the City of Manteca 45 dB Ldn interior noise level standard, provided that windows can be closed. Therefore, mechanical ventilation (air conditioning) should be provided for all residences constructed within this development adjacent to the railroad tracks to allow occupants to close doors and windows as desired for additional acoustic isolation.

**TABLE 4.8.10**  
**PREDICTED FUTURE RAILROAD NOISE LEVELS AT THE FIRST ROW OF OUTDOOR ACTIVITY AREAS**  
**WITH VARYING BARRIER HEIGHTS**

Location	Barrier Height	Future Noise Level, Ldn
Lots Adjacent to Railroad Tracks	0	66
	6	62
	7	61
	8	60

Notes: Noise barriers can take the form of earthen berms, solid walls, or a combination of the two.

*Timing/Implementation: Prior to Improvement Plan approval.*

*Enforcement/Monitoring: City of Manteca Department of Public Works.*

Implementation of the above mitigation measures would reduce noise levels associated with the railroad at proposed single family residences on the project site. Impacts after mitigation would be **less than significant**.

**Impact 4.8.6: Noise Generated by New Commercial Uses at Corner of Airport and Louise. [SM]**

Commercial uses are proposed for the property at the southwest quadrant of Airport Way and Louise Avenue. Although a specific development proposal for this commercial area has not been submitted, noise generated by future commercial uses could generate excessive noise levels at the residences constructed within this development. As a result, this impact is considered **significant** and subject to mitigation.

Mitigation Measure

**MM-4.8.6** A project specific noise assessment should be completed for future commercial uses proposed at the southwest quadrant of Airport Way and Louise Avenue to ensure that noise generated by activities related to the commercial use(s) are mitigated to a state of satisfaction with City of Manteca noise standards.

*Timing/Implementation: Prior Plan approval for commercial issues.*

*Enforcement/Monitoring: City of Manteca Department of Public Works.*

Implementation of the mitigation measure would reduce noise generated by new commercial uses at the corner of Airport and Louise. Impacts after mitigation would be **less than significant**.

**Impact 4.8.7: Noise Generated by Existing Well Sites at Proposed Single Family Residential Uses. [SM]**

The existing well sites generate a sustained noise level of 68 dB Leq while in operation at a distance of 25 feet from the pump equipment. Because this distance is approximately equal to the distance to the nearest proposed residences, well-related noise levels at those residences is predicted to be approximately 68 dB as well.

Because the water wells could conceivably operate during nighttime hours, and because those wells could operate for a cumulative duration of 30 minutes out of an hour, the noise level standard applied at the nearest residential property line would be 45 dB. Based on this objective, noise generated by the existing pumping equipment associated with the two on-site water wells could exceed the 45 dB standard by approximately 23 dB. As a result, this impact is considered **significant** and subject to mitigation.

Mitigation Measure

**MM-4.8.7** An acoustic enclosure should be constructed around the noise-producing equipment of the two existing well sites located on the project site. Specifically, a building should be constructed to enclose the existing wells, and that structure should be designed so as to provide a building façade noise level reduction of 30 dB. This degree of attenuation is easily achieved by acoustic enclosures, and provides a margin of safety relative to the City's nighttime noise level standards.

*Timing/Implementation: Prior Plan approval.*

## 4.8 NOISE

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*Enforcement/Monitoring: City of Manteca Department of Public Works.*

Implementation of the mitigation measure would reduce noise generated by the existing wells to a state of compliance with City of Manteca noise standards. Impacts after mitigation would be **less than significant**.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

#### **Impact 4.8.8            Future (Cumulative) increase in traffic noise levels. [LS]**

The project will contribute to the cumulative future traffic noise environment along the roadways utilized by project traffic.

A substantial increase in traffic noise levels is defined as 3 dB. Due to the relatively small number of trips which are predicted to be generated by the proposed project when compared to cumulative traffic volumes without the project, traffic noise level increases are predicted to be insignificant on all segments of the local roadway network evaluated in this analysis. Because the project-generated traffic will not cause significant increase in cumulative traffic noise level increases along the existing roadway network, this impact is considered to be **less than significant**.

### REFERENCES

Federal Interagency Committee on Noise (FICON) recommendation. August 1992.

City of Manteca. October 2003. *City of Manteca General Plan*. City of Manteca Community Development Department. Manteca, California.

City of Manteca. July 1992. *City of Manteca Zoning Ordinance*. City of Manteca Community Development Department. Manteca, California.



**4.9 PUBLIC SERVICES**

This section discusses the community service districts that would serve the project site including fire protection and emergency services, police protection, parks and recreation, road maintenance services, school facilities, along with public health and hospital services.

#### A. FIRE PROTECTION AND EMERGENCY SERVICES

This section of the EIR evaluates the impacts on fire protection services as a result of the proposed project. The existing fire protection services provided by the Manteca Fire Department are discussed and the demand for increased services and accessibility are evaluated. This analysis is based on a review of the project and consultations with the Manteca Fire Department.

##### 4.9.1 SETTING

The Manteca Fire Department provides full-service fire and hazard protection within the Manteca city limits, including fire suppression, emergency medical services and hazardous materials response. The Fire Department operates with a combination of 36 full-time career and 20 volunteer reserve personnel, who man 3 fire engines, 3 reserve engines, a support unit, a communications trailer, a command vehicle, and 9 other non-fire fighting vehicles. Three fire stations are maintained by the Fire Department. The closest station to the project site is Station 243, located at 299 W. Louise Avenue, approximately 1¾ mile to the east.

Staffing levels at the Manteca Fire Department are low in comparison with other municipalities in the county. At the present time, the department provides 0.77 firefighters per 1,000 population, the lowest among all municipal fire departments within San Joaquin County. Nevertheless, the combination of personnel and equipment, along with the City's water service infrastructure and the Fire Department's handling of emergencies, currently warrants an Insurance Services Office (ISO) rating of 3, which is the second highest within San Joaquin County. ISO ratings are on a scale of 1 to 10, with 1 being the highest rating. This rating affects fire insurance rates for both homeowners and businesses. The Fire Department's level of service is reflected in its average response time, which was 4.51 minutes as of 2003. The Fire Department goal is a 5-minute response time for all emergencies; therefore, the 2001 response time exceeds the standard.

##### 4.9.2 REGULATORY FRAMEWORK

###### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

Relevant City of Manteca goals and policies related to the proposed project are identified below. General Plan goals and policies for this and other elements related to other EIR issue areas are discussed in the relevant EIR environmental analysis sections. **Table 4.9-1** summarizes the project's consistency with the General Plan Public Facilities and Services Element with regard to fire protection and emergency services.

## 4.9 PUBLIC SERVICES

**TABLE 4.9-1**  
**PROJECT CONSISTENCY WITH THE GENERAL PLAN PUBLIC FACILITIES AND SERVICES ELEMENT**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Policy PF-P-41.</b> The City shall endeavor to maintain an overall fire insurance (ISO) rating of 4 or better.	Yes	The project proposes the dedication of a fire station site with construction and staffing of a fire station to follow at such time as adequate funding becomes available. Establishment of a fire station on the site would enhance decrease response times in the area and increase the level of service the Fire Department provides. The current ISO rating is 3.
<b>Policy PF-P-42.</b> The City shall endeavor through adequate staffing and station locations to maintain the minimum feasible response time for fire and emergency calls.	Yes	The project proposes the dedication of a fire station site with construction and staffing of a fire station to follow at such time as adequate funding becomes available. Establishment of a station on the site would provide immediate response to emergencies in the area.
<b>Policy PF-P-43.</b> The City shall provide fire services to serve existing and projected development.	Yes	The project proposes the dedication of a fire station site with construction and staffing of a fire station to follow at such time as adequate funding becomes available. The new station would serve the project site and vicinity.
<b>Policy PF-P-44.</b> The City will establish the criteria for determining the circumstances under which fire service will be enhanced.	Yes	City approval would be required for the project, which includes the proposed dedication of a fire station site.

### 4.9.3 IMPACTS AND MITIGATION MEASURES

#### SIGNIFICANCE STANDARDS

Project impacts on fire protection services are considered significant if they result in the following:

- Increased demand for additional personnel, equipment or facilities, the lack of which impairs the ability of the Manteca Fire Department to maintain an acceptable level of service.
- Increase in response times to fire service calls such that total response time exceeds five minutes.

#### METHODOLOGY

In order to assess possible impacts on fire service as a result of the project, Pacific Municipal Consultants conducted a review of background information on the City's Fire Department. The Manteca General Plan was reviewed for policies pertaining to service levels and standards of performance. In addition, Manteca Fire Department personnel were contacted in order to assess

current service levels, to quantify impacts associated with the project that could negatively affect these levels; and to determine mitigation for identified potential negative impacts.

#### PROJECT IMPACTS AND MITIGATION MEASURES

##### Fire Protection Service

**Impact 4.9.1            The project would lead to an increased demand for fire protection services by the Manteca Fire Department. [LS]**

The project at buildout would have approximately 760 single-family residences, along with an additional 310 potential residential units in multifamily buildings. The commercial center and park areas would also contribute to the increased demand for fire protection and emergency services. However, the project proposes to set aside land for the construction of a new fire station that would serve the project site and vicinity. Not only would this fire station readily provide service to the project site, it would also ensure a quick response time to emergencies located in the area. Additionally, the Manteca Fire Department has fire protection requirements and standards for new development projects. These requirements include standards for hydrant spacing, fire flow, access and roadway requirements. The Fire Department, in previous contacts concerning the project, has not indicated any problems with providing service to the project site. Therefore, impacts are considered **less than significant**.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.9.2            The project would contribute to a cumulative demand for fire protection services provided by the City. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for fire protection services. The Manteca General Plan EIR evaluated the potential impacts on fire protection services. It concluded that implementation of policies and implementation measures in the Public Facilities and Services Element that are related to fire protection would reduce potential impacts to a level that is **less than significant**.

## 4.9 PUBLIC SERVICES

### B. POLICE PROTECTION SERVICES

This section of the EIR evaluates the impacts on law enforcement services as a result of the proposed project. The existing law enforcement services provided by the Manteca Police Department are discussed and the demand for increased services and accessibility are evaluated. This analysis is based upon review of the project and consultations with the Manteca Police Department.

#### 4.9.1 SETTING

The Manteca Police Department provides police protection services to the City. It operates out of its station at 1001 West Center Street. The Police Department has 100 total personnel, 67 of whom are sworn officers. The current staffing level currently provides approximately 1.30 sworn officers per 1,000 population, based on the 2000 U.S. Census population figures of 51,176 residents. The Manteca General Plan establishes a standard of one sworn officer per 1,000 residents. Therefore, the current ratio exceeds this standard. In addition, the Police Department has an active volunteer staff of Police Explorers, Reserve Officers, and senior citizens (SHARP).

#### 4.9.2 REGULATORY FRAMEWORK

##### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

Relevant City of Manteca goals and policies related to the proposed project are identified below. General Plan goals and policies for this and other elements related to other EIR issue areas are discussed in the relevant EIR environmental analysis sections. **Table 4.9-2** summarizes the project's consistency with the General Plan with regard to police protection services.

**TABLE 4.9-2  
PROJECT CONSISTENCY WITH THE GENERAL PLAN PUBLIC FACILITIES AND SERVICES ELEMENT**

<b>General Plan Goals and Policies</b>	<b>Consistency with General Plan</b>	<b>Analysis</b>
<b>Policy PF-P-38.</b> The City shall endeavor through adequate staffing and patrol arrangements to maintain the minimum feasible police response time for police calls.	Yes	Staffing levels at the Manteca Police Department, particularly for sworn officers, would be adequate for the provision of police protection to the project site, in accordance with City standards.
<b>Policy PF-P-39.</b> The City shall provide police services to serve the existing and projected population.	Yes	The Police Department would provide adequate police services to the project site, under City standards.
<b>Policy PF-P-40.</b> The City will establish the criteria for determining the circumstances under which police service will be enhanced.	Not applicable	Police protection service after project completion, based upon sworn officer/population ratio, would remain above City standards.

### 4.9.3 IMPACTS AND MITIGATION MEASURES

#### SIGNIFICANCE STANDARDS

Project impacts on police protection services are considered significant if they result in the following:

- Increased demand for additional personnel, equipment or facilities, the lack of which impairs the ability of the Manteca Police Department to maintain an acceptable level of service. The established level of service by the City is one sworn officer per 1,000 residents.
- Increase in response times to police service calls such that total response time exceeds five minutes.

#### METHODOLOGY

In order to assess possible impacts on police service as a result of the project, Pacific Municipal Consultants conducted a review of background information on the City's Police Department. The Manteca General Plan was reviewed for policies pertaining to service levels and standards of performance. In addition, Manteca Police Department personnel were contacted in order to assess current service levels; quantify impacts associated with the project that could negatively effect these levels; and determine if additional staffing, equipment, or facilities would be required in order to mitigate negative impacts.

#### PROJECT IMPACTS AND MITIGATION MEASURES

##### Police Protection Service

**Impact 4.9.3            The project would lead to an increased demand for police protection services by the Manteca Police Department. [LS]**

The project at buildout would add approximately 3,163 residents to the City's population (see Section 4.11, Utilities and Service Systems). The commercial center and park areas would also contribute to the increased demand for police protection services. However, if the project site population at buildout was added to the 2000 City population, and the current number of sworn officers remains the same, there would be approximately 1.12 sworn officers per 1,000 City residents. This would still be above the City standard. The Police Department currently patrols the project area and implementation of the project would not result in a need to extend a significant level of new service to the project site. Emergency response times to the project site would be the same as those for residential areas in the vicinity. There have been no reported problems with response times in the area. The Police Department, in previous contacts concerning the project, has not indicated any problems with providing service to the project site. Therefore, impacts are considered **less than significant**.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.9.4            The project would contribute to a cumulative demand for police protection services provided by the City. [LS]**

## 4.9 PUBLIC SERVICES

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Development that would occur under the project and as designated in the Manteca General Plan would increase demand for police protection services. The Manteca General Plan EIR evaluated the potential impacts on fire protection services. It concluded that implementation of policies and implementation measures in the Public Facilities and Services Element that are related to police protection would reduce potential impacts to a level that is **less than significant**.

## C. PARKS AND RECREATION

This section of the EIR identifies existing local park and recreation facilities and evaluates the demand upon these facilities, as well as the need for additional facilities, which would occur as a result of development within the project area. This analysis is based on a review of the project and consultations with the City of Manteca Parks and Recreation Department.

### 4.9.1 SETTING

The City of Manteca Parks and Recreation Department operates a system of 47 parks and recreation facilities. These recreational facilities include a golf course, pools, bike paths, indoor recreation facilities, ball fields and skating facilities. There are approximately 275 acres of neighborhood and community parks in the City. Of these municipal parks, Primavera Park and Villa Ticino Park are closest to the project site, located approximately one mile away. Primavera Park contains playground equipment, while Villa Ticino Park is a neighborhood park with no significant facilities. The Manteca Golf Course is located approximately one mile to the southeast. The project site is also located within 1.5 miles of Libby Mingo Park and Horizon Park in the City of Lathrop.

### 4.9.2 REGULATORY FRAMEWORK

#### QUIMBY ACT

Section 66477 of the California Government Code, which is part of the Subdivision Map Act, is known as the Quimby Act. Under the Quimby Act, a city or county can require the dedication of up to three acres of parkland per one thousand persons residing in a subdivision, as a condition of approval of a tentative map or a parcel map. If the amount of existing neighborhood and community park area in the city or county already exceeds this limit, then the local jurisdiction may require the dedication of parkland to a standard not to exceed five acres of parkland per one thousand persons residing in a subdivision. In lieu of acreage, the act permits the payment of a fee to be used to finance the acquisition of parkland by the city. The city or county must adopt an ordinance that requires Quimby Act dedications or fee payments before they can be imposed. While the City has not enacted such an ordinance, Manteca Municipal Code Section 16.21.120 does require a subdivider to reserve sites for parks as a condition of tentative map approval, according to standards and formula contained in the section.

#### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

Relevant City of Manteca General Plan Goals and Policies related to the proposed project are identified below. General Plan goals and policies for this and other elements related to other EIR issue areas are discussed in the relevant EIR environmental analysis sections. **Table 4.9-3** summarizes the project's consistency with the General Plan.

## 4.9 PUBLIC SERVICES

**TABLE 4.9-3  
PROJECT CONSISTENCY WITH THE GENERAL PLAN PUBLIC FACILITIES AND SERVICES AND RESOURCE  
CONSERVATION ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Public Facilities and Services Element</b>		
<b>Policy PF-P-46.</b> The City shall use joint development of park and drainage detention basins in the development of neighborhood parks.	Yes	The project proposes construction of a park in the northwest corner of the project site that would also function as a detention basin.
<b>Policy PF-P-48.</b> 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 the city limits. The distribution of land between neighborhood and community parks shall be determined within the Parks and Recreation Master Plan.	Yes	The project proposes creation of parkland that would meet the City standard of 5 acres per 1,000 residents.
<b>Policy PF-P-49.</b> Neighborhood parks shall conform to the following general guidelines (specific details and standards to be determined within the Parks and Recreation Master Plan): <ul style="list-style-type: none"> <li>• The typical minimum size shall be set to support active and passive recreation activities.</li> <li>• The typical service area for a neighborhood park is approximately ¼ mile walking distance.</li> <li>• 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.</li> </ul>	Yes	Parks created on the project site would conform to established City standards.
<b>Policy PF-P-52.</b> All new residential development will be required to pay a park acquisition and improvement fee, based upon providing 5 acres per 1,000 residents, to fund system-wide improvements.	Yes	The project would pay all required fees related to park acquisition and improvements.
<b>Policy PF-P-53.</b> The City shall promote the provision of private open space and recreational facilities as a part of new residential development.	Not applicable	The project does not propose the creation of private open space and recreational facilities.
<b>Resource Conservation Element</b>		
<b>Goal RC-8.</b> To provide adequate land for open space as a framework for urban development, to meet the passive recreation needs of the community, and to set aside wildlife habitat.	Yes	The project proposes the creation of 14.61 acres of parkland and another 6.79 acres of swales that would function as open space.

**TABLE 4.9-3  
PROJECT CONSISTENCY WITH THE GENERAL PLAN PUBLIC FACILITIES AND SERVICES AND RESOURCE  
CONSERVATION ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Policy RC-P-15.</b> Promote the provision of public and private open space within the urbanized parts of Manteca, in order to provide for the recreational needs of the residents.	Yes	The project would include approximately 21 acres of park and open space.

### 4.9.3 IMPACTS AND MITIGATION MEASURES

#### SIGNIFICANCE STANDARDS

Project impacts on parks and recreational services are considered significant if they result in the following:

- Causes parkland level of service to decline below City standard of five (5) acres per 1,000 residents.
- Requires construction of park or recreational facilities that may have adverse environmental impacts.
- Increases demand on existing City parks and recreational facilities to a level that impairs service.

#### METHODOLOGY

In order to assess possible impacts on park and recreational operations and facilities as a result of the project, Pacific Municipal Consultants conducted a review of background information on the Parks and Recreation Department. The Manteca General Plan was reviewed for policies pertaining to service goals and department personnel were contacted in order to assess appropriate mitigation measures to offset potential impacts to the quality and utilization of the City's parks and recreational facilities.

#### PROJECT IMPACTS AND MITIGATION MEASURES

##### Parks

**Impact 4.9.5            The project would lead to an increased demand for park services by the Manteca Parks and Recreation Department. [LS]**

As stated previously in this section, the project at buildout would add approximately 3,163 residents to the City's population. These residents are expected to place a demand on parks in the City. Currently, the City provides approximately 5.58 acres of parks per 1,000 City residents, based upon the City's 2000 Census population. This is above the identified City standard. If the project site population at buildout was added to the 2000 City population, and the current park acreage

## 4.9 PUBLIC SERVICES

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remains the same, there would be approximately 5.27 acres of parkland per 1,000 City residents. This would still be above the City standard. Moreover, the project proposes to add 14.61 acres of park area. This amount of parkland would be sufficient to provide 5 acres per 1,000 residents on the project site at buildout. Therefore, impacts on parks are considered **less than significant**.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.9.6            The project would contribute to a cumulative demand for park and recreational services provided by the City. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for park and recreational services. The Manteca General Plan EIR evaluated the potential impacts on park and recreational services. It concluded that implementation of policies and implementation measures in the Public Facilities and Services Element that are related to parks and recreation would reduce potential impacts to a level that is **less than significant**.

## D. ROAD MAINTENANCE SERVICES

This section addresses road maintenance services as they related to the proposed project.

### 4.9.1 SETTING

The City of Manteca Public Works Department is responsible for the maintenance of City streets and roadways. State roadways within the City limits are maintained by the California Department of Transportation (Caltrans). New streets constructed as part of projects within the City limits are required to comply with City street standards. In addition, new development is required to pay transportation impact fees that provide funding for construction of City transportation projects, as identified in the *Public Facilities Implementation Plan Report*.

### 4.9.2 REGULATORY FRAMEWORK

#### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

Relevant City of Manteca General Plan Goals and Policies related to the proposed project are identified below. General Plan goals and policies for this and other elements related to other EIR issue areas are discussed in the relevant EIR environmental analysis sections. **Table 4.9-4** summarizes the project's consistency with the General Plan.

**TABLE 4.9-4  
PROJECT CONSISTENCY WITH THE GENERAL PLAN CIRCULATION ELEMENT**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Policy C-P-5.</b> Development which would necessitate roadway improvements prior to the development of lands abutting these roadway improvements shall be required to make such improvements, or participate in such improvements, as a condition of approval.	Yes	The project would comply with City street construction standards.
<b>Policy C-P-6.</b> 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.	Yes, with mitigation	Mitigation measures described in Section 4.10, Transportation and Circulation, would require the project to pay its fair share of the costs of improvements necessary to maintain adequate levels of service on roadways affected by traffic generated by the project.

### 4.9.3 IMPACTS AND MITIGATION MEASURES

#### SIGNIFICANCE STANDARDS

Project impacts on fire protection services are considered significant if they result in the following:

## 4.9 PUBLIC SERVICES

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- Increased demand for additional personnel, equipment or facilities, the lack of which impairs the ability of the Manteca Public Works Department to maintain an acceptable level of service for road maintenance.

### METHODOLOGY

In order to assess possible impacts to City streets located in the vicinity of the project site as well as its fiscal impacts to the City's municipal budget, Pacific Municipal Consultants conducted a review of background information on the City's Public Works Department and street infrastructure. The Manteca General Plan was reviewed for policies pertaining to street service levels and standards of performance along with those pertaining to budgetary implications associated with street construction and maintenance. Public Works Department personnel were contacted in order to assess current service levels and to quantify fiscal impacts associated with project that could negatively impact City finances.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Road Maintenance

**Impact 4.9.7            The project would lead to an increased demand for road maintenance services by the Manteca Public Works Department. [LS]**

The project at buildout would include 760 single-family residences, multifamily buildings accommodating 310 units, and a commercial center. These land use activities would require the installation of streets to provide adequate access. The project therefore would contribute to the increased demand for road maintenance services. However, streets on the project site would be new and would be constructed to City standards, which would reduce demand for maintenance in the near future. The predominantly residential character of project site traffic would reduce stresses on the streets that may cause problems requiring maintenance. Heavier traffic would generally be confined to Louise Avenue and Airport Way, which already support such traffic. The Public Works Department, in previous contacts concerning the project, has not indicated any problems with providing service to the project site. Therefore, impacts are considered **less than significant**.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.9.8            The project would contribute to a cumulative demand for road maintenance services provided by the City. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for road maintenance services. The Manteca General Plan EIR evaluated potential impacts on roadways. It concluded that implementation of policies and implementation measures in the Circulation Element that are related to streets would reduce potential impacts. Also, the *Public Facilities Implementation Plan Report* sets forth roadways improvements and funding plans for the City that would reduce maintenance problems. As stated above, the project would pay impact fees to support these projects. Therefore, cumulative impacts are considered **less than significant**.

## E. SCHOOL FACILITIES

This section of the EIR addresses public school services as they related to the proposed project, as well as public school financing associated with the Leroy F. Greene School Facilities Act of 1998 (Government Code Sections 65995-65998).

### 4.9.1 SETTING

The project site is located within the boundaries of the Manteca Unified School District. The District consists of 17 elementary and middle schools, 3 high schools, one continuation school and one community day school. Total enrollment in the district as of the 2002-2003 school year stood at 21,052 students, of which 15,113 were in grades one through eight and 5,939 were in grades nine through twelve (California Education Department, 2003).

Students in the Villa Ticino neighborhood across Airport Way from the project site attend Stella Brockman Elementary School, located at 763 Silverado Drive. Stella Brockman Elementary teaches students from kindergarten to the eighth grade. Total enrollment as of November 14, 2003 was 823 students. The school capacity is 1,050 students. While Stella Brockman Elementary is currently below capacity, that capacity would likely be exceeded as development occurs. The District is currently negotiating to acquire property to the south of Stella Brockman Elementary. This site would be the location of an annex that would teach kindergarten to third grade students. The capacity of this annex would be approximately 550 students (Mary Karim, pers. comm.).

Secondary school students in the Villa Ticino neighborhood attend Sierra High School, located at 1700 Thomas Street. Total enrollment at Sierra High as of November 14, 2003 was 1,940 students. The capacity of Sierra High is 2,000 students. The District is currently negotiating to acquire property in the City of Lathrop west of Interstate 5 for construction of a high school. Students from Lathrop, who currently attend Sierra High School, would attend this school once construction is completed (Mary Karim, pers. comm.).

### 4.9.2 REGULATORY FRAMEWORK

#### STATE OF CALIFORNIA

##### **Leroy F. Greene School Facilities Act of 1998 (SB 50)**

Prior to the Leroy F. Greene School Facilities Act of 1998 (Government Code Sections 65995-65998), case law allowed cities to consider and impose conditions to mitigate impacts of new development on school facilities. The 1998 Facilities Act suspended this authority, commonly referred to as Mira authority.

Education Code Section 17620(a)(1) states that the governing board of any school district is authorized to levy a fee, charge, dedication, or other requirement against any construction within the boundaries of the district, for the purpose of funding the construction or reconstruction of school facilities. Government Code Section 65995(b)(1) states that in the case of residential construction, the amount of any fees, charges, dedications, or other requirements may not exceed \$1.93 per square foot. However, under specified circumstances, school districts may impose alternative fees pursuant to Government Code Sections 65995.5 and 65995.7 (Level 2 and/or Level

## 4.9 PUBLIC SERVICES

3 fees, respectively). If state funding runs out at any time, school districts may impose up to 100 percent of the state average cost of school facilities on new development (alternative Level Three fees).

Government Code Section 65995(e) states that a city does not have the ability to condition any land use approval, whether legislative or adjudicative, on the need for school facilities. However, in 2006, if a state bond measure fails, *Mira* authority is partially restored to the extent a city can then consider public school facilities in making a legislative decision; a city could deny an application but could not condition the project to pay fees above the fee set by the State.

### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

Relevant City of Manteca General Plan Goals and Policies related to the proposed project are identified below. General Plan goals and policies for this and other elements related to other EIR issue areas are discussed in the relevant EIR environmental analysis sections. **Table 4.9-5** summarizes the project's consistency with the General Plan.

**TABLE 4.9-5  
PROJECT CONSISTENCY WITH THE GENERAL PLAN PUBLIC FACILITIES AND SERVICES ELEMENT**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Goal PF-13.</b> Provide for the educational needs of Manteca's residents.	Yes	The project would pay development impact fees required by the Manteca Unified School District.
<b>Policy PF-P-34.</b> Financing of new school facilities will be planned concurrent with new development.	Yes	The project would pay development impact fees required by the Manteca Unified School District.

### 4.9.3 IMPACTS AND MITIGATION MEASURES

#### SIGNIFICANCE CRITERIA

Project impacts are considered significant if the project results in the following:

- Increased demand for additional personnel, equipment, or facilities, and/or results in a negative effect that impairs the ability of the service provider to maintain an acceptable level of service for public schools that would result in a physical impact on the environment.

#### METHODOLOGY

In order to assess possible impacts that the project might have on schools, Pacific Municipal Consultants conducted a review of City documents for background information on schools. Information from the California Department of Education website supplemented the documents. Personnel at the Manteca Unified School District were contacted for information on capacity of facilities and future plans for construction.

## PROJECT IMPACTS AND MITIGATION MEASURES

## Schools

**Impact 4.9.9 Implementation of the project would increase student enrollment at the schools within the Manteca Unified School District. [LS]**

The Manteca Unified School District uses student generation factors to estimate the number of students, based upon an average number of students per dwelling units. **Table 4.9-6** provides an estimate of the total number of students that would be generated by the project at buildout.

**TABLE 4.9-6  
ESTIMATED STUDENTS GENERATED BY PROJECT**

Student Level	Number of Dwelling Units	Average Students per Dwelling Unit	Estimated Students
K-6	1070	0.534	571
7-8	1070	0.147	157
9-12	1070	0.267	286
<b>Total</b>	<b>1070</b>	<b>0.948</b>	<b>1014</b>

Source: *Student Generation Analysis, Manteca Unified School District, Public Economics, Inc., May 2003.*

As shown in **Table 4.9-6**, the project would generate an estimated 1014 students. The 728 students from kindergarten to eighth grade would likely attend Stella Brockman Elementary School. The school is currently 227 students below capacity. The school, at its current capacity, would be unable to accommodate the expected number of students generated by the project. However, the District plans to construct an annex that would accommodate an additional 550 students. With construction of the annex, the school could accommodate the students generated by the project. The 286 high school students would attend Sierra High School, which is currently 60 students below capacity. Without an expansion of the existing facilities at Sierra High School, the school could not accommodate all of the potential new students. However, should the proposed high school in Lathrop be constructed, there would be adequate capacity at Sierra High School for the high school students that would be generated by the project.

Impact fees are intended to offset the potential impact that development has on school facilities. It cannot be determined if the amount of developer fees paid by the project would be sufficient to finance all improvements necessary to accommodate the additional students generated by the project. However, under Government Code Section 65996(b), as amended by the Leroy F. Greene School Facilities Act of 1998, the payment of impact fees is to be considered full and adequate mitigation for potential impacts on schools, notwithstanding the provisions of CEQA. Therefore, with payment of the developer fees, along with the planned District projects, the project's impacts on schools are considered **less than significant**.

## CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.9.10 The project would contribute to a cumulative demand for school services provided by the Manteca Unified School District. [LS]**

*Future* Development that would occur under the project and as designated in the Manteca General Plan would increase demand for school services. *with* The Manteca General Plan EIR evaluated the potential

#### 4.9 PUBLIC SERVICES

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impacts on school services. It concluded that implementation of policies and implementation measures in the Public Facilities and Services Element that are related to schools would reduce potential impacts to a level that is **less than significant**.

**F. PUBLIC HEALTH AND HOSPITALS**

This section of the EIR addresses impacts of the project as they relate to medical services, specifically public health facilities and hospitals.

**4.9.1 SETTING**

The City of Manteca is served by two acute care hospitals, with a combined total bed capacity of 139. Doctors Hospital, which is managed by a private corporation, is located at 1205 East North Street. St. Dominics, managed by a nonprofit organization, is located 1777 West Yosemite Avenue. St. Dominics is a 3-floor hospital, but only 2 floors are currently active with beds, so it has the capacity to absorb an increase in patient load. In addition, Kaiser Permanente operates a medical office on 1721 West Yosemite Avenue for participants in the company's insurance plan. The nearest public health facility is San Joaquin General Hospital. This 236-bed facility is located in the community of French Camp, adjacent to and west of Interstate 5.

**4.9.2 REGULATORY FRAMEWORK****CITY OF MANTECA GENERAL PLAN**

There are no policies or implementation measures in the Manteca General Plan that address the provision of medical services. Policy LU-P-38 in the Land Use Element states that the City shall designate adequate land, appropriately located for quasi-public uses such as hospitals, churches, private school facilities and utility uses. However, since the project does not involve hospital construction, this policy is not applicable. San Joaquin General Hospital is a County facility, and therefore outside the City's jurisdiction. The two hospitals within the City limits are not publicly managed. Decisions concerning the provision of medical would be made primarily by the organizations that manage these hospitals.

**4.9.3 IMPACTS AND MITIGATION MEASURES****SIGNIFICANCE CRITERIA**

Project impacts are considered significant if the project results in the following:

- Increased demand for additional personnel, equipment, or facilities, and/or results in a negative effect that impairs the ability of the service provider to maintain an acceptable level of service for medical services that would result in a physical impact on the environment.

**METHODOLOGY**

In order to assess possible impacts that the project might have on medical services, Pacific Municipal Consultants conducted a review of City documents for background information.

## 4.9 PUBLIC SERVICES

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Information was also obtained through the websites of the hospitals and medical offices mentioned above.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Public Health and Hospitals

**Impact 4.9.11**            **The project would lead to an increased demand for medical services available in the City and surrounding area. [LS]**

As stated previously in this section, the project at buildout would add approximately 3,163 residents to the City's population. These residents are expected to place a demand on medical facilities in the City. The two hospitals located in the City would be expected to accommodate any increase in patients, as most patients from the project site would most likely cover the costs either with their own money or through medical insurance. There could be an increase in the number of patients that use San Joaquin General Hospital. However, given the anticipated selling prices for the residences and the income levels of the people who would most likely purchase them, it is expected that there would be very few people residing within the project site that would use that hospital. Impacts on medical facilities are considered **less than significant**.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.9.12**            **The project would contribute to a cumulative demand for medical services in the area. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for medical services. As stated above, the Manteca hospitals would most likely be able to accommodate this increased demand, since the costs of providing services would most likely be covered. The increased demand may require expansion of the existing facilities, which could have environmental impacts. At the moment, no such projects have been proposed, and any such proposals would be subject to environmental review and would be required to comply with applicable City policies and ordinances. As stated above, the project would likely contribute little to the patient load at San Joaquin General Hospital. Cumulative impacts are considered **less than significant**.

### REFERENCES

California Department of Education, Education Demographics Unit, 2003.

City of Manteca. 1993. *Public Facilities Implementation Plan Report for City of Manteca*. Nolte and Associates, December 1993.

City of Manteca. 2003. *Draft General Plan 2023*. May 2003.

City of Manteca. 2003. *Environmental Impact Report For the City of Manteca General Plan 2023*. October 6, 2003.

City of Manteca. 2003. *General Plan Update Background Report 2003*.

Doctors Hospital of Manteca. Website [www.doctorsmanteca.com](http://www.doctorsmanteca.com).

Kaiser Permanente. Website [www.kaiserpermanente.org](http://www.kaiserpermanente.org).

Manteca City Fire Department, Annual Report, 2001.

Mary Karim, Facilities Planning Specialist, Manteca Unified School District. Telephone conversation with Terry Farmer, Pacific Municipal Consultants, November 25, 2003.

San Joaquin General Hospital. Website [www.sjgeneralhospital.com](http://www.sjgeneralhospital.com).

St. Dominics Hospital. Website [www.stdominicscares.org](http://www.stdominicscares.org).



**4.10 TRANSPORTATION  
AND CIRCULATION**

This section presents an analysis of the traffic impacts associated with the proposed project, as well as impacts on public transportation and other transportation systems. It also evaluates the project's consistency with the City of Manteca's General Plan Transportation objectives, goals, and policies. This section is primarily based upon a traffic study conducted for the project by T.Y. Lin International/CCS, which is available in this document as Appendix G.

### 4.10.1 EXISTING SETTING

#### STREETS AND ROADWAYS

The project site is located west of Airport Way, south of Louise Avenue, and east of the Union Pacific Railroad tracks. Interstate 5 and State Route (SR) 120 provide regional access to and from the project site via interchanges at Louise Avenue/Interstate 5 and Airport Way/SR 120. Primary access to the project site would be provided via Louise Avenue, Airport Way and Yosemite Avenue. A more detailed description of significant roadways in the project vicinity is provided below:

**Interstate 5** is a north-south freeway to the west of the project site. It is the major interregional freeway on the West Coast, connecting the Manteca-Lathrop area to Los Angeles, San Diego and Mexico to the south and Sacramento, Oregon and Washington to the north.

**State Route (SR) 120** is an east-west state highway located to the south of the project site. It is a freeway between Interstate 5 and SR 99, thus serving as a major connecting route between the two roadways. SR 120 continues eastward as a rural highway at the Yosemite Avenue/SR 99 interchange, connecting the City to Yosemite National Park.



Photo 4.10-1 Intersection of Louise Avenue and Airport Way

**Louise Avenue** is a two-lane, east-west roadway that forms the northern boundary of the project site. It runs between the cities of Manteca and Lathrop. Within the vicinity of the project site, Louise Avenue intersects with Interstate 5, McKinley Avenue, Airport Way and Union Road. The Louise Avenue/Union Road intersection is controlled by a traffic signal, while the remaining intersections are stop-sign controlled. The Louise Avenue/Airport Way intersection is at the northeastern corner of the project site (Photo 4.10-1). The Manteca General Plan EIR states that the average daily traffic volume on Louise Avenue is 14,000 vehicles, but the average

volume for the segment fronting the project site is not known.

**Airport Way** is a two-lane, north-south roadway that forms the eastern boundary of the project site.

## 4.10 TRANSPORTATION AND CIRCULATION

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Like Louise Avenue, it runs between Manteca and Stockton. Besides Louise Avenue, Airport Way intersects Lathrop Road, Yosemite Avenue and SR 120. The Manteca General Plan EIR states that the average daily traffic volume on Airport Way, which will eventually be 4-6 lanes, is 9,000 vehicles.

**Yosemite Avenue** is a two-lane, east-west roadway to the south of the project site. Within the project vicinity, Yosemite Avenue intersects McKinley Avenue, Airport Way and Union Road. The Yosemite Avenue/Airport Way intersection is controlled by a traffic signal, while the other intersections are stop-sign controlled. Average daily traffic volume on Yosemite Avenue ranges from 11,000 to 17,000 vehicles, according to the Manteca General Plan EIR.

**Lathrop Road** is a two-lane, east-west roadway to the north of the project site. It runs from the City of Lathrop along the northern city limits of Manteca. Within the project vicinity, Lathrop Road intersects Interstate 5, State Highway 99, McKinley Avenue and Airport Way. The Lathrop Road/Airport Way intersection is controlled by a traffic signal, while the other intersections are stop-sign controlled. Average daily traffic volume on Lathrop Road ranges from 10,000 to nearly 12,000 vehicles, according to the Manteca General Plan EIR.

### EXISTING TRAFFIC CONDITIONS

TY LIN Int. / CCS, conducted a traffic study on the project. The study focused on nine existing intersections in the project vicinity. Traffic volumes during the morning (AM) and evening (PM) peak hours were collected at each of the nine intersections, based upon current roadway geometries. **Figure 4.10-1** shows the locations of the study intersections and their existing AM and PM peak hour traffic volumes.

Operating conditions experienced by motorists on roadways and at intersections are described as "levels of service" (LOS). LOS is based upon several factors, including traffic volumes intersection configurations and controls, and speed and travel time. LOS is expressed qualitatively by letter grades A through F, with A being the best condition and F the worst. The City of Manteca strives to maintain a citywide average LOS of C, and no worse than LOS D at any individual location. **Table 4.10-1** provides the LOS during the AM and PM peak hours at the study intersections. As shown by the table, all the study intersections were operating at LOS C or better, except for the Airport Way/SR 120 eastbound ramps, which was operating at LOS F. The Methodology portion of this section provides a more detailed discussion of how traffic conditions were evaluated.

**Table 4.10-1  
EXISTING AM AND PM PEAK HOUR INTERSECTION OPERATIONS**

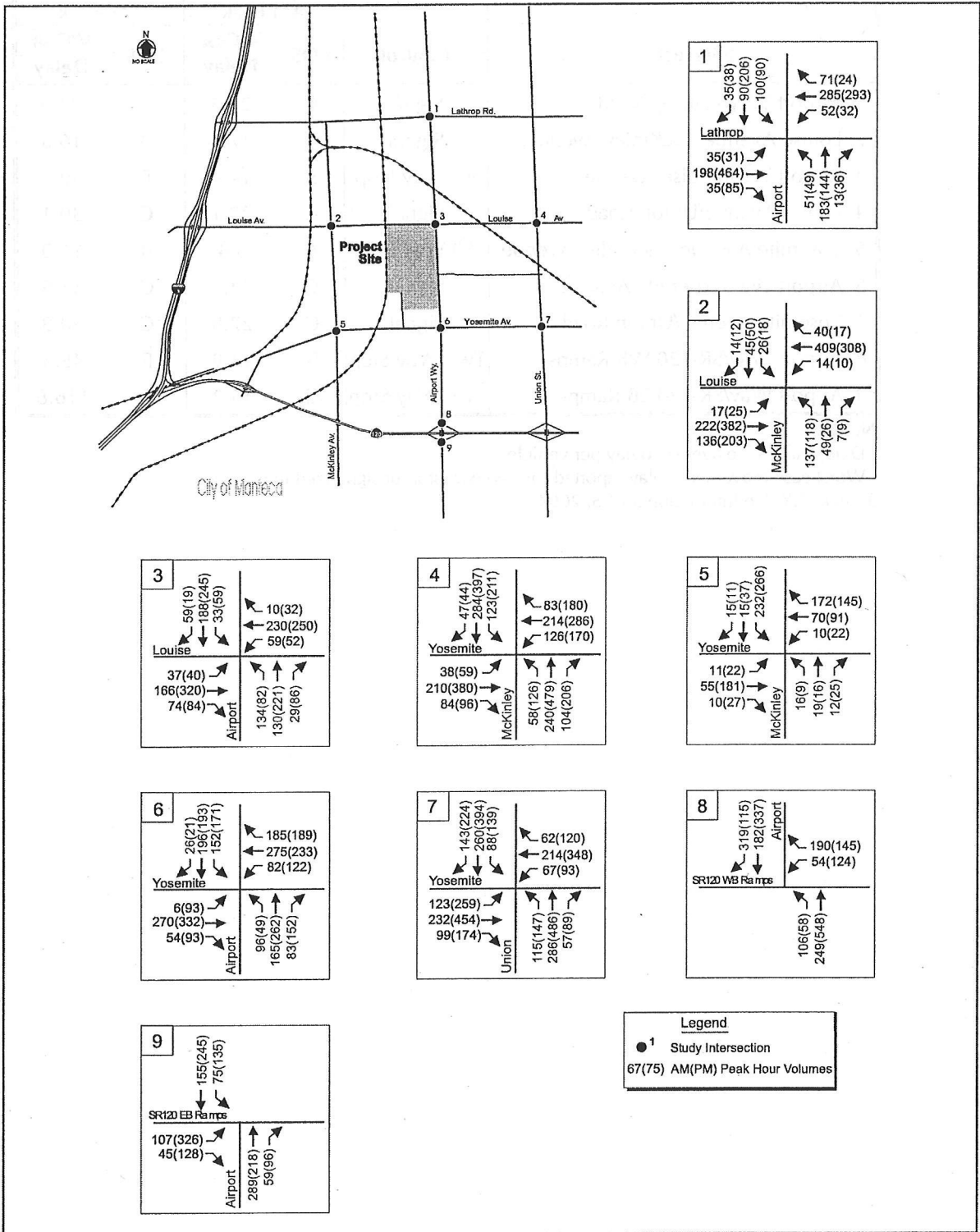
Intersection	Control	AM Peak		PM Peak	
		LOS	V/C or Delay	LOS	V/C or Delay
1. Airport Way/Lathrop Road	Signal	C	27.5	C	24.6
2. Louise Avenue /McKinley Avenue	Signal	B	17.4	B	16.5
3. Airport Way/Louise Avenue	All Way Stop	B	14.8	E	39.7
4. Louise Avenue/Union Road	Signal	C	27.1	C	30.1
5. Yosemite Avenue /McKinley Avenue	All Way Stop	A	9.4	B	11.0
6. Airport Way/Yosemite Avenue	Signal	C	28.7	C	31.6
7. Yosemite Avenue/Union Road	Signal	C	27.8	C	30.9
8. Airport Way/SR-120 WB Ramps	Two Way Stop	B	14.9	E	45.3
9. Airport Way/SR-120 EB Ramps	Two Way Stop	C	15.2	F	116.8

**Notes:**

Delay values are average delay per vehicle.

Worst-case movement delay reported for two way stop unsignalized intersections.

Source: T.Y. Lin International/CCS, 2004.



SOURCE: TY LIN INTERNATIONAL/CCS, JULY 2004

FIGURE 4.10-1  
EXISTING PEAK HOUR VOLUMES

## PUBLIC TRANSPORTATION

The San Joaquin Regional Transit District (SJRTD) provides transit service throughout the City through the Stockton Metropolitan Area Rapid Transit (SMART) and County Area Transit (CAT). SMART provides intercity routes between the City of Stockton and other cities in San Joaquin County. Route 21 provides service to Manteca and Ripon, with stops in the City at Doctors Hospital, Main Street and the Manteca Civic Center. Route 20 provides service to Lathrop, with a stop in the downtown area on Fifth Avenue between Lathrop Road and Louise Avenue. In addition, SMART provides subscription commuter bus service between the City and the national laboratories in Livermore.

CAT provides fixed-route transit service to French Camp, Lathrop and Manteca. In the City, CAT makes stops at Doctors Hospital, St. Dominic's Hospital and the Civic Center. Also, the City is served by the SJRTD "Hopper" bus service. Hopper is a flexible-fixed route service that follows a fixed route, but can deviate from that route up to  $\frac{3}{4}$  of a mile for ADA-certified elderly and disabled passengers unable to reach the fixed route stops. It replaces CAT services during Hopper service hours. Hopper Route 95 travels on Louise Avenue and Airport Way in the vicinity of the project site.

The Altamont Commuter Express (ACE) provides commuter rail service between Stockton and San Jose. ACE is the product of a joint powers agreement between the San Joaquin Regional Rail Commission, the Alameda County Congestion Management Agency, and the Santa Clara Valley Transportation Authority. Three trains are provided during the morning commute, and three trains return in the evening. The ACE line runs on the Union Pacific Railroad tracks west of the project site. An ACE station is located in the City of Lathrop at Shideler Parkway off Yosemite Avenue, southwest of the project site.



Photo 4.10-2 Railroad crossing at Louise Avenue

## RAILROADS

Aside from ACE, the Union Pacific Railroad operates freight service on its tracks to the west of the project site. Louise Avenue crosses these tracks just northwest of the site (Photo 4.10-2). This crossing is approximately one-half mile west of the Louise Avenue/Airport Way intersection.

## BICYCLES AND PEDESTRIANS

The City has a number of bicycle facilities, including bike paths (Class I), bike lanes (Class II) and bike routes (Class III). Currently, there are no bicycle facilities located in the project vicinity. However, the Manteca General Plan proposes an expansion of bicycle facilities during its planning period (2003-2023). One proposed facility is a Class II lane along Airport Way, along with connecting lanes from the Villa Ticino East subdivision and the Stella Brockman Elementary School. A Bicycle Route Master Plan, which would provide a

## 4.10 TRANSPORTATION AND CIRCULATION

more detailed blueprint and design standards for a City bicycle route network, is currently under consideration by the City.

Most streets in the City provide sidewalks, and crosswalks are available at major intersections. Currently, there are no sidewalks installed on the project site. However, sidewalks are available on the eastern side of Airport Way in the Villa Ticino East subdivision.

### 4.10.2 REGULATORY FRAMEWORK

#### PUBLIC FACILITIES IMPLEMENTATION PLAN

The City of Manteca's Public Facilities Implementation Plan is an implementing document for the City's General Plan policies on public facilities. The purpose of the Implementation Plan is to ensure that public facilities – including transportation facilities – are adequate as the City grows and develops in accordance with the General Plan. The Implementation Plan includes a list of transportation projects and means of financing these projects. In order to more efficiently and equitably plan for financing of transportation projects, the Implementation Plan divides the City's planning area into five Transportation Financing Zones, which differ from one another in their degree of reliance on specific major transportation facilities. The project site is located in Transportation Financing Zone 5, which obtains its primary access along Louise Avenue and Lathrop Road and the interchanges along Interstate 5 and State Route 99.

#### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

The General Plan contains goals and policies in the Circulation and Resource Conservation Elements that are related to transportation and circulation issues. **Table 4.10-2** summarizes the evaluation of project consistency with the goals and policies pertinent to this chapter.

**TABLE 4.10-2**  
**PROJECT CONSISTENCY WITH THE GENERAL PLAN CIRCULATION**  
**AND RESOURCE CONSERVATION ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Circulation Element</b>		
<b>Goal AQ-1.</b> Provide for a circulation system that allows for the efficient movement of people, goods, and services within and through Manteca, based on land use and current improvement standards in conformance with the Public Facilities Implementation Plan.	Yes, with mitigation	Mitigation measures contained in this section would ensure that the project would have no adverse impact on the local circulation system, in accordance with City of Manteca LOS standards.
<b>Goals AQ-2.</b> Maintain a safe vehicular transportation system.	Yes, with mitigation	Mitigation measures contained in this section would ensure that circulation in the project vicinity would occur safely.
<b>Goal AQ-3.</b> Expand transportation alternatives within the City, including public transit, walking, and bicycling.	Yes, with mitigation	The project would be located adjacent to an existing bus route. It also proposes the installation of sidewalks along project streets. Mitigation measures contained in this section

**TABLE 4.10-2  
PROJECT CONSISTENCY WITH THE GENERAL PLAN CIRCULATION  
AND RESOURCE CONSERVATION ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
		would ensure provision for bicycle lanes adjacent to the project site.
<b>Goal AQ-4.</b> Minimize traffic accidents and hazards.	Yes, with mitigation	Mitigation measures contained in this section would ensure that circulation in the project vicinity would occur safely.
<b>Goal AQ-5.</b> Ensure the adequate provision of both on-street and off-street parking.	Yes	The project would be constructed in accordance with City standards for on-street and off-street parking.
<b>Goal AQ-6.</b> Provide a safe and secure bicycle route system.	Yes, with mitigation	Mitigation measures contained in this section would ensure provision for bicycle lanes adjacent to the project site.
<b>Goal AQ-7.</b> Maintain coordinated, efficient bus service that provides an effective alternative to private automobile use.	Yes	The project would be located adjacent to an existing bus route, and would not cause the removal of any bus stops.
<b>Goal AQ-8.</b> Provide for safe and convenient pedestrian circulation.	Yes	The project proposes the installation of sidewalks along project streets and the installation of traffic control signals will result in the establishment of crosswalks and pedestrian crossing facilities at signalized intersections.
<b>Policy AQ-P-4.</b> Develop and maintain street systems that provide for efficient traffic flow and thereby minimize air pollution for automobile emissions.	Yes, with mitigation	Mitigation measures contained in this section would ensure traffic flow in the project vicinity that would be in accordance with City of Manteca LOS standards.
<b>Policy AQ-P-5.</b> Develop and maintain circulation systems that provide alternative uses to the automobile for transportation, including bicycle routes, pedestrian paths, bus transit, and carpooling.	Yes, with mitigation	The project would be located adjacent to an existing bus route. It also proposes the installation of sidewalks along project streets. Mitigation measures contained in this section would ensure provision for bicycle lanes adjacent to the project site.
<b>Policy C-P-1.</b> 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.	Yes	This document evaluates the potential impacts of the project on traffic LOS, and proposes mitigation measures to reduce or eliminate identified adverse impacts.
<b>Policy C-P-2.</b> 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	Yes, with mitigation	Mitigation measures contained in this section would ensure that the project would have no adverse impact on the local circulation system, in accordance with City of Manteca LOS standards.

## 4.10 TRANSPORTATION AND CIRCULATION

**TABLE 4.10-2  
PROJECT CONSISTENCY WITH THE GENERAL PLAN CIRCULATION  
AND RESOURCE CONSERVATION ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<p>LOS D under the following circumstances:</p> <p>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.</p> <p>b. Where it is difficult or impossible to maintain LOS C because surrounding facilities in other jurisdictions operate at LOS D or worse.</p> <p>c. Where free-flowing roadways or interchange ramps would discourage use of alternate travel modes.</p> <p>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.</p>		
<p><b>Policy C-P-3.</b> 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.</p>	Yes	The project would be in compliance with City regulations and standards regarding street improvements.
<p><b>Policy C-P-4.</b> 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.</p>	Yes, with mitigation	Mitigation measures contained in this section would ensure that the project would contribute its fair share to the costs of circulation improvements undertaken in the project vicinity.
<p><b>Policy C-P-5.</b> 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.</p>	Not applicable	The project would not necessitate any roadway improvements prior to development of the project site, other than street improvements along the Louise Avenue and Airport Way frontages.

TABLE 4.10-2  
PROJECT CONSISTENCY WITH THE GENERAL PLAN CIRCULATION  
AND RESOURCE CONSERVATION ELEMENTS

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Policy C-P-6.</b> 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.	Yes, with mitigation	Mitigation measures contained in this section would ensure that the project would contribute its fair share to the costs of circulation improvements undertaken in the project vicinity.
<b>Policy C-P-13.</b> 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.	Not applicable	No private streets would be developed as part of the project.
<b>Policy C-P-15.</b> 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.	Not applicable	The project is not located adjacent to a freeway. Although the project proposes residential lots along Louise Avenue and Airport Way, residences would be fronting interior streets. Therefore, no frontage roads would be required.
<b>Policy C-P-17.</b> 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.	Yes	The project would construct walls or berms along portions of the project site where residential lots abut major streets (Louise Avenue and Airport Way).
<b>Policy C-P-18.</b> 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.	Yes	The project shall pay all applicable development impact fees for transportation.
<b>Policy C-P-21.</b> The creation or continuance of traffic hazards shall be discouraged in new development and other proposals requiring the City to exercise its discretionary authority.	Yes, with mitigation	Mitigation measures contained in this section would ensure that circulation in the project vicinity would occur safely.
<b>Policy C-P-22.</b> In the development of new projects, the City shall give special attention to maintaining adequate corner-sight	Yes	The project includes features at access points that would ensure adequate corner-sight distances.

## 4.10 TRANSPORTATION AND CIRCULATION

**TABLE 4.10-2  
PROJECT CONSISTENCY WITH THE GENERAL PLAN CIRCULATION  
AND RESOURCE CONSERVATION ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
distances at city street intersections and at intersections of city streets and private access drives and roadways.		
<b>Policy C-P-26.</b> 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. In the downtown area, the City is responsible for development of parking facilities and new development is not required to provide parking.	Yes	The project would be constructed in accordance with City standards for on-street and off-street parking.
<b>Policy C-P-51.</b> Encourage programs that provide ridesharing and vanpool opportunities and other alternative modes of transportation for Manteca residents.	Yes, with mitigation	The project would be located adjacent to an existing bus route. It also proposes the installation of sidewalks along project streets. Mitigation measures contained in this section would ensure provision for bicycle lanes adjacent to the project site. Nothing in the project would discourage residents and businesses from participating in ridesharing and similar programs.
<b>Resource Conservation Element</b>		
<b>Goal RC-3.</b> Ensure that land use and circulation improvements are coordinated to reduce the number and length of vehicle trips and thereby help conserve scarce or nonrenewable energy sources.	Yes, with mitigation	The project would be located adjacent to an existing bus route. It also proposes the installation of sidewalks along project streets. Mitigation measures contained in this section would ensure provision for bicycle lanes adjacent to the project site.

### 4.10.3 IMPACTS AND MITIGATION MEASURES

#### SIGNIFICANCE STANDARDS

A transportation or circulation impact is considered significant if implementation of the project would result in any of the following:

- Causes an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system, i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections. Also, impacts are considered to be significant if implementation of the proposed project would cause roadways and/or intersections to experience traffic volumes that result in an unacceptable LOS. The City of Manteca has determined that an acceptable LOS for individual streets and roadways is D or better, with a citywide average LOS of C.

- Exceeds, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.
- Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks.
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Results in inadequate emergency access.
- Results in inadequate parking capacity.
- Conflicts with adopted policies, plans or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks), or requires expansion of alternative transportation systems that may have significant environmental effects.

### METHODOLOGY

T.Y. Lin International/CCS, (formerly CCS Planning and Engineering, Inc.), prepared a study evaluating the potential impacts of the project on traffic. This study is available in this document as **Appendix G**. Traffic impacts are typically assessed by evaluating the effects of a proposed project on the transportation system's ability to accommodate expected traffic levels. In an urban or suburban environment, intersections are the primary capacity-controlling locations, rather than mid-block segments of roadways. Therefore, the traffic study focused on the operation of intersections considered most likely to be adversely affected by the project. The study intersections were previously listed in **Table 4.10-1** and illustrated in **Figure 4.10-1**.

The project proposes three additional intersections that would be access points to the project site. Two would be on Airport Way and the other would be on Louise Avenue. All three of the proposed new driveway/access points were evaluated in the traffic study for potential impacts. A fourth access point from Swanson Road in the south was also evaluated (T.Y. Lin International/CCS, 2004).

During a weekday, traffic flows are typically highest during morning (AM) and evening (PM) peak periods. Therefore, the potential for a project to adversely affect the operation of a transportation system is greatest during these peak periods. Implementation of the project is expected to involve residential and commercial land use activity. Both land uses generate significant traffic during the AM and PM peak hours. Because of this, the traffic study focused on potential impacts during the AM and PM peak hours.

Existing AM and PM peak hour turning movement traffic volumes were collected at each of the nine study intersections. Intersection traffic counts were collected on May 10, 2004. Traffic volumes for the Louise Avenue/McKinley Avenue intersection were obtained from the Assieh Industrial Park Traffic Impact Study Report, dated April 9, 2002. The 2002 counts at that intersection were reviewed and found to be compatible with the counts taken in May 2004.

Cumulative traffic conditions were developed by applying the growth contained in the City of Manteca General Plan Traffic Model, which is based upon the San Joaquin Council of Governments

## 4.10 TRANSPORTATION AND CIRCULATION

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(SJCOG) county model. The City's General Plan Traffic Model assumes buildout of General Plan land uses. The project is consistent with development assumed in the City's General Plan under buildout conditions. The growth between the 1999 base year model link volumes and the future year 2025 model link volumes were calculated, and a straight-line interpolation was applied to the existing traffic volumes based upon a 22-year growth period between existing (2003) and future (2025) volumes. Average growth per year was found to be approximately three percent.

Trip generation estimates prepared for the project were based upon rates from *Trip Generation, Sixth Edition (1997)*, a manual prepared by the Institute of Transportation Engineers (ITE). The ITE *Trip Generation* manual is considered to be the industry-standard source of trip generation rates. For the traffic study, trip generation characteristics of Single Family Detached Housing, Multi-Family Housing – Apartments, and Shopping Center were used.

Trip distribution simulates the geographical pattern of travel, matching trips generated by one type of land use with trips generated by other types of land use. Trip distribution patterns utilized by the traffic study in evaluating Existing Plus Project conditions were based upon existing travel patterns in the vicinity of the project site. For Cumulative Plus Project conditions, trip distribution patterns were based upon the City's General Plan Traffic Model. The City's model was recently updated and provides a detailed forecast of future traffic patterns in the Manteca area.

LOS analysis for intersections differs between intersections with traffic signals (signalized) and intersections controlled by stop signs (unsignalized). The LOS methodology used to analyze signalized intersections was based upon the signalized intersection methodology used in the 2000 *Highway Capacity Manual*, Chapter 16. Unsignalized intersections were analyzed using the method described in the 2000 *Highway Capacity Manual*, Chapter 17. Unsignalized intersection LOS described in the traffic study was based upon average total delay per vehicle for the intersection as a whole for all-way stop intersections, and worst case movement delay for two-way stop intersections.

Traffic signal warrants are a series of standards that provide guidelines for determining if a traffic signal is appropriate. Signal warrant analyses are typically conducted at intersections of minor streets with stop sign controls and uncontrolled major streets. For the project traffic study, unsignalized intersections with unacceptable LOS (i.e., E or F) were evaluated using the Peak Hour Volume Warrant (Warrant No. 11) from the *Caltrans Traffic Manual*. The Peak Hour Volume Warrant was applied where the minor street experiences long delays in entering or crossing the major street for at least one hour of the day. It should be noted that even if the Peak Hour Volume Warrant is met, a more detailed signal warrant study is recommended before a traffic signal is installed.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Existing Plus Project Traffic Conditions

**Impact 4.10.1**      **The project would generate traffic at sufficient volume to cause LOS to decline below City standards at three study intersections. [SM]**

Existing Plus Project conditions refers to traffic conditions that result when project-generated traffic is added to existing traffic conditions. Intersection operations during the AM and PM peak hours at the nine study intersections were analyzed for this traffic study under Existing Plus Project

conditions. LOS that would occur at these intersections are presented in Table 4.10-3 below. The Existing Plus Project AM and PM peak hour traffic volumes are illustrated in Figure 4.10-2.

**Table 4.10-3  
Existing Plus Project  
AM and PM Peak Hour Intersection Operations**

Intersection	Control	Base Geometrics							
		AM Peak		PM Peak		With Improvements			
		LOS	Delay	LOS	Delay	AM Peak LOS Delay	PM Peak LOS Delay		
1. Airport Way/Lathrop Road	Signal	C	28.1	C	26.8				
2. Louise Avenue/McKinley Avenue	Signal	B	15.8	B	13.9				
3. Airport Way/Louise Avenue	All Way Stop	C	24.4	F	163.3	C	29.7	C	32.4
4. Louise Avenue/Union Road	Signal	C	27.0	C	30.7				
5. Yosemite Avenue/McKinley Avenue	All Way Stop	B	10.1	C	15.9				
6. Airport Way/Yosemite Avenue	Signal	C	28.9	C	33.4				
7. Yosemite Avenue/Union Road	Signal	C	27.5	C	32.9				
8. Airport Way/SR-120 WB Ramps	Two Way Stop	C	17.3	F	159.0	C	20.5	B	19.5
9. Airport Way/SR-120 EB Ramps	Two Way Stop	C	19.4	F	409.3	B	11.0	D	29.2

**Notes:** Delay values are overall delay per vehicle for unsignalized intersections  
 Source: T.Y. Lin International/CCS, 2004.

As shown in Table 4.10-3, three intersections would operate at conditions below the City standard of LOS D: Airport Way/Louise Avenue (both AM and PM), Airport Way/SR 120 Westbound Ramps (PM only), and Airport Way/SR 120 Eastbound Ramps (PM only). Some of the other study intersections would experience LOS declines as a result of the project, but would still maintain an acceptable LOS. The decline of LOS below City standards at three of the study intersections is a **significant impact** and subject to mitigation.

Mitigation Measures

The following mitigation measures are based upon recommendations made in the traffic study:

**MM 4.10.1a**

The project shall install a traffic signal at the Airport Way/Louise Avenue intersection and provide protected left-turns and through/right-turn lanes at all approaches. Based upon the traffic study prepared for the project, the addition of project-related trips to existing would result in the intersection operating at LOS F with delay of 163.3 seconds in the PM peak hour. However, implementation of the identified improvement would result in this

#### 4.10 TRANSPORTATION AND CIRCULATION

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intersection operating at LOS C with a Delay of 29.7 and 32.4 seconds in the AM and PM peak hours respectively. Signal Warrant are met at this intersection. Signal Warrant Sheets are provided in the **Technical Appendix**.

*Timing/Implementation: Prior to issuance of the first building permit.  
Enforcement/Monitoring: City of Manteca Public Works Department.*

##### MM 4.10.1b

The project shall install a traffic signal at the intersection of Airport Way and the SR 120 westbound ramps. Based upon the traffic study prepared for the project, the addition of project-related trips to existing traffic would result in LOS F for the worst-case movement with delay of 159.0 seconds in the PM peak hour. However, Implementation of the identified improvement would result in this intersection operating at LOS C and B with delay of 20.5 and 19.5 seconds in the AM and PM peak hours respectively. Signal Warrant are met at this intersection. Signal Warrant Sheets are provided in the **Technical Appendix**.

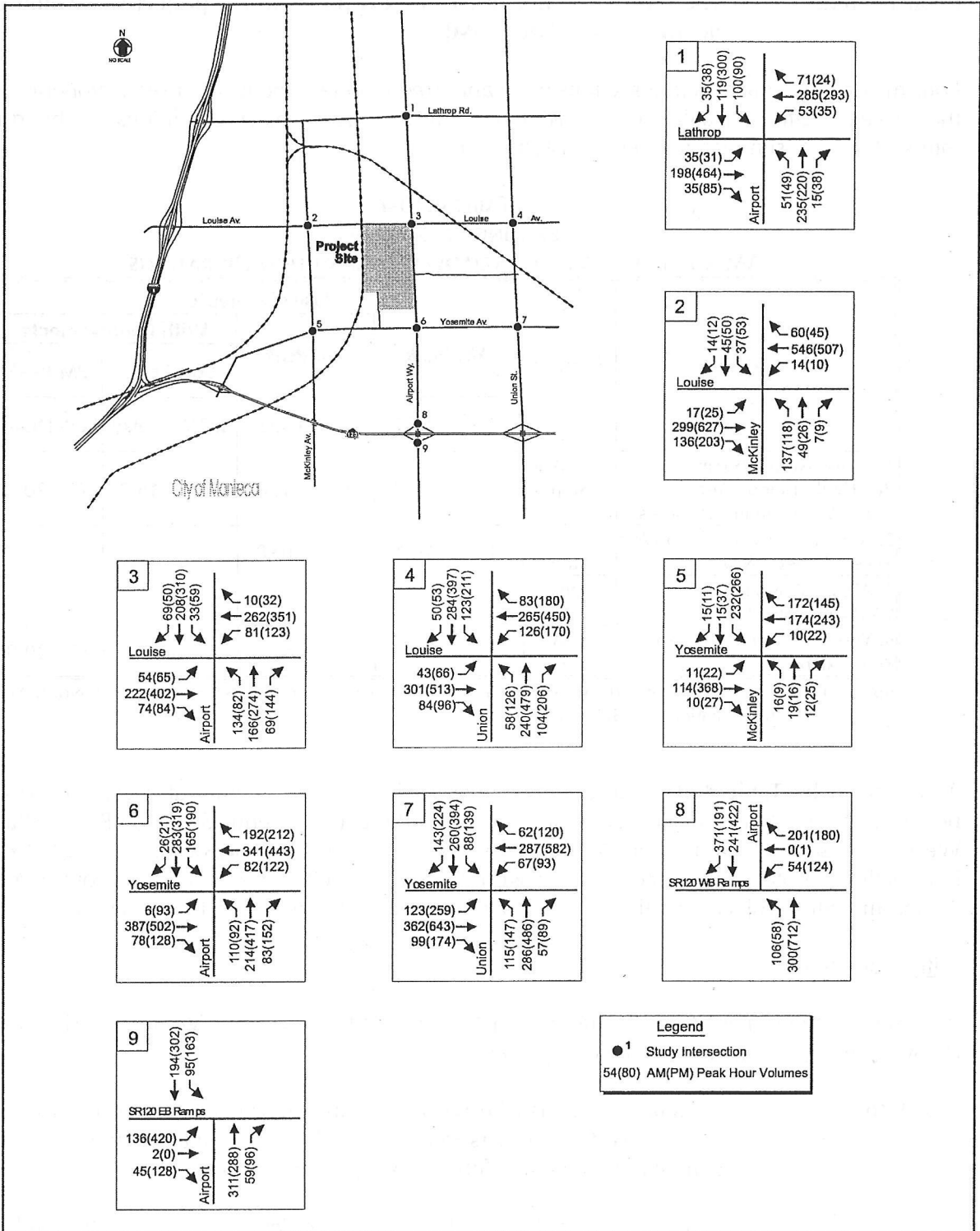
*Timing/Implementation: Prior to issuance of the first building permit.  
Enforcement/Monitoring: California Department of Transportation, City of Manteca Public Works Department.*

##### MM 4.10.1c

The project shall convert the intersection of Airport Way and the SR 120 eastbound ramps to all-way stop sign control. Based on the traffic study prepared for the project, the addition of project-related trips to existing traffic would result in LOS F for the worst-case movement with delay of 409.3 seconds in the PM peak hour. However, implementation of the identified improvement would result in this intersection operating at LOS B and D with delay of 11.0 and 29.2 seconds in the AM and PM peak hours respectively. Signal Warrant are met at this intersection, however, all-way stop sign control will improve the intersection. Signal Warrant Sheets are provided in the **Technical Appendix**.

*Timing/Implementation: Prior to commencement of construction activities.  
Enforcement/Monitoring: California Department of Transportation, City of Manteca Public Works Department.*

Implementation of the mitigation measures would improve LOS at the three intersections to D or better, which would meet City standards. Impacts after mitigation would be **less than significant**.



SOURCE: TY LIN INTERNATIONAL/CCS, JULY 2004

FIGURE 4.10-2  
EXISTING + PROJECT PEAK HOUR VOLUMES

## 4.10 TRANSPORTATION AND CIRCULATION

### Existing Plus Project Site Access

**Impact 4.10.2** The level of service at two access points to the project site would operate below City standards. [SM]

Four major project access intersections were analyzed to determine level of service/operations with the project traffic. Traffic operations under Existing Plus Project conditions at the driveway intersections are summarized below in **Table 4.10-4**.

**TABLE 4.10-4  
EXISTING PLUS PROJECT  
AM AND PM PEAK HOUR ROADWAY INTERSECTION OPERATIONS**

Intersection	Control	Base Geometrics							
		AM Peak		PM Peak		With Improvements			
		LOS	Delay	LOS	Delay	AM Peak LOS Delay	PM Peak LOS Delay		
1. Louise Avenue/Swanson Road/Villa Ticino West Access/Assieh Industrial Access	Two Way Stop	C	19.4	F	> 120.0	B	15.3	C	20.7
2. Airport Way/Villa Ticino West Access/Geneva Way	Two Way Stop	B	10.1	B	10.8				
3. Airport Way/Villa Ticino West/Crom Street	Signal	B	14.1	B	17.7				
4. Yosemite Avenue/Swanson Road Extension	Two Way Stop	C	16.7	F	76.7	B	17.1	C	20.9

**Notes:** Delay values are overall delay per vehicle for unsignalized intersections. (E, N, S – East, North, South)  
Source: T.Y. Lin International/CCS, 2004.

As indicated by **Table 4.10-4**, all driveway intersections would operate at acceptable LOS C or better during the AM and PM peak hours, except for the Louise Avenue/Swanson Road/Villa Ticino West Access/Assieh Industrial Access and the Yosemite Avenue/Swanson Road Extension intersections. Both of these access points would operate at LOS F in the PM peak hour based upon the Existing Plus Project condition. This impact is **significant** and subject to mitigation.

#### Mitigation Measures

Both intersections meet Caltrans traffic signal warrant 11 (Peak Hour Volume). Therefore, the following mitigation measure is recommended.

**MM 4.10.2a** A traffic signal shall be installed at the Louise Avenue/Swanson Road/Villa Ticino West Access/Assieh Industrial Access intersection prior to the completion of the first fifty (50) single-family residences.

*Timing/Implementation:* Prior to completion of first 50 single-family residences.

*Enforcement/Monitoring:* City of Manteca Public Works and Community Development Departments.

**MM 4.10.2b** A traffic signal shall be installed at the Yosemite Avenue/Swanson Road Extension intersection prior to the completion of the first fifty (50) single-family residences.

*Timing/Implementation: Prior to completion of first 50 single-family residences.*

*Enforcement/Monitoring: City of Manteca Public Works and Community Development Departments.*

Implementation of traffic signals at both driveway locations would result in acceptable LOS C or better in the AM and PM peak hours, as shown in **Table 4.10-4** above. Impacts after mitigation would be **less than significant**.

#### **Existing Plus Project Traffic Queuing**

**Impact 4.10.3** **Queuing on offsite roadways may occur as a result of the project. [LS]**

Under Existing Plus Project AM and PM peak hour conditions, there would be no off-site queuing problems based on the available queuing/storage distance between the railroad tracks and the project driveway. Although the intersection of Louise Avenue/Swanson Road/Driveway (N) would operate at unacceptable LOS F conditions during the PM peak hour, the poor LOS is due to northbound left turn out of the project site. Results from the traffic study also show that queuing will be minimal at the other driveway locations. Therefore, impacts are **less than significant**.

#### **Railroad Crossing**

**Impact 4.10.4** **Additional traffic generated by the project may increase queuing problems on Louise Avenue resulting from train traffic blocking vehicular traffic. [PSM]**

Louise Avenue crosses the Union Pacific Railroad tracks adjacent to the northwestern corner of the project site. The railroad crossing has crossing guards that activate when train traffic from both Union Pacific and ACE passes through the crossing. Train traffic disrupts the flow of vehicular traffic on Louise Avenue between the City of Lathrop and Airport Way, causing traffic queues on the roadway. These queues are temporary and cease once the train traffic passes through and the crossing is open again.

It is not known how long the vehicular traffic queues are on Louise Avenue during times the railroad crossing is closed, under existing conditions. As described above, the project would add more vehicular traffic on adjacent roadways, including Louise Avenue. This additional traffic may increase the length of queues that occur during train crossings at Louise Avenue such that they may potentially disrupt traffic flows all the way to the Airport Way intersection. Also, these queues may cause longer delays at the Louise Avenue access point. These impacts, although not quantified, are considered **potentially significant** and subject to mitigation.

## 4.10 TRANSPORTATION AND CIRCULATION

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### Mitigation Measures

**MM 4.10.4** The City shall synchronize traffic signals on Louise Avenue from the railroad crossing to Airport Way so as to reduce the amount of queuing that occurs on Louise Avenue during times train traffic closes the railroad crossing.

*Timing/Implementation: Upon installation of traffic signal at Louise Avenue access point (see MM 4.10.2).*

*Enforcement/Monitoring: City of Manteca Public Works and Community Development Departments.*

Implementation of the mitigation measure would ensure that traffic flow on Louise Avenue would be less disrupted by train traffic. Impacts after mitigation would be **less than significant**.

### **Public Transportation**

**Impact 4.10.5** The project would place additional demands on existing public transportation systems. [LS]

The project may generate an increase in demand for the use of public transportation, particularly for buses and for the ACE train. An existing Hopper bus route is located along Louise Avenue and Airport Way, adjacent to the project site. The SJRTD can accommodate the additional passenger the project is likely to generate without requiring additional buses. Likewise, ACE, which recently added a third train, can accommodate any passengers the project is likely to generate. Therefore, impacts on public transportation are considered **less than significant**.

### **Bicycle Transportation**

**Impact 4.10.6** The project could make inadequate provision for potential bicycle routes that would be part of a Citywide system. [PSM]

As previously noted, there are no bike paths, bike lanes or bike routes in the project vicinity. However, the Manteca General Plan proposes an expansion of bicycle facilities during its planning period. One proposed facility is a Class II lane along Airport Way, along with connecting lanes from the Villa Ticino East subdivision and the Stella Brockman Elementary School. The Manteca General Plan does not indicate a specific layout of the bike lane. However, it is probable that a bike lane would be located on each side of Airport Way. The proposed Bicycle Route Master Plan, which is currently under consideration by the City, also includes a bike lane along Airport Way. Design standards for bike lanes contained in the Bicycle Plan indicate that a bike lane would be included on each side of a roadway. Since preliminary site plans for the project do not indicate that provision has been made for a bike lane along the Airport Way frontage, this impact is **potentially significant**.

### Mitigation Measures

**MM 4.10.6** Prior to tentative map approval, the project applicant shall indicate on site plans that adequate provision has been made for a Class II bicycle lane along the Airport Way frontage. The provision for the bicycle lane shall be

in accordance with design standards that are adopted as part of a Bicycle Route Master Plan or standards otherwise adopted by the City.

*Timing/Implementation: Prior to final site plan approval.*

*Enforcement/Monitoring: City of Manteca Community Development Department.*

Implementation of the mitigation measure would ensure that the project would not obstruct or make more expensive the opportunity to install a bicycle lane along Airport Way. Impacts after mitigation would be **less than significant**.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

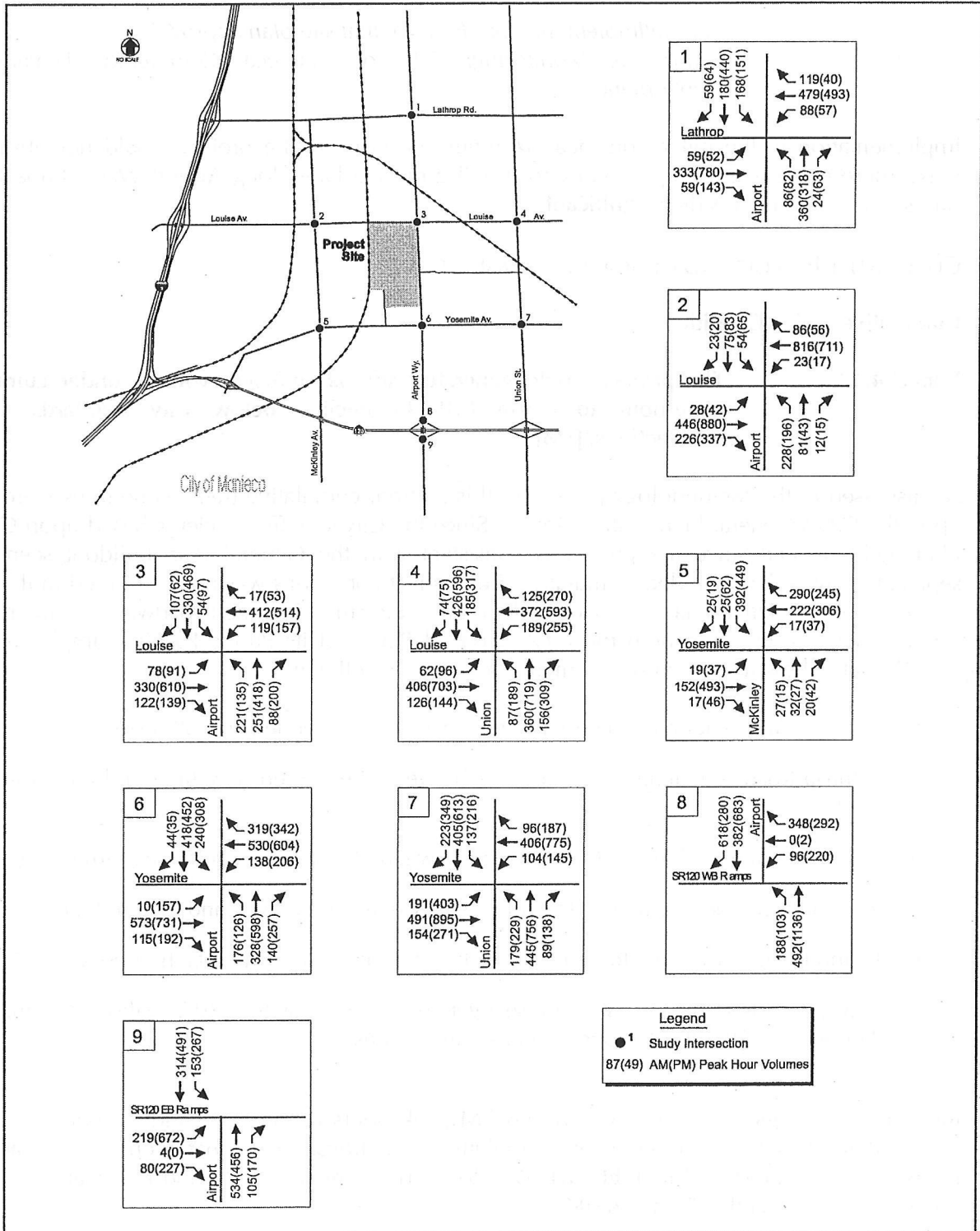
#### Cumulative Traffic Conditions

**Impact 4.10.7      The project would generate traffic at sufficient volume under cumulative conditions to cause LOS to decline below City standards at two intersections. [SM]**

As discussed in the Methodology portion of this section, cumulative traffic conditions were based upon the City's General Plan Traffic Model. Since the City's Traffic Model is based upon General Plan buildout, and since the project is consistent with the General Plan buildout scenario, a separate analysis that included Cumulative Plus Project conditions was not performed in the traffic study. The cumulative analysis conducted in the traffic study included roadway and intersection improvements assumed in both the City's General Plan and its Public Facilities Implementation Plan Report. These assumed improvements included the following:

- Airport Way – widening to six lanes between Sedan Avenue and Roth Road.
- Lathrop Road – widening to four lanes between the western city limit and the eastern city limit.
- Louise Avenue – widening to four lanes between Airport Way and the eastern city limit.
- Yosemite Avenue – widening to six lanes between Airport Way and Union Road.
- Union Road – widening to four lanes between sedan Avenue and Lathrop Road.
- Traffic signals at Airport Way/Louise Avenue, Airport Way/SR 120 Westbound Ramps, and Airport Way/SR 120 Eastbound Ramps intersections.

Intersection operations during the AM and PM peak hours at the nine study intersections were analyzed for this traffic study under cumulative conditions. LOS that would occur at these intersections are presented in **Table 4.10-5** below. The cumulative AM and PM peak hour traffic volumes are illustrated in **Figure 4.10-3**.



SOURCE: TY LIN INTERNATIONAL/CCS, JULY 2004

FIGURE 4.10-3  
 CUMULATIVE + PROJECT PEAK HOUR VOLUMES

**TABLE 4.10-5  
CUMULATIVE CONDITION  
AM AND PM PEAK HOUR INTERSECTION OPERATIONS**

Intersection	Control	Cumulative Geometrics					
		AM Peak		PM Peak		With Improvements	
		LOS	Delay	LOS	Delay	AM Peak LOS	PM Peak Delay
1. Airport Way/Lathrop Road	Signal	C	30.0	C	27.0		
2. Louise Avenue/McKinley Avenue	Signal	C	24.1	C	21.1		
3. Airport Way/Louise Avenue	Signal	C	31.9	D	35.7		
4. Louise Avenue/Union Road	Signal	C	31.8	D	52.0		
5. Yosemite Avenue/McKinley Avenue	All Way Stop	C	16.5	F	67.3	C 27.4	C 31.5
6. Airport Way/Yosemite Avenue	Signal	C	30.6	D	38.6		
7. Yosemite Avenue/Union Road	Signal	C	33.0	E	62.3	C 32.1	D 44.6
8. Airport Way/SR-120 WB Ramps	Signal	C	24.4	C	20.3		
9. Airport Way/SR-120 EB Ramps	Signal	C	22.6	C	28.3		

**Notes:** Delay values are overall delay per vehicle for unsignalized intersections  
Source: T.Y. Lin International/CCS, 2004.

As shown in **Table 4.10-5**, two intersections would operate at conditions below the City standard of LOS D: Yosemite Avenue/McKinley Avenue (PM only) and Yosemite Avenue/Union Road (PM only). Three other study intersections would experience LOS declines as a result of the project under cumulative conditions, but would still maintain an acceptable LOS. The decline of LOS below City standards at the Yosemite Avenue/McKinley Avenue intersection and the Yosemite Avenue/Union Road intersection is a **significant impact** and subject to mitigation.

#### Mitigation Measures

Manteca Municipal Code Section 13.38.070 requires developers of property to pay a transportation facilities improvement fee, as set by City Council resolution and in accordance with procedures set forth in the Municipal Code. The fee would be applied to transportation facility projects listed in the Public Facilities Implementation Plan Report.

**MM 4.10.7a** The project shall contribute its fair share to the costs of the installation of a traffic signal at the Yosemite Avenue/McKinley Avenue intersection. Based upon the traffic study prepared for the project, the traffic generated by the project will contribute approximately 26 percent of the Existing Plus Project AM peak hour traffic passing through the intersection, and approximately 40 percent of the PM peak hour traffic. The project applicant and the City shall

## 4.10 TRANSPORTATION AND CIRCULATION

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develop a formula that equitably distributes the cost of the installation of the signal at such time as the intersection meets warrants for such.

*Timing/Implementation: Prior to issuance of the first building permit.*

*Enforcement/Monitoring: City of Manteca Public Works Department.*

### MM 4.10.7b

The project shall contribute its fair share to the costs of the installation of a traffic signal at the Yosemite Avenue/Union Road intersection. Based upon the traffic study prepared for the project, the traffic generated by the project will contribute approximately 12 percent of the Existing Plus Project AM peak hour traffic passing through the intersection, and approximately 14 percent of the PM peak hour traffic. The project applicant and the City shall develop a formula that equitably distributes the cost of the installation of the signal at such time as the intersection meets warrants for such.

*Timing/Implementation: Prior to issuance of the first building permit.*

*Enforcement/Monitoring: City of Manteca Public Works Department.*

Implementation of the mitigation measure would improve LOS at both the Yosemite Avenue/McKinley Avenue and Yosemite Avenue/Union Road intersections to LOS C or LOS D, which would meet City standards. Impacts after mitigation would be **less than significant**.

### Cumulative Site Access

**Impact 4.10.8      The level of service at two access points to the project site would operate below City standards under cumulative conditions. [SM]**

All four of the major project access intersections were analyzed to determine level of service/operations with the project traffic. Traffic operations under cumulative conditions at the driveway intersections are summarized below in **Table 4.10-6**.

The Cumulative Plus Project results indicate that all project roadway intersections would operate at acceptable LOS B or better during the AM and PM peak hours, except for the Louise Avenue/Swanson Road/Villa Ticino West Roadway/Assieh Industrial Roadway and Yosemite Avenue/Swanson Road Extension intersections, which would both operate at LOS F conditions in the AM and PM peak hour. This impact is **significant** and subject to mitigation.

**TABLE 4.10-6  
CUMULATIVE PLUS PROJECT  
AM AND PM PEAK HOUR DRIVEWAY INTERSECTION OPERATIONS**

Intersection	Control	Base Geometrics							
		AM Peak		PM Peak					
		LOS	Delay	LOS	Delay				
1. Louise Avenue/Swanson Road/Villa Ticino West Access/Assieh Industrial Access	Two Way Stop	F	<120.0	F	<120.0	B	18.1	B	17.6
2. Airport Way/Villa Ticino West Access/Geneva Way	Two Way Stop	A	9.5	A	9.7				
3. Airport Way/Villa Ticino West/Crom Street	Signal	B	18.7	B	16.6				
4. Yosemite Avenue/Swanson Road Extension	Two Way Stop	F	<120.0	F	<120.0	B	19.6	B	18.4

#### Mitigation Measures

Both of the driveway intersections meet Caltrans traffic signal warrant 11 (Peak Hour Volume) under cumulative conditions. To mitigate the traffic impacts to less-than-significant level, signalization is recommended. **MM 4.10.2** requires traffic signals at both of the subject access points. The following mitigation measure applies to the Yosemite Avenue/Swanson Road access point.

Implementation of traffic signals at the subject driveway locations pursuant to **MM 4.10.2** would result in acceptable LOS in the AM and PM peak hours. LOS at the driveway intersections based on the recommended improvements is presented in **Table 4.10-6** above and is presented in **MM 4.10.2**. Impacts after mitigation would be **less than significant**.

#### **Cumulative Traffic Queuing**

**Impact 4.10.9**      **Queuing on offsite roadways may occur as a result of the project under cumulative conditions. [LS]**

Under Cumulative AM and PM peak hour conditions, there will be no off-site queuing problems based on the available queuing/storage distance between the railroad tracks and the project driveway. Although the intersection of Louise Avenue/Swanson Road/Driveway (N) would continue to operate at unacceptable LOS F conditions during the PM peak hour, the poor LOS is due to northbound left turn out of the project site. The results also show that queuing will be minimal at the other driveway locations. Therefore, impacts are **less than significant**.

## 4.10 TRANSPORTATION AND CIRCULATION

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### REFERENCES

City of Manteca. 1993. *City of Manteca Bicycle Route Master Plan, Final Background Report*. Cella Barr Associates, Manteca, Calif., August 11, 1993. Addendum to this document dated April 4, 1996.

City of Manteca. 2003. *Draft General Plan 2023*. May 2003.

City of Manteca. 2001. *Louise Avenue Specific Plan and Setback Lines*. December 17, 2001.

David Vickers, Transportation Analyst. City of Manteca. Telephone Correspondence. Jan-Feb, 2004.

T.Y. Lin International/CCS. 2004. *Villa Ticino West Draft Traffic Impact Analysis*. Sacramento, Calif., February 2004.

Urban and Environmental Planning. 1989. *Rossi Annexation Project Environmental Impact Report*. August, 1989.



**4.11 UTILITIES AND  
SERVICE SYSTEMS**

This section discusses the public utilities and service systems that would serve the project site, including water supply, wastewater services, and solid waste disposal service. Information for this section primarily comes from public documents.

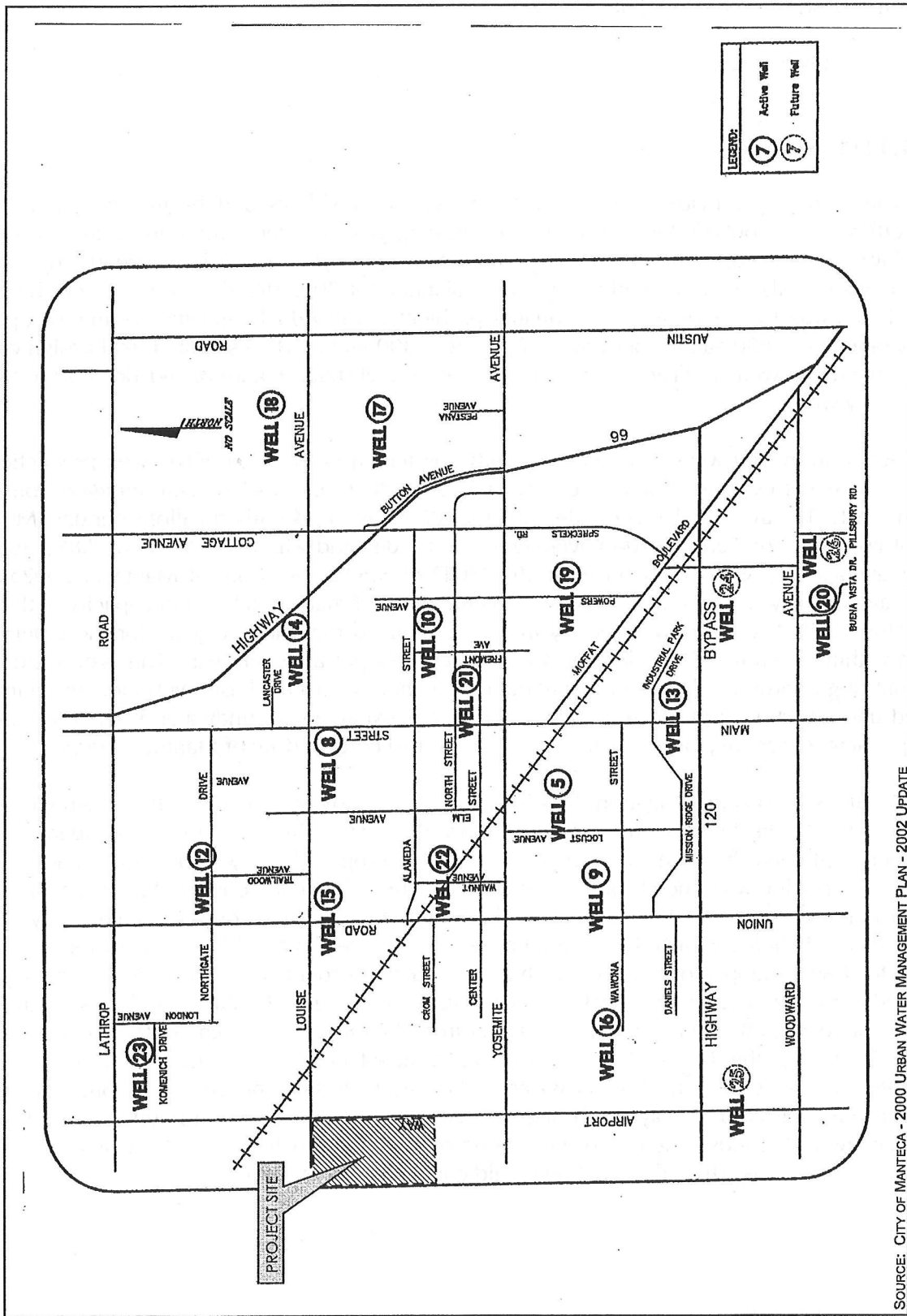
## **A. WATER SUPPLY**

### **4.11.1 SETTING**

The City currently provides water service to Manteca residents and businesses, as well as to properties located outside the City limits. At present, groundwater is the only source of water for the City (see Section 4.6, Hydrology and Water Quality). The City currently operates 16 groundwater wells, with three additional wells planned for 2003-04. Seven more wells have been abandoned due to age and/or water quality problems. Individual capacities of the 16 operating wells range from 600 gallons per minute (gpm) to 2,300 gpm. The estimated total design capacity of the operating wells is 21,900 gpm (City of Manteca, 2002a). **Figure 4.11-1** depicts the location of the City wells.

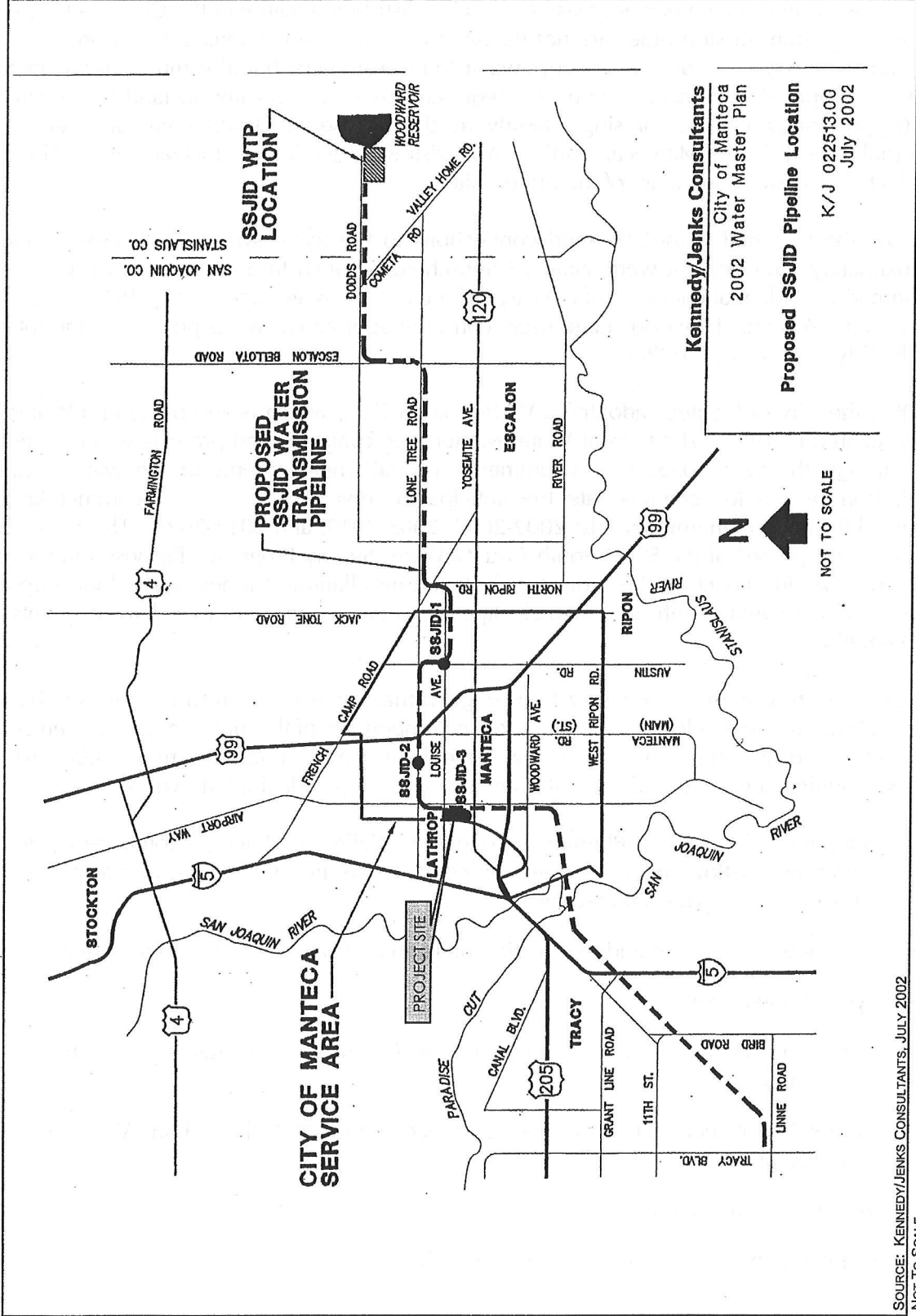
Production from City wells has increased with population growth. In 2001, well production was 12,973 acre-feet (AF), an increase from 12,607 AF in 2000 and a 45 percent increase from 8,940 AF in 1991. The average day water demand for 2001 was 11.44 million gallons per day (MGD), or 7,944 gpm. By comparison, 2000 average day water demand was 11.26 MGD or 7,819 gpm, and 1991 average day water demand was 7.98 MGD or 5,542 gpm (City of Manteca, 2002a). The 2001 average day water demand was 36 percent of the estimated total design capacity of the City's operating wells. A groundwater study in 1985 estimated that the safe yield for the groundwater basin within which the City is located was 1.0 acre-foot per acre per year. The "safe yield" is the amount of groundwater that can be continuously withdrawn from a basin without adverse impacts. Based upon 2000 well production data, the City was extracting groundwater at a rate of 2.4 acre-feet per acre, exceeding the estimated safe yield by 140 percent (City of Manteca, 2002a).

The South San Joaquin Irrigation District (SSJID) has moved forward with construction work associated with the South County Water Supply Program. The Program is a cooperative effort between SSJID and the Cities of Manteca, Escalon, Lathrop and Tracy to provide surface water to satisfy the drinking water needs of the participating cities. Key components of the Program include a new water treatment plant near Woodward Reservoir in Stanislaus County and a delivery pipeline to the cities. When completed, the SSJID project is expected to provide approximately 53 percent of the total water supply for Manteca, with groundwater to provide the remaining 47 percent and to be used primarily to satisfy peak water demands (City of Manteca, 2002a). The City is contracted to receive up to 11,500 acre-feet of water per year from the program through 2010, with a subsequent phase increasing the City's allotment to 18,500 acre-feet per year (City of Manteca, 2003). Estimated date of provision of SSJID water to the City is 2005. The proposed SSJID pipeline for Manteca parallels Airport Way south of Louise Avenue, along the eastern boundary of the project site. **Figure 4.11-2** shows the proposed location of the SSJID pipeline through Manteca, along with the planned turnouts where the pipeline would connect to City facilities.



SOURCE: CITY OF MANTECA - 2000 URBAN WATER MANAGEMENT PLAN - 2002 UPDATE  
 NOT TO SCALE

FIGURE 4.11-1  
 WELL LOCATION MAP



**Kennedy/Jenks Consultants**  
 City of Manteca  
 2002 Water Master Plan

**Proposed SSJID Pipeline Location**  
 K/J 022513.00  
 July 2002

SOURCE: KENNEDY/JENKS CONSULTANTS, JULY 2002  
 NOT TO SCALE

**FIGURE 4.11-2**  
**STREET CROSS SECTIONS**



## 4.11 UTILITIES AND SERVICE SYSTEMS

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Water from the City wells is distributed through a buried network of pipelines ranging from 6-inch and smaller diameter pipes in the older parts of the City (mainly the downtown area) to up to 16-inch diameter pipes in the newer areas. Due to the distributed nature of the City's wells (see **Figure 4.11-1**), large transmission pipes are not needed to move large volumes of water around the City. The distribution system not only conveys water to its customers, but also must provide capacity to meet fire suppression demands. Fire flow requirements vary according to land use, ranging from 1,250 gpm for two hours for single family residential uses to 3,500 gpm for three hours for industrial uses (City of Manteca, 2002a). An existing water line is located along Airport Way parallel to the eastern boundary of the project site.

In 2002, the City had 14,861-metered connections to the water system. Of these connections, approximately 93.4 percent were standard household 5/8-inch to 3/4-inch size meters, reflecting the primarily residential character of the City. There are few large users – only 251 connections are larger than 1½ inch. However, large users consume approximately 15 percent of the total water supply (City of Manteca, 2002a).

In 2002, the City of Manteca adopted a Water Master Plan, which is an update of a Water Master Plan prepared in 1985. The current Water Master Plan evaluates and projects water needs for the City through the year 2025, and recommends capital improvements to the water supply and distribution system to accommodate the anticipated service need. The recommendations are presented for three planning periods: 2002-2004, 2005-2010, and 2011-2025. These time periods coincide with phases of the SSJID South County Water Supply Program. Proposed improvements that may have an impact on the project include the installation of a new well along Airport Way north of Louise Avenue with new 12-inch pipe, and connections with two delivery points on the SSJID pipeline.

The City has an active water conservation program that has evolved from the City's Urban Water Management Plan (see below). One of the main components of this program is enforcement of the City's water conservation ordinances that have been codified into Section 13.04.210 of the Manteca Municipal Code (see below). Other components include the following:

- Adoption of Uniform Plumbing Code and California Energy Commission guidelines requiring low-flow fixtures for all new construction and distribution of water conservation kits to water customers on request.
- Distribution of articles and information on lawn and garden irrigation techniques.
- System water audits.
- Adoption and implementation of new five-year inclining block rate schedule that promotes water conservation.
- Completion of benefit-to-cost analyses in accordance with the Urban Water Management Planning Act.
- Water shortage contingency plans.
- General public and direct classroom education.

**4.11.2 REGULATORY FRAMEWORK****URBAN WATER MANAGEMENT PLANNING ACT**

In 1983, the State Legislature enacted the Urban Water Management Planning Act (California Water Code Sections 10610-10656). The Act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The Act describes the contents of Urban Water Management Plans to be prepared by the affected entities, as well as how urban water suppliers should adopt and implement the plans.

In 2002, the City adopted its Urban Water Management Plan. The Urban Water Management Plan is a plan submitted to the California Department of Water Resources. Although the fundamental issues dealt with in the Urban Water Management Plan are similar to those in the City's Water Master Plan (see below), the Urban Water Management Plan does not discuss water system infrastructure. Instead, it focuses on managing water sources and water demand, particularly during times of water shortages. Issues evaluated in the Urban Water Management Plan include reliability of City water supplies, water demand management measures, and contingency plans in the event of water shortages.

**SB 610 AND SB 221**

Two recent pieces of State legislation are specifically relevant to the information that an EIR must address, as they relate to water supply for a large-scale project like the proposed project. These two pieces of legislation are briefly summarized below:

*SB 610 Water Supply Planning* - Cities or counties that determine that a project is subject to CEQA must request that any public water system that may supply water for the project assess whether its total water supplies will meet the projected demands of the project. The assessment must include, among other things, identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project (including ground water supply), and a description of water received in prior years pursuant to those entitlements.

*SB 221 Conditions of Approval and Water Availability* - This statute requires a lead agency to condition the approval of a subdivision of more than 500 residential units on proof of water availability from the applicable public water system. Findings regarding water availability must be supported by substantial evidence. The statute also provides that a development agreement for a subdivision subject to the statute shall not be approved unless the agreement provides that any tentative map prepared will comply with the new law.

**WATER CONSERVATION ORDINANCE**

The Manteca City Council adopted a Water Conservation Ordinance in 1991 (Ordinance No. 915). It specifies prohibited uses of water during the time period of July 1 – October 1 each year. These uses include the washing of sidewalks and other non-landscaped exterior ground areas, washing of automobiles and boats except under certain conditions, and serving water by restaurants except when requested by the customer. It also places restrictions on the watering of landscaping, washing of exterior buildings and filling of swimming pools. In 1994, the City Council enacted

## 4.11 UTILITIES AND SERVICE SYSTEMS

Ordinance No. 986, which extended the time period for water conservation measures to the period of Daylight Savings Time each year. The provisions of both ordinances have been codified in the Manteca Municipal Code as Sections 13.04.210 and 12.04.220.

### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

The General Plan contains goals and policies in the Economic Development, Public Facilities and Services, and Resource Conservation Elements that are related to water supply system issues. **Table 4.11-1** summarizes the evaluation of project consistency with the goals and policies pertinent to this chapter.

**TABLE 4.11-1  
PROJECT CONSISTENCY WITH THE GENERAL PLAN ECONOMIC DEVELOPMENT,  
PUBLIC FACILITIES AND SERVICES, AND RESOURCE CONSERVATION ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Economic Development Element</b>		
<b>Goal ED-17.</b> Assure adequate public infrastructure is available at the right place and the right time to serve economic development opportunities.	Yes	The project is located adjacent to a water line along Airport Way and can readily connect to the City's water system.
<b>Goal ED-19.</b> Assure that new development provides funding for necessary infrastructure.	Yes	The proposed development would install the necessary water infrastructure on the project site.
<b>Policy ED-24.</b> Public infrastructure adequate to serve planned economic growth should be available and properly phased.	Yes	The proposed development would install the necessary water infrastructure on the project site over the course of project site development.
<b>Public Facilities and Service Element</b>		
<b>Goal PF-3.</b> Facilities improvements and services required to serve development will not place an economic burden on existing residents of the City. Development will pay a fair share of all costs of required public infrastructure and services.	Yes	The proposed development would install the necessary water infrastructure on the project site and would connect to the City's water system at its own expense.
<b>Policy PF-12.</b> 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.	Yes	The project would pay any water development fees assessed.
<b>Policy PF-13.</b> 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.	Yes	The proposed development would install the necessary water infrastructure on the project site. Although no expansion of City facilities is anticipated, the project would pay its fair share toward the cost of any water facility improvements.

**TABLE 4.11-1**  
**PROJECT CONSISTENCY WITH THE GENERAL PLAN ECONOMIC DEVELOPMENT,**  
**PUBLIC FACILITIES AND SERVICES, AND RESOURCE CONSERVATION ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Resource Conservation Element</b>		
<b>Goal RC-1.</b> Minimize the consumption of water to reasonable levels consistent with a high level of amenities and quality of life for City residents and visitors.	Yes	The project would comply with the provisions of the City's adopted Plumbing Code and Water Conservation Ordinance.
<b>Goal RC-2.</b> Maximize the beneficial uses of water by recycling water for irrigation and other non-potable uses.	Not applicable	In its 2000 <i>Urban Water Management Plan</i> , the City has determined that it is not cost-effective to pursue the use of recycled water at this time.
<b>Policy RC-P-1.</b> The City shall continue to implement water conservation standards for all commercial and industrial development, and for all existing and new residential development.	Yes	The project would comply with the provisions of the City's adopted Plumbing Code and Water Conservation Ordinance.
<b>Policy RC-P-4.</b> The City shall promote water conservation in both City operations and private development to minimize the need for the development of new water sources.	Yes	The project would comply with the provisions of the City's adopted Plumbing Code and Water Conservation Ordinance.

### 4.11.3 IMPACTS AND MITIGATION MEASURES

#### SIGNIFICANCE STANDARDS

For the purposes of this EIR, impacts are considered to be significant if the following could result from implementation of the proposed project:

- A substantial increase in demand for adequate domestic water supply and water distribution facilities over the existing conditions.
- A substantial depletion of groundwater resources, which would limit this resource for other potential uses.
- If a heritage resource does not meet CEQA criteria of significance or if it is not a unique archaeological or a historical resource, the effects of the project on those resources are not considered a significant effect on the environment. It is sufficient that both the resource and the effect on it are noted in the Initial Study or EIR but they need not be considered further in the CEQA process (CEQA 15064.4.[c][3-4]).
- A decrease in the level of service provided by the City's water supply system. According to the City's *Public Facilities Implementation Plan*, the City's target for level of service for water is as follows:

## 4.11 UTILITIES AND SERVICE SYSTEMS

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- 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.
- Provide additional flows for fire suppression of 1,250 gpm for low-density residential, 2,500 gpm for commercial, and 3,500 gpm for industrial.

### METHODOLOGY

Pacific Municipal Consultants reviewed all public documents that provided information on the City's water supply system. Documents included the *City of Manteca Water Master Plan*, the *City of Manteca Urban Water Management Plan*, and the *Public Facilities Implementation Plan Report*. The South San Joaquin Irrigation District website was accessed for information on the South County Water Supply Program.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Water Lines

##### **Impact 4.11.1            Implementation of the proposed project would require the installation of water distribution facilities to serve the project site. [LS]**

Development of the project would require the installation of water lines to serve the land uses proposed on the project, and a connection to the City's water system. As previously stated, a water line is located adjacent to the project site along Airport Way. No main water lines would need to be extended to serve the project site. The developer would install the necessary water lines to connect the proposed land uses to the water system. Therefore, impacts to the City's water distribution system would be **less than significant**.

#### Water Supply

##### **Impact 4.11.2            The project would place additional demands on the City's water supply, particularly during peak demand periods. [LS]**

The residential and commercial land uses proposed by the project would place demands on the City's water supply. As proposed, the project would include 760 single family residences and the potential for approximately 310 multifamily units. If the average low-density residential household size of 3.06 and the average high-density residential household size of 2.70 were applied (figures from City of Manteca, 2003), then the total population of the project site at buildout would be approximately 3,163. From 1960 to 2000, the average day water production per person was 214 gallons per capita per day. Using this figure, it is estimated that the water demand from residential units on the project site would be on average approximately 676,882 gallons per day, or 0.677 MGD. In addition, demand for water would come from the commercial center, the fire station, the parks and the public landscaping.

In 2001, the City's operating wells produced an average of 11.44 MGD. The total design capacity of the wells is approximately 31.54 MGD. Therefore, the average daily water demand of the project could be readily met by the City's existing wells. However, another factor to consider is peak hour usage. Based upon a review of water production data, peak hour flow is approximately 2.8 times the average day flow (City of Manteca, 2002a). If this figure is applied to the 2001

average day flow, the peak hour water demand would be approximately 32.03 MGD, which exceeds the design capacity of the wells. The project may contribute to this excess in peak hour demand over potential supplies. However, the City proposes to drill three additional wells in 2003-04, which would increase the available supply. Also, in 2005, water from the South County Water Supply Program would become available to the City. These measures would ensure that adequate water would be available to satisfy both average and peak hour demands of both the City and the project. In addition, the project would be required to comply with water conservation measures that would reduce the potential water demand. Therefore, impacts on water supply are considered **less than significant**.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.11.3            Implementation of the proposed project, in combination with cumulative development under the Manteca General Plan, would increase the current demand for water supply. [LS]**

Project development would be consistent with the designations under the Manteca General Plan. The Manteca General Plan EIR evaluated the potential effects of General Plan buildout on water supplies. The EIR concluded that goals, policies and implementation measures of the Public Facilities and Services Element would assist in accommodating future water demand by encouraging a combination of increasing water sources and implementing water conservation measures. Also, the EIR mentions that the City's *Master Water Plan* indicates that future City demand would be met by a combination of SSJID water from the South County Water Supply Program and groundwater from City wells. The SSJID water would be used as the base supply, with groundwater to be used to meet peak water demands. SSJID water would meet nearly the entire City's projected water demands during the winter months. Therefore, cumulative impacts of the project on water supply are considered **less than significant**.

## 4.11 UTILITIES AND SERVICE SYSTEMS

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### B. WASTEWATER SERVICES

#### 4.11.1 SETTING

The City owns and operates a wastewater collection and treatment system. The system serves all City residents, and also treats wastewater for the Lathrop County Water District. Existing sewer collection lines total approximately 105 miles in length, with pipe sizes ranging from six inches to 36 inches in diameter. As of January 2004, there were 20,295 total sewer connections with approximately 15,236 of the total connections serving residential single-family dwellings. The layout of the sewer system consists of smaller diameter collector lines draining into larger trunk lines. The majority of the sewer collection system is comprised of vitrified clay pipe (VCP) and reinforced concrete pipe (RCP). In newer areas, polyvinyl chloride (PVC) pipe or acrylonitrile-butadiene-styrene (ABS) pipe is often used. In areas of extremely shallow sewers, ductile iron pipe is used for its resistance to crushing. The age of the sewer lines varies from 60 years old to new (City of Manteca, 1989). A trunk line is located southeast of the project site, in the vicinity of the intersection of Airport Way and Yosemite Avenue. A smaller collector line runs along Airport Way, adjacent to the eastern boundary of the project site.

The general topography of the Manteca area, along with the desire of the City to minimize pump stations, has resulted in a sewer system that has very flat slopes. Almost all the City drains by gravity to the main lift station located on Union Road. From this station, the wastewater is lifted into the main trunk line that goes to the wastewater treatment plant (City of Manteca, 1989).

The City of Manteca Wastewater Quality Control Facility (WQCF) is a combined biofilter-activated sludge wastewater treatment plant. Its current capacity is 6.95 MGD. The current average daily flow is approximately 6.20 MGD. Phased improvements scheduled to be completed by December 2005 will increase the capacity of the WQCF to 10 MGD. The WQCF serves commercial and residential properties in the City (5.93 MGD), the City of Lathrop (1.02 MGD) and one frozen food packager. Secondary treatment of wastewater is conducted at the plant, with effluent being discharged to the San Joaquin River during the wet season (October-March) and being land-applied during the dry season. Dried sludge is spread on agricultural lands adjacent to the WQCF site (City of Manteca, 2003). The City of Manteca Public Works / Engineering Department has indicated that the City is currently moving ahead with plans to install tertiary filtration equipment at the WQCF site however tertiary treatment of wastewater is not currently in use.

#### 4.11.2 REGULATORY FRAMEWORK

##### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

The General Plan contains goals and policies in the Economic Development, Public Facilities and Services, and Resource Conservation Elements that are related to wastewater system issues. **Table 4.11-2** summarizes the evaluation of project consistency with the goals and policies pertinent to this chapter.

**TABLE 4.11-2  
PROJECT CONSISTENCY WITH THE GENERAL PLAN ECONOMIC DEVELOPMENT,  
PUBLIC FACILITIES AND SERVICES, AND RESOURCE CONSERVATION ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Economic Development Element</b>		
<b>Goal ED-17.</b> Assure adequate public infrastructure is available at the right place and the right time to serve economic development opportunities.	Yes	The project is located adjacent to a sewer line along Airport Way and can readily connect to the City's sewer system.
<b>Goal ED-19.</b> Assure that new development provides funding for necessary infrastructure.	Yes	The proposed development would install the necessary sewer infrastructure on the project site.
<b>Policy ED-24.</b> Public infrastructure adequate to serve planned economic growth should be available and properly phased.	Yes	The proposed development would install the necessary sewer infrastructure on the project site over the course of project site development.
<b>Public Facilities and Services Element</b>		
<b>Goal PF-3.</b> Facilities improvements and services required to serve development will not place an economic burden on existing residents of the City. Development will pay a fair share of all costs of required public infrastructure and services.	Yes	The proposed development would install the necessary sewer infrastructure on the project site and would connect to the City's sewer system at its own expense.
<b>Goal PF-8.</b> Maintain an adequate level of service in the City's sewage collection and disposal system to meet the needs of existing and projected development.	Yes	The current capacity of the City WQCF is approximately 6.95 MGD. Current average daily flow is approximately 6.20 MGD.
<b>Policy PF-P-22.</b> 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 expansions.	Yes	The proposed development would install the necessary sewer infrastructure on the project site. Although no expansion of City facilities is anticipated, the project would pay its fair share toward the cost of any sewer facility improvements.
<b>Resource Conservation Element</b>		
<b>Policy RC-P-2.</b> The City shall explore potential treated wastewater.	Not applicable	This is an issue that applies at the City level, and not at the level of an individual project.

### 4.11.3 IMPACTS AND MITIGATION MEASURES

#### SIGNIFICANCE STANDARDS

For the purposes of this EIR, impacts are considered to be significant if the following could result from implementation of the proposed project:

- A substantial increase in demand for adequate wastewater collection and treatment facilities over the existing conditions.

## 4.11 UTILITIES AND SERVICE SYSTEMS

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- If a heritage resource does not meet CEQA criteria of significance or if it is not a unique archaeological or a historical resource, the effects of the project on those resources are not considered a significant effect on the environment. It is sufficient that both the resource and the effect on it are noted in the Initial Study or EIR but they need not be considered further in the CEQA process (CEQA 15064.4.[c][3-4]).
- A decrease in the level of service provided by the City's sewer system. According to the City's *Public Facilities Implementation Plan*, the City's target for level of service for sewer is to collect and treat an average of 325 gallons per day per dwelling unit equivalent (DUE).

### METHODOLOGY

Pacific Municipal Consultants reviewed all public documents that provided information on the City's water supply system. Documents included the *City of Manteca Sewer System Master Plan*, the *Public Facilities Implementation Plan Report*, and the Manteca General Plan and General Plan EIR. Additional information on wastewater collection and treatment was provided by City staff.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Wastewater Collection Lines

**Impact 4.11.4**            **Implementation of the proposed project would require the extension of wastewater infrastructure to the project site. [LS]**

Development of the project would require the installation of sewer lines to serve the land uses proposed on the project, and a connection to the City's sewer system. As previously stated, a sewer line is located adjacent to the project site along Airport Way. No trunk or major connector lines would need to be extended to serve the project site. The developer would install the necessary sewer lines on the project site to connect the proposed land uses to the sewer system. Therefore, impacts to the City's sewer collection system would be **less than significant**.

#### Wastewater Treatment Facilities

**Impact 4.11.5**            **Implementation of the proposed project would generate additional wastewater flows that would be treated at the Manteca Wastewater Quality Control Facility. [LS]**

Land use activities on the project site, primarily the residential units, would generate wastewater that must be collected and treated. The 1989 Sewer Master Plan, in projecting wastewater flows, used factors based upon land use designations. These factors, which are gallons per acre per day, were applied to the acreage for each land use within the project site to develop an estimate for the amount of wastewater that would be generated by the project. **Table 4.11-3** provides the estimated daily wastewater flow.

Based upon **Table 4.11-3**, it is estimated that the project would generate approximately 219,096 gallons of wastewater per day, or approximately 0.22 MGD. This is slightly over 3 percent of the current treatment capacity of the City's WQTF. However, by December 2005, the capacity of the WQTF will be 10.0 MGD, and the project would account for only 2.2 percent of that capacity. Since the project likely would not be built out for years, it is expected to require less capacity for

much of that time period. Given that the current average dry weather flow to the WQTF is 6.20 MGD, there would be adequate capacity to accommodate wastewater flows generated by the project without need for additional expansion beyond that currently scheduled. Impacts on treatment facilities, therefore, would be **less than significant**.

**TABLE 4.11-3**  
**PROPOSED LAND USES WITHIN PROJECT SITE**

Land Use	Acres	Wastewater Flow Rate (gpad)*	Total Wastewater Flow (gpd)
Single Family Residential	183.87	950	174,676.5
Multiple Family Residential	12.40	1,880	23,312.0
Commercial Center	18.55	1,120	20,776.0
Fire Station	0.78	425	331.5
<b>Total</b>	<b>237.00</b>	<b>--</b>	<b>219,096.0</b>

\* Gallons per acre per day. Rates from *City of Manteca Sewer System Master Plan, 1989*.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.11.6**      **Implementation of the proposed project, in combination with cumulative development under the Manteca General Plan, would increase demand for wastewater treatment services. [LS]**

Project development would be consistent with the designations under the Manteca General Plan. The Manteca General Plan EIR evaluated the potential effects of General Plan buildout on water supplies. The EIR concluded that goals, policies and implementation measures of the Public Facilities and Services Element would assist in accommodating future wastewater treatment demand, mainly by updating the Public Facilities Implementation Plan every five years, by encouraging an industrial pretreatment program for business parks and other industrial uses, and by promoting reduced demand through efficient water use. Also, the WQTF has an ultimate treatment capacity of 25 MGD, which the EIR concluded would be more than adequate capacity to accommodate wastewater treatment demand generated by growth as projected in the Manteca General Plan. Therefore, cumulative impacts of the project on the City's wastewater system are considered **less than significant**.

## 4.11 UTILITIES AND SERVICE SYSTEMS

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### C. SOLID WASTE DISPOSAL

#### 4.11.1 SETTING

Solid waste in Manteca is collected by the City's Solid Waste Division. City residences and businesses are required to subscribe to the City's collection service, with limited exceptions (Manteca Municipal Code Section 8.12.180). Residential refuse is collected every week. The Solid Waste Division also provides residential and commercial collection services for recyclable materials and composting materials ("green waste"). These materials are collected every two weeks. Approximately 30,000 tons of solid waste were collected by the City last year. Of this total, approximately 10,552 tons were green waste and 7,976 tons were recyclable materials.

Previously, refuse collected by the City was taken to the Lovelace Solid Waste Transfer Station, a County facility located on Lovelace Road north of the City. As of October 2003, solid waste from the City is sent to the Forward Landfill, a facility operated by Waste Management, a private firm. Forward Landfill is located on Austin Road northeast of the City. Permitted capacity of the landfill is 51,040,000 cubic yards. As of June 1, 2002, remaining capacity at Forward Landfill is 40,031,058 cubic yards, with an anticipated closure date of January 1, 2020 (California Integrated Waste Management Board, 2004).

#### 4.11.2 REGULATORY FRAMEWORK

##### CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995 and 50 percent by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated with the County plan. In order of priority, the plans must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal.

##### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

The General Plan contains goals and policies in the Public Facilities and Services Element that are related to wastewater system issues. **Table 4.11-4** summarizes the evaluation of project consistency with the goals and policies pertinent to this chapter.

**TABLE 4.11-4**  
**PROJECT CONSISTENCY WITH THE GENERAL PLAN ECONOMIC DEVELOPMENT AND**  
**PUBLIC FACILITIES AND SERVICES ELEMENTS**

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Public Facilities and Services Element</b>		
<b>Goal PF-11.</b> Provide for implementation and enforcement of the provisions for the Source Reduction and Recycling Element.	Yes	The project would be served by the City's Solid Waste Division, which has recycling and green waste programs.

### 4.11.3 IMPACTS AND MITIGATION MEASURES

#### SIGNIFICANCE STANDARDS

For the purposes of this EIR, impacts are considered to be significant if the following could result from implementation of the proposed project:

- Solid waste generation by the project exceeds permitted capacity of landfills to which the solid waste is sent for disposal.
- The City is unable to meet the goal of diverting 50 percent of solid waste from landfills, as set forth by the California Integrated Waste Management Act.

#### METHODOLOGY

Pacific Municipal Consultants reviewed information contained in the Manteca General Plan EIR regarding solid waste. Additional information on solid waste services was provided by the City's Solid Waste Division website and the Solid Waste Information System of the California Integrated Waste Management Board, and from City and San Joaquin County staff.

#### PROJECT IMPACTS AND MITIGATION MEASURES

##### **Solid Waste Disposal**

##### **Impact 4.11.7 Implementation of the project would lead to an increase in demand for solid waste disposal services. [LS]**

Land use activities on the project site are expected to generate solid waste. The City would be responsible for collecting solid waste from the project site, and it is expected that the City would be able to provide this service without any substantial need to increase personnel or equipment. The Forward Landfill as of 2002 had approximately 78 percent of its capacity unused. Therefore, the landfill can accommodate the solid waste generated by the project. Project impacts would be reduced with the removal of recyclable materials as part of the City's solid waste collection service. Impacts associated with solid waste disposal are considered **less than significant**.

## 4.11 UTILITIES AND SERVICE SYSTEMS

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### Source Reduction Programs

**Impact 4.11.8**            **The project may inhibit attainment of solid waste source reduction goals of the City. [LS]**

Under the California Integrated Waste Management Act, all cities are to attain a 50 percent diversion rate of their solid waste by 2000. According to City staff, Manteca currently has a 51-52 percent waste diversion rate. The project would contribute more solid waste to the City total, which could affect the diversion rate if the project contributes more waste that is not diverted. However, the project would be served by the City's Solid Waste Division, which offers separate collection service for recyclable materials and for composting materials. It is expected that participation by residents and businesses located on the project site would be similar to that of the City overall. Therefore, impacts on the City's waste diversion rate are considered **less than significant**.

### CUMULATIVE IMPACTS AND MITIGATION MEASURES

**Impact 4.11.9**            **The project would contribute to cumulative demands for solid waste disposal services. [LS]**

Solid waste generation is expected to increase in the Manteca area as development occurs. This would place additional demands on the capacity of the landfill to which the City's solid waste would be sent. As previously noted, Forward Landfill has approximately 78 percent remaining capacity. Therefore, it would be able to accommodate both the solid waste generated by the project and waste generated by future development in the City. Moreover, the waste diversion programs initiated by the City would reduce the amount of solid waste that is actually disposed at the landfill. Assuming that the current waste diversion rate remains the same, approximately half of the City's solid waste would be diverted from the landfill. Cumulative impacts on solid waste disposal are considered **less than significant**.

### REFERENCES

California Integrated Waste Management Board. Solid Waste Information System, last updated February 9, 2004. Website [www.ciwmb.ca.gov/SWIS](http://www.ciwmb.ca.gov/SWIS).

City of Manteca. 1989. *City of Manteca Sewer System Master Plan*. James M. Montgomery Consulting Engineers Inc., November 1989.

City of Manteca. 1993. *Public Facilities Implementation Plan Report for City of Manteca*. Nolte and Associates, December 1993.

City of Manteca. 2002a. *2002 Water Master Plan, City of Manteca*. Kennedy/Jenks Consultants, Sacramento, Calif.

City of Manteca. 2002b. *City of Manteca 2000 Urban Water Management Plan – 2002 Update*.

City of Manteca. 2003. *Environmental Impact Report For the City of Manteca General Plan 2023*. October 6, 2003.

City of Manteca Solid Waste Division website, [www.ci.manteca.ca.us/solidwaste](http://www.ci.manteca.ca.us/solidwaste).

Phil Govea, Associate Engineer. City of Manteca. E-mail correspondence, February 20, 2004.



**4.12 AGRICULTURAL  
RESOURCES**

This section describes the agricultural resources in the project area and the policies pertaining to these resources. Major sources utilized in the preparation of this section include the City of Manteca Resource Conservation Element of the General Plan, the California Department of Conservation Farmland Conversion Reports, the California Department of Conservation Important Farmlands Map, the Soil Survey of San Joaquin County and the California Agricultural Statistics Service's Summary of Agricultural Commissioners' Reports.

### 4.12.1 EXISTING SETTING

#### EXISTING AGRICULTURAL OPERATIONS



Photo 4.12-1 Alfalfa field on project site

The City of Manteca is located in the San Joaquin Valley, one of the major agricultural regions in California. Out of California's 58 counties, San Joaquin County ranked seventh in agricultural production value. As of fiscal year 2000, the county's agricultural receipts totaled \$1,343,808,000, with milk, grapes, tomatoes, almond meats, English walnuts, cherries, hay, woody ornamentals, asparagus, and apples the major agricultural products. Agricultural employment in the county totaled 9,601 individuals as of census year 2000.

At the present time, the project site is currently being used for the production of alfalfa and pasture crops (Photo 4.12-1).

However, as previously described in this document, the project site is largely surrounded by urban development. There are no large agricultural operations in the vicinity.

As described in Section 4.5, Geology and Soils, soils found within the project site consist of Tinnin loamy coarse sand and Veritas fine loamy sand, which is a well-drained nearly level soil that is deep to hardpan. The soils in the Tinnin series are considered soils of Statewide Importance and the Veritas Fine Loamy Sand a Prime soil as defined by the California Department of Conservation, Farmland Mapping and Monitoring program.

#### 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. Department of Agriculture, Soil Conservation Service, now the Natural Resources Conservation Service (NRCS). Since 1980, the State of California has assisted the NRCS with completing its mapping in the state. The FMMP was created within the California Department of Conservation (DOC) to carry on the mapping activity on a continuing basis, and with a greater level of detail.

The Important Farmland Maps produced under the FMMP identify five farmland categories: prime farmland, farmland of statewide importance, unique farmland, farmland of local importance and

## 4.12 AGRICULTURAL RESOURCES

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grazing land. Each of these categories is summarized below, based on *A Guide to the Farmland Mapping and Monitoring Program (1994)*, prepared by the Department of Conservation:

- **Prime farmland** is land with the best combination of physical and chemical features able to sustain the long-term production of agricultural crops. These lands have the soil quality, growing season, and moisture supply needed to produce sustained high yields.
- **Unique farmland** is land of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California.
- **Farmland of statewide importance** is land similar to prime farmland, but with minor shortcomings, such as greater slopes or less ability to hold and store moisture.
- **Farmland of local importance** is land of importance to the local agricultural economy, as determined by each County's Board of Supervisors and a local advisory committee. Farmland of local importance in San Joaquin County includes all farmable land not meeting the definitions of "Prime Farmland," "Farmland of Statewide Importance," and "Unique Farmland." This includes land that is or has been used for irrigated pasture, dry land farming, confined livestock or dairy facilities, aquaculture, poultry facilities, and dry grazing. It also includes soils previously designated by soil characteristics as "Prime Farmland," "Farmland of Statewide Importance," and "Unique Farmland" that has since become idle.
- **Grazing land** are areas covered by vegetation, both naturally grown and cultivated, that is suited to the grazing of livestock.

The *San Joaquin County 2000 Important Farmland Map* produced by the California Department of Conservation shows that the soils within the project site consists of Prime Farmland along its eastern boundary and Farmland of Statewide Importance throughout the majority of the central and western portion of the site. Although these soils are conducive to agricultural production, surrounding urban uses such as residential and industrial development limit the utilization of the site for farming operations.

### FARMLAND CONVERSION

Conversion of farmland to urban uses has become an issue of concern at both the local and state level. A basic premise of farmland conversion is that the proximity of agricultural land to urban uses increases the value of agricultural properties directly through formal purchase officers, indirectly through recent sales in the vicinity, and through the extension of utilities and other urban infrastructure into productive agricultural areas. This premise is evidenced in the fact that property values, as measured by the County Assessor's office, are higher adjacent to the urban fringe.

The FMMP of the California Department of Conservation keeps track of farmland conversions throughout the state. The conversion of important farmlands in San Joaquin County from 1992 to 2000 is presented in Table 4.12-1. Between 1992 and 2000, San Joaquin County experienced a decrease in acreages classified as Prime Farmland and Farmland of Statewide Importance. During the same period, acreage of lands classified as Unique Farmlands and Farmlands of Local Importance increased. These changes reflect the net effect of conversions to urban and other built

up uses, along with reclassification of acreages attributable to changes in agricultural use. These events resulted in a decrease of 12,845 acres in Prime Farmlands and 5,702 acres in Farmlands of Statewide Importance.

TABLE 4.12-1  
ACRES OF IMPORTANT FARMLANDS-SAN JOAQUIN COUNTY (1992-2000)

Year	Acres Present by Type				
	Prime Farmland	Farmland of Statewide Importance	Unique Farmland	Farmland of Local Importance	Total Important Farmlands
1992	436,003	99,548	47,084	53,020	635,655
1994	434,328	99,132	47,202	54,252	634,914
1996	433,130	98,162	48,760	53,481	633,533
1998	429,173	96,800	52,719	53,677	632,369
2000	423,158	93,846	57,977	56,009	630,990
8 Year Difference	-12,845	-5,702	+10,893	+2,989	-4,665
8 Year Percent Difference	-3%	-6%	+19%	+6%	-1%

Source: California Department of Conservation, *Farmland Conversion Reports 1992 to 1994, 1996 to 1998, 1998 to 2000, July 2002.*

#### 4.12.2 REGULATORY FRAMEWORK

##### WILLIAMSON ACT

The California Land Conservation Act, better known as the Williamson Act, was adopted in 1965 to encourage the preservation of the state's agricultural lands and prevent their premature conversion to urban uses. The Williamson Act established an agricultural preserve contract procedure by which any county or city within the state taxes landowners at a lower rate, using a scale based on the actual use of the land for agricultural purposes, as opposed to its unrestricted market value. In return, the owners guarantee that these properties will remain in agricultural production for a ten-year period. The contract is renewed automatically on an annual basis unless the owner files a notice of non-renewal. In this manner, each agricultural preserve contract (at any given date) is always operable at least nine years into the future. Approximately 70 percent of the state's prime agricultural land currently is protected under the Williamson Act. City parcel data revealed that Williamson Act contracts do not encumber any of the parcels within the project site.

##### RIGHT-TO-FARM ORDINANCE

In order to "preserve, protect, and encourage the use of viable agricultural lands," the City of Manteca adopted a Right-to-Farm Ordinance in 1990. The ordinance specifies that sellers of property located within the City limits provide a disclosure statement that informs potential buyers that the City permits properly conducted agricultural activities within the City limits. Included among these activities are the use of chemicals, fertilizers, and pesticides. The disclosure statement must mention that the potential owner needs to be prepared to accept inconveniences and discomforts that may arise out of the nearby farming operations.

## 4.12 AGRICULTURAL RESOURCES

### CITY OF MANTECA GENERAL PLAN GOALS AND POLICIES

Agricultural preservation and conversion issues are addressed in the Resource Conservation element of the Manteca General Plan. Table 4.12-2 identifies the General Plan agricultural resource policies that are applicable to the proposed project and presents an evaluation of the consistency of the project with these statements as required by CEQA. While the EIR analyzes the project's consistency with the General Plan, the final authority for interpretation of these policy statements and determination of the project's consistency rests with the City Council.

General Plan Goals and Policies	Consistency with General Plan	Analysis
<b>Resource Conservation Element</b>		
<b>Goal RC-9:</b> To promote the continuation of agricultural uses in the Manteca area and to discourage the premature conversion of agricultural land to nonagricultural uses, while providing for the urban development needs of Manteca.	Yes	The project is an infill project within the City. The site is surrounded by housing, industrial facilities and other urban uses, which limits its viability as productive agricultural land. Development of the site is expected to fill the need for housing in the City without expansion into viable farming areas outside the City limits.
<b>RC-P-18.</b> The City shall support the continuation of agricultural uses on lands designated for urban use, until urban development is imminent.	Yes	The City has a Right-To-Farm Ordinance, which permits the continuation of necessary and traditional farming activities on agricultural lands located adjacent to urban development. The ordinance stipulates that notice be provided to purchasers of real estate which states that agricultural activities occur nearby and that buyers may experience discomfort when such activities occur. The City's Right-To-Farm Ordinance supports the continued use of the project site in agricultural production until urban development occurs.
<b>RC-P-19.</b> The City shall provide an orderly and phased development pattern so that farmland is not subjected to premature development pressure.	Yes	The project site is currently in agricultural production, but more intensive development has surrounded the project site on three sides. The site has been designated for urban uses and is essentially an infill project, which would reduce pressure for development on farmland outside the City.
<b>RC-P-20.</b> 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.	Yes	Development that would occur on the project site is a continuation of existing development to the east, within the City limits. The parcel of land proposed for development is currently in agricultural production, but is designated for development and is constrained for agriculture by existing adjacent development. The development of this largely infill project is expected to direct similar development

TABLE 4.12-2 PROJECT CONSISTENCY WITH THE GENERAL PLAN RESOURCE CONSERVATION ELEMENTS		
General Plan Goals and Policies	Consistency with General Plan	Analysis
		away from other portions of the City that are adjacent to larger agricultural operations.
RC-P-21. Nonagricultural uses in areas designated for agriculture should be redirected to urban areas.	Yes	The project site, while currently used for agriculture, is designated for urban development.
RC-P-22. Protect designated agricultural lands, without placing an undue burden on agricultural landowners.	Yes	Development of the project would direct housing development away from other large tracts of agricultural lands, without placing any burdens on agricultural landowners.
RC-P-23. Provide buffers at the interface of urban development and farmland, in order to minimize conflicts between these uses.	Yes	The project site is located in an area surrounded by urban development. As a result, the project site does not front expansive areas of agricultural lands that require buffers in order to be protected from the impacts of urban development.
RC-P-24. The City shall endeavor to 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.	Yes	The project site is surrounded by urban development and would have no impact on other farming operations.
RC-P-25. 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.	Not applicable	The project site is designated for mixed-use development, and not for agricultural uses.
RC-P-26. The City shall discourage the cancellation of Williamson Act contracts outside the Primary Urban Service Boundary line.	Not applicable	There are no Williamson Act contracts in effect on any of the properties within the project area.
RC-P-27. The City shall not extend water and sewer lines to premature urban development that would adversely affect agricultural operations.	Not applicable	Water and sewer infrastructures are currently in place in the vicinity of the project site. The project site has been designated for urban uses.

### 4.12.3 IMPACTS AND MITIGATION MEASURES

#### STANDARDS OF SIGNIFICANCE

Project impacts on agricultural resources are considered significant if they result in the following:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use.

## 4.12 AGRICULTURAL RESOURCES

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- Involve other changes in the existing environment which, due to their location or nature, could result in the constraint of agricultural operations and the subsequent conversion of farmland to non-agricultural use.
- Conflict with existing zoning for agricultural use or a Williamson Act contract.

### METHODOLOGY

Evaluation of potential agricultural impacts of the project was based upon a review of the City of Manteca General Plan and Zoning Ordinance, as well as field reconnaissance of the project site and surrounding area. Additional significant sources of information included the California Department of Conservation Farmland Conversion Report 1998 – 2000, the California Department of Conservation Important Farmlands Map, the Soil Survey of San Joaquin County and the California Agricultural Statistics Service's Summary of Agricultural Commissioners' Reports. The project was then compared to existing conditions in order to determine the impacts due to loss of agricultural resources.

### PROJECT IMPACTS AND MITIGATION MEASURES

#### Agricultural Conversion – Project Site

**Impact 4.12.1**            The project would result in the conversion of agricultural land classified as Prime Farmland and Farmland of Statewide Importance to an urban use. [LS]

The *San Joaquin County 2000 Important Farmland Map* shows that the soils within the project site are classified as Prime Farmland along its eastern boundary and Farmland of Statewide Importance throughout most of the central and western portions of the site. These soils are conducive to productive agricultural operations, which is evidenced by its current use for alfalfa and pasture crops. Implementation of the project would result in the conversion of approximately 127 acres of land classified as Prime Farmland and Farmland of Statewide Importance to an urban use. However, the project site lies between the expanding urban boundaries of both the City and the adjacent City of Lathrop and has become increasingly surrounded by residential and industrial development. In addition, the project site is currently zoned R-1 while several of the parcels to the north and south are zoned for manufacturing operations. The City of Manteca has designated the project site as being suitable for development of residential units with uses and densities as established in the General Plan. Development on this site is expected to provide housing that otherwise could have been constructed adjacent to large contiguous agricultural parcels located on the south and east side of Manteca's urban boundary, putting development pressure on these parcels. Impacts, therefore, are considered less than significant.

#### Agricultural Conversion – Project Vicinity

**Impact 4.12.2**            The project may lead to increased pressure to convert lands currently used for agricultural production in the vicinity to urban uses. [LS]

An orchard is located northeast of the project site, at the intersection of Airport Way and Louise Avenue. Also, land south of the project site is being used to grow corn. The construction of the project may lead to increased pressure to convert these lands from agricultural to urban uses, due to the potential increased value of these lands for development and the further fragmentation of the

agricultural area. However, the Manteca General Plan has designated these lands for urban development, so conversion of these lands is anticipated in the future. Impacts, therefore, are considered less than significant.

#### CUMULATIVE IMPACTS AND MITIGATION MEASURES

##### Cumulative Agricultural Land Conversion

**Impact 4.12.3**            **The project would convert land classified as Prime Farmland and Farmland of Statewide Importance to urban uses, contributing to the cumulative loss of such farmland in San Joaquin County and the Central Valley region. [SU]**

The project site is located on a piece of land located on Manteca's western city limits that is currently used for agricultural production. Previous land use decisions made by both communities have established a pattern of development that has resulted in the project site being largely surrounded by urban uses. In addition to these projects, other developments throughout San Joaquin County and the larger Central Valley are contributing to the cumulative loss of agricultural land resources. As previously shown in Table 4.12-1, San Joaquin County has lost approximately 18,500 acres of Prime Farmland and Farmland of Statewide Importance from 1992 to 2000. While much of this loss was made up with the addition of Unique Farmland and Farmland of Local Importance, these farmlands require a greater investment of inputs such as labor, equipment and materials (e.g., water, fertilizer) than would Prime Farmland and Farmland of Statewide Importance.

The City of Manteca's General Plan guides the development of the community to the year 2023. The current General Plan document addresses development issues on 25,975 acres outside Manteca's municipal boundaries. These outside areas were evaluated in order to identify and evaluate future economic viability, traffic, services and aesthetic qualities found within these lands that may impact the Manteca community. According to the Manteca General Plan EIR, buildout as identified in the General Plan would convert farmland to urban uses over the 20-year planning period covered by the General Plan. This impact was identified as significant and unavoidable in the EIR prepared for the General Plan update. The impact of urban development on agricultural land has been envisioned and recognized by the County through the adoption of a Statement of Overriding Consideration. Nevertheless, the project would contribute to the cumulative loss of Prime Farmland and Farmland of Statewide Importance. This impact is **significant and unavoidable**. There are no feasible measures that would mitigate this impact to a level that is less than significant.

#### REFERENCES

California Department of Conservation, Farmland Mapping and Monitoring Program. Farmland Conversion Report Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports*. September 2003.

California Department of Conservation, *Important Farmlands Map* 2002.

California Department of Conservation, *A Guide to the Farmland Mapping and Monitoring Program* 1994.

#### 4.12 AGRICULTURAL RESOURCES

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California Agricultural Statistics Service, *Summary of County Agricultural Commissioners' Reports*. September 2003.

City of Manteca. 2003. Draft General Plan 2003. May 2003.

City of Manteca. 2003. *Environmental Impact Report For the City of Manteca General Plan 2023*. October 6, 2003.

City of Manteca Municipal Code, Chapter 8.24 - Right To Farm, 1990.

United States Bureau of the Census, *Census 2000 Summary File*. 2000.

U.S. Department of Agriculture, Soil Conservation Service, *Soil Survey of San Joaquin County, California*, issued 1992.



**5.0 CUMULATIVE  
IMPACTS SUMMARY**

This section summarizes the cumulative impacts associated with the project that are identified in environmental issue areas in Section 4.0. Cumulative impacts are the result of combining the potential effects of the project with other planned developments, as well as foreseeable development projects. The following discussion considers the cumulative impacts of the relevant environmental issue areas.

## 5.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) contain an assessment of the cumulative impacts that could be associated with the proposed project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related 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 future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (CEQA Guidelines Section 15355(b)).

CEQA Guidelines Section 15130(b) states that the following three elements are necessary for an adequate cumulative impact analysis:

- 1) Either:
  - (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,
  - (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.
- 2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and
- 3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Although not so stated in the CEQA Guidelines, 1(A) above is referred to as the "list" approach in analyzing cumulative impacts, while 1(B) is referred to as the "plan" approach.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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Where a lead agency is examining a project with an incremental effect that is not “cumulatively considerable,” a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

This EIR utilizes both the “list” and the “plan” approach in the cumulative analysis. The most relevant related planning document for the project site is the City of Manteca General Plan, and therefore it is utilized in consideration of cumulative conditions, impacts, and mitigation measures. However, this cumulative analysis is not based solely on the City’s General Plan and associated EIR. This Draft EIR looks beyond the City’s General Plan cumulative setting and buildout condition and analyzes the potential cumulative impacts of the project in conjunction with proposed or reasonably foreseeable development for the region. Of particular significance is development in the City of Lathrop, which is adjacent to and west of the project site. Ultimately, the Draft EIR analyzes the cumulative impacts of approved, proposed, and under application projects in the area against the backdrop of the City’s General Plan EIR.

In addition, the cumulative settings for the Water Quality, Air Quality and Biological Resources discussions have been customized to a more regional setting. This is because water, airborne pollutants, and wildlife species easily move beyond such static boundaries as those defined by the General Plan. The authors recognize that impacts associated with other issues may also have the ability to move beyond Manteca General Plan boundaries, but believe that the planning area provides a sufficient cumulative setting area for making determinations of significance regarding these other environmental issues.

### 5.2 CUMULATIVE SETTING

#### CITY OF MANTECA GENERAL PLAN

The City of Manteca General Plan 2023 is the fundamental guide for physical development in the City’s planning area for the planning period 2003-2023. The planning area, referred to in the City’s General Plan as the Study Area, encompasses approximately 25,975 acres within and outside of the existing city limits. The General Plan may cover land outside the city limits if it bears relation to the City’s planning in the City’s judgment (Government Code Section 65300). Approximate boundaries of the Study Area are French Camp Road to the north, the Union Pacific Railroad tracks to the west, Walthall Slough and a line contiguous to Sedan Avenue to the south, and a line approximately one-half mile east of Austin Road on the east. The boundaries actually encompass more than is required to accommodate the projected growth of the City. However, additional land was included in order to consider the Sphere of Influence of adjacent jurisdictions and the potential impacts of development in the surrounding area.

The Manteca General Plan includes seven mandated elements: Land Use, Circulation, Housing, Safety, Noise, and Resource Conservation (which combines the required Conservation and Open Space elements). It also includes four optional elements: Community Design, Economic Development, Public Facilities and Services, and Air Quality. All of these elements carry the same legal authority in land use decisions. They also contain goals, policies and implementation program related to the issues discussed within each element.

The General Plan contains a mandated Land Use Diagram, which shows the land use designations in the Study Area that indicate the general location and type of development that would be allowed

to occur during the planning period. Approximately 17,645 acres of land have been designated for land uses by the General Plan. Of these, 13,685 acres are for urban uses, of which 5,343 acres have existing urban uses. The total land use proposed in the Manteca General Plan will accommodate a population of 94,000 to 144,000. The EIR for the Manteca General Plan, in its environmental analysis, estimated a population of 94,378 at General Plan buildout. This estimate is based upon assumptions regarding development of residential lands, which are presented in **Table 5-1** below.

**TABLE 5-1  
MANTECA GENERAL PLAN EIR  
RESIDENTIAL LAND USE ASSUMPTIONS**

Land Use Category	Dwelling Units per Acre	Average Dwellings per Acre	Efficiency Percent <sup>1</sup>	Vacancy Percent <sup>2</sup>	Market Reserve <sup>3</sup>
Very Low Density Residential	0 to 2	1	80%	0.04%	120%
Low Density Residential	2.1 to 8	5	80%	0.04%	120%
Medium Density Residential	8.1 to 15	8	80%	0.04%	120%
High Density Residential	15.1 to 25	20	90%	0.04%	120%
Commercial Mixed Use	15.1 to 25	20	90%	0.04%	120%

<sup>1</sup> Refers to percentage of land developed for residences. Remainder of land used for streets, parks, schools and other uses.  
<sup>2</sup> Refers to percent of residential units vacant at any time after full development.  
<sup>3</sup> Allows for surplus of residential land use to ensure competitive land prices and more affordable housing.

Source: Wade Associates, May 2003, in Manteca General Plan EIR (2003).

Based upon the acreage designated for residential land uses in the Manteca General Plan and the assumptions set forth in **Table 5-1** above, an estimated number of dwelling units was calculated. For each type of dwelling unit, an average household size was applied. The average household size for each dwelling unit was based upon the average household size for Manteca according to the 2000 U.S. Census, which was 2.98. Generally, single-family dwellings have a slightly larger average household population than apartments (Manteca General Plan EIR, 2003). The resulting estimates on City population for the year 2023 are presented in **Table 5-2** below.

**TABLE 5-2  
MANTECA GENERAL PLAN EIR  
POPULATION AND HOUSING ESTIMATES AT 2023 GENERAL PLAN BUILDOUT**

Land Use Category	Net Acres Available	Average Housing Units per Acre	Housing Units	Percent of Housing Units by Type	Average Household Size	Total Estimated Population
Very Low Density Residential	825.6	1	826	2.6	3.06	2,526
Low Density Residential	4,129.3	5	20,646	65.0	3.06	63,178
Medium Density Residential	358.4	8	2,867	9.0	3.00	8,602
High Density Residential	324.0	20	6,480	20.4	2.70	17,496
Commercial Mixed Use	47.7	20	954	3.0	2.70	2,576
<b>Total</b>	<b>5,685.0</b>		<b>31,773</b>	<b>100.0</b>	<b>2.97</b>	<b>94,378</b>

Source: Wade Associates, May 2003, in Manteca General Plan EIR (2003).

### 5.3 CUMULATIVE IMPACTS ANALYSIS AND SUMMARY

The following provides a summary of cumulative environmental impacts identified with the project, as discussed in each technical section in Section 4.0, Environmental Setting, Impacts, and Mitigation Measures. Each cumulative impact is listed, along with mitigation measures when applicable. The headings in this summary correspond to each chapter in Section 4.0, and are presented in the order of the chapters in that section. The numbering of each cumulative impact listed here corresponds to its numbering in Section 4.0.

#### AESTHETICS

##### Scenic Vistas

**Impact 4.1.5 Construction of the project would cumulatively contribute to the degradation of existing scenic vistas found in the Manteca General Plan area. [SU]**

The Manteca General Plan EIR states that buildout of the General Plan area will occur primarily at the edge of Manteca, and primarily in current agricultural areas. New development would be visible from locations within the community, from the highway overpasses, and from the nearby, unincorporated agricultural areas beyond the General Plan area boundaries. New development would impact the current views of open space, which are primarily vistas of agricultural fields and orchards. The Manteca General Plan EIR concluded that this impact is significant and unavoidable, even with application of Resource Conservation Element Policy RC-P-17, which seeks to maximize the potential for open space and visual experiences.

The project would contribute to this identified degradation of scenic views by being developed on existing agricultural land, thereby changing scenic vistas in the vicinity. While the project would include some park and open space areas, it would still alter the views in the area. Therefore, the cumulative impacts of the project on scenic vistas are **significant and unavoidable**.

**Impact 4.1.6 The project would contribute to the general conversion of the visual character of the Manteca area from rural to predominantly urban. [LS]**

As with other parts of the northern San Joaquin Valley, the Manteca-Lathrop area has experienced considerable urban development in recent years. Among other effects, this development has led to the conversion of rural landscapes in the area, which are considered to have scenic value. As previously described, the project would reduce the amount of rural landscape in the area and convert it to suburban residential development. However, as also described previously, the project site is substantially surrounded by urban development. The development on the project site would essentially be an infill project, utilizing vacant land within the City limits for designated urban uses. Infill projects are encouraged, as they reduce development pressures outside of the developed urban area, therein reducing the conversion of predominantly rural areas of the northern San Joaquin Valley. Thus, the project, while converting some rural landscape, would discourage the conversion of larger rural landscapes outside the City limits. Cumulative impacts on visual character, therefore, are considered **less than significant**.

## AIR QUALITY

**Impact 4.2.4           The project would contribute to cumulative air pollutant emissions within the San Joaquin Valley Air Basin. [SU]**

The project is located in the San Joaquin Valley Air Basin, an air basin with severe air quality problems. In particular, the air basin is currently in nonattainment status for ozone and PM<sub>10</sub>, under both state and federal standards. These problems are related to the cumulative emissions from numerous sources in the region and transport from outside the region. While individual sources are unlikely to have a measurable impact by themselves, each contributes to the cumulative problem. The proposed project is part of a pattern of urbanization of agricultural lands within the air basin that exacerbates regional air pollution problems.

Efforts to attain the state and federal ambient air quality standards are made more difficult by continuing growth in population, vehicle use and industrialization within the air basin. Since substantial reductions in emissions of ozone precursors and particulate matter will be necessary to attain the ambient air quality standards, the introduction of a new source of emissions would delay the attainment of the standards. The impacts of the proposed project were singularly found to be significant and would also be **significant and unavoidable** cumulatively, considering the effects of similar development within the air basin in the past, present and foreseeable future.

## BIOLOGICAL RESOURCES

**Impact 4.3.11           The project, in conjunction with other projects proposed in San Joaquin County, could potentially contribute to cumulative impacts on special-status plant and wildlife species. [SU]**

The cumulative setting for biological resource impacts is defined based upon the distribution of local resident and migratory wildlife in San Joaquin County. This takes into account the special-status species and their potential habitat found within the project site and within San Joaquin County, including giant garter snake, raptors and other migratory birds, and California horned lark. Past agriculture, water diversion projects, and urban development have caused cumulative significant impacts to biological resources in San Joaquin County, and in the San Joaquin Valley. These significant impacts include, but may not be limited to, loss of common and sensitive plant communities, loss/disturbance of habitat for common and special-status wildlife species, and loss/disturbance of common and special-status wildlife.

Increased development and the concomitant increase in human population and associated activity would result in habitat loss and a reduction in overall habitat quality and condition of the natural environment. Proposed and conceptual development as to be provided under the City of Manteca General Plan, the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), and the San Joaquin County General Plan would contribute to cumulative biological resource impacts, including substantial habitat loss and fragmentation in areas designated for commercial or residential development. For example, it is anticipated that approximately 57,635 acres (or approximately 12.5 percent) of existing ditched and unditched row and field crops within San Joaquin County would be converted through the year 2049 by activities covered pursuant to the SJMSCP (SJCOG, 1999). The proposed project, in conjunction with other projects proposed in the local area and the San Joaquin Valley, would result in **significant and unavoidable** cumulative biological resource impacts in the San Joaquin Valley.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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The policies and measures of the City of Manteca General Plan and the SJMSCP were designed to minimize and mitigate impacts to biological resources within the City of Manteca and San Joaquin County, respectively, to reduce impacts to a less than significant level. Implementation of minimization and mitigation measures identified in the SJMSCP (SJCOG, 2000) would aid in preserving and creating foraging, shelter, and breeding habitat for resident and migratory wildlife species.

Some project-specific significant impacts may be reduced to less than significant levels through project redesign or implementation of mitigation measures. Loss and fragmentation of habitat resulting from current and future projects in San Joaquin County would be reduced and/or mitigated by minimization and mitigation measures identified in the SJMSCP. However, in the San Joaquin Valley, cumulative impacts to biological resources resulting from implementation of current and future projects would be **significant and unavoidable**.

### HAZARDS AND HAZARDOUS MATERIALS

**Impact 4.4.7 Hazardous materials impacts are site-specific and are generally not affected by, or do not affect, other development in the region. [LS]**

Impacts of a project as they relate to hazardous materials are generally limited to the project site. Given the strict regulations under which hazardous materials are transported, stored and disposed, it is not likely that a project would contribute significantly to a hazardous material problem in a region. Future projects that may use or store hazardous substances would be subject to the same hazardous material regulations that apply to this project.

The project is located in an area where hazardous material sites have been identified. However, the project would not affect any activities on these sites, including remediation. Also, the project would not contribute to any existing contamination associated with these identified sites. Therefore, cumulative impacts are considered **less than significant**.

### GEOLOGY AND SOILS

**Impact 4.5.5 Due to the nature of geologic resources and soils, adverse impacts are site-specific and are generally not affected by, or do not affect, other development in the region. [LS]**

Geotechnical impacts tend to be site-specific rather than cumulative in nature. Each development site would be subject to, at a minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent within the region. In addition, implementation of **MM 4.5.2a** will ensure a site-specific geotechnical investigation is prepared for the project prior to construction. This is considered a **less than significant** impact.

Impacts regarding surficial deposits, namely erosion and sediment deposition, can be cumulative in nature within a watershed. Section 4.6, Hydrology and Water Quality, discusses issues regarding cumulative water quality impacts. In general, issues associated with soil erosion can be mitigated through grading, drainage and revegetation BMPs that are typically included in a SWPPP, as discussed under **Impact 4.5.1**. Erosion impact also can be mitigated by other local, State, and federal regulatory efforts identified throughout this document. Therefore, cumulative impacts associated with geology and soils are considered **less than significant**.

## HYDROLOGY AND WATER QUALITY

**Impact 4.6.7**            **The project would contribute to a cumulative increase in surface runoff generated by development in the Manteca area. [LS]**

The project would contribute to a general increase in surface runoff and storm drainage caused by more urbanized development in the Manteca area. However, **MM 4.6.1**, along with measures in the Safety Element described under **Impact 4.6.1**, would reduce the contribution of the project to this cumulative increase. Also, the City of Manteca's *Master Storm Drainage Plan* and *Public Facilities Implementation Plan Report* anticipate increases in storm drainage. Measures in these documents have been developed to accommodate the increased volume. Therefore, cumulative impacts of the project on storm drainage are considered **less than significant**.

**Impact 4.6.8**            **The project may contribute to a cumulative degradation of surface and groundwater quality in the Manteca area. [LS]**

As described in **Impact 4.6.2** and **Impact 4.6.5**, the project may contribute to some degradation in surface water and groundwater quality, particularly in combination with similar development in the Manteca-Lathrop area. However, mitigation measures described in this section would reduce the project's contribution to adverse impacts on water quality, and may eliminate some adverse impacts. Cumulative impacts are considered **less than significant**.

## LAND USE AND PLANNING

**Population Growth**

**Impact 4.7.3**            **Implementation of the project would contribute to a cumulative increase in the City's population. [SU]**

The project would add an estimated 2,920 residents to the current City population (see Section 4.11, Utilities and Service Systems). The additional population generated by the project, along with the population projected for the City under General Plan buildout, would have significant environmental impacts in the Manteca area. The Manteca General Plan EIR evaluated the potential impacts of increased population. It concluded that, while monitoring and regulating growth to a responsible level would maintain the integrity of the community, there are no specific mitigation measures that would reduce or eliminate the impacts of increased population on Manteca and the surrounding area. Therefore, the cumulative impacts of the project associated with population growth are considered **significant and unavoidable**.

**Agricultural Land Conversion**

**Impact 4.7.4**            **The project would convert land classified as Prime Farmland and Farmland of Statewide Importance to urban uses, contributing to the cumulative loss of such farmland in San Joaquin County and the Central Valley region. [SU]**

The project site is located on a piece of land located on Manteca's western city limits that is currently used for agricultural production. Development on this site is expected to provide housing that otherwise could have been constructed adjacent to large contiguous agricultural parcels.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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located on the south and east side of Manteca's urban boundary, putting development pressure on these parcels. Previous land use decisions made by the City have established a pattern of development that has resulted in the project site being largely surrounded by urban uses. In addition to the proposed project, other developments throughout San Joaquin County and the larger Central Valley are contributing to the cumulative loss of agricultural land resources. As shown in **Table 4.12-1** in Chapter 4.12, Agricultural Resources, San Joaquin County has lost approximately 18,500 acres of Prime Farmland and Farmland of Statewide Importance from 1992 to 2000. While much of this loss was made up with the addition of Unique Farmland and Farmland of Local Importance, these farmlands require a greater investment of inputs such as labor, equipment and materials (e.g., water, fertilizer) than would Prime Farmland and Farmland of Statewide Importance.

The City of Manteca's General Plan guides the development of the community through the year 2023. The current General Plan document addresses development issues on 25,975 acres outside Manteca's municipal boundaries. According to the Manteca General Plan EIR, buildout as identified in the General Plan would convert farmland to urban uses over the 20-year planning period covered by the General Plan. This impact was identified as significant and unavoidable in the EIR prepared for the General Plan update. The impact of urban development on agricultural land has been envisioned and recognized by the County through the adoption of a Statement of Overriding Consideration. Nevertheless, the project would contribute to the cumulative loss of Prime Farmland and Farmland of Statewide Importance. This impact is **significant and unavoidable**. There are no feasible measures that would mitigate this impact to a level that is less than significant. The City Council of the City of Manteca adopted a Finding of Overriding Consideration regarding the conversion of farmland as part of the adoption of the Environmental Impact Report prepared in support of the City of Manteca General Plan 2023.

### Agricultural Conversion – Project Vicinity

**Impact 4.7.5            The project may lead to increased pressure to convert lands currently used for agricultural production in the vicinity to urban uses. [SU]**

An orchard is located northeast of the project site, at the intersection of Airport Way and Louise Avenue. Also, a small amount of land south of the project site is being used to grow corn. The construction of the project may lead to increased pressure to convert these lands from agricultural to urban uses, due to the potential increased value of these lands for development and the further fragmentation of the agricultural area. However, the Manteca General Plan has designated these lands for urban development, so conversion of these lands is anticipated in the future. Impacts, therefore, are considered to be **significant and unavoidable**. There are no feasible measures that would mitigate this impact to a level that is less than significant. The City Council of the City of Manteca adopted a Finding of Overriding Consideration regarding the conversion of farmland as part of the adoption of the Environmental Impact Report prepared in support of the City of Manteca General Plan 2023.

### NOISE

**Impact 4.8.7            Future (Cumulative) increase in traffic noise levels. [LS]**

The project will contribute to the cumulative future traffic noise environment along the roadways utilized by project traffic.

A substantial increase in traffic noise levels is defined as 3 dB. Due to the relatively small number of trips which are predicted to be generated by the proposed project when compared to cumulative traffic volumes without the project, traffic noise level increases are predicted to be insignificant on all segments of the local roadway network evaluated in this analysis. Because the project-generated traffic will not cause significant increases in cumulative traffic noise levels along the existing roadway network, this impact is considered to be **less than significant**

PUBLIC SERVICES

**Impact 4.9.2            The project would contribute to a cumulative demand for fire protection services provided by the City. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for fire protection services. The Manteca General Plan EIR evaluated the potential impacts on fire protection services. It concluded that implementation of policies and implementation measures in the Public Facilities and Services Element that are related to fire protection would reduce potential impacts to a level that is **less than significant**.

**Impact 4.9.4            The project would contribute to a cumulative demand for police protection services provided by the City. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for police protection services. The Manteca General Plan EIR evaluated the potential impacts on fire protection services. It concluded that implementation of policies and implementation measures in the Public Facilities and Services Element that are related to police protection would reduce potential impacts to a level that is **less than significant**.

**Impact 4.9.6            The project would contribute to a cumulative demand for park and recreational services provided by the City. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for park and recreational services. The Manteca General Plan EIR evaluated the potential impacts on park and recreational services. It concluded that implementation of policies and implementation measures in the Public Facilities and Services Element that are related to parks and recreation would reduce potential impacts to a level that is **less than significant**.

**Impact 4.9.8            The project would contribute to a cumulative demand for road maintenance services provided by the City. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for road maintenance services. The Manteca General Plan EIR evaluated potential impacts on roadways. It concluded that implementation of policies and implementation measures in the Circulation Element that are related to streets would reduce potential impacts. Also, the *Public Facilities Implementation Plan Report* sets forth roadways improvements and funding plans for the City that would reduce maintenance problems. As stated above, the project would pay impact fees to support these projects. Therefore, cumulative impacts are considered **less than significant**.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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**Impact 4.9.10**            **The project would contribute to a cumulative demand for school services provided by the Manteca Unified School District. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for school services. The Manteca General Plan EIR evaluated the potential impacts on school services. It concluded that implementation of policies and implementation measures in the Public Facilities and Services Element that are related to schools would reduce potential impacts to a level that is **less than significant**.

**Impact 4.9.12**            **The project would contribute to a cumulative demand for medical services in the area. [LS]**

Development that would occur under the project and as designated in the Manteca General Plan would increase demand for medical services. As stated above, the Manteca hospitals would most likely be able to accommodate this increased demand, since the costs of providing services would most likely be covered. The increased demand may require expansion of the existing facilities, which could have environmental impacts. At the moment, no such projects have been proposed, and any such proposals would be subject to environmental review and would be required to comply with applicable City policies and ordinances. As stated above, the project would likely contribute little to the patient load at San Joaquin General Hospital. Cumulative impacts are considered **less than significant**.

### TRANSPORTATION AND CIRCULATION

#### Cumulative Traffic Conditions

**Impact 4.10.7**            **The project would generate traffic at sufficient volume under cumulative conditions to cause LOS to decline below City standards at two intersections. [SM]**

As discussed in the Methodology portion of this section, cumulative traffic conditions were based upon the City's General Plan Traffic Model. Since the City's Traffic Model is based upon General Plan buildout, and since the project is consistent with the General Plan buildout scenario, a separate analysis that included Cumulative Plus Project conditions was not performed in the traffic study. The cumulative analysis conducted in the traffic study included roadway and intersection improvements assumed in both the City's General Plan and its Public Facilities Implementation Plan Report. These assumed improvements included the following:

- Airport Way – widening to six lanes between Sedan Avenue and Roth Road.
- Lathrop Road – widening to four lanes between the western city limit and the eastern city limit.
- Louise Avenue – widening to four lanes between Airport Way and the eastern city limit.
- Yosemite Avenue – widening to six lanes between Airport Way and Union Road.
- Union Road – widening to four lanes between sedan Avenue and Lathrop Road.

- Traffic signals at Airport Way/Louise Avenue, Airport Way/SR 120 Westbound Ramps, and Airport Way/SR 120 Eastbound Ramps intersections.

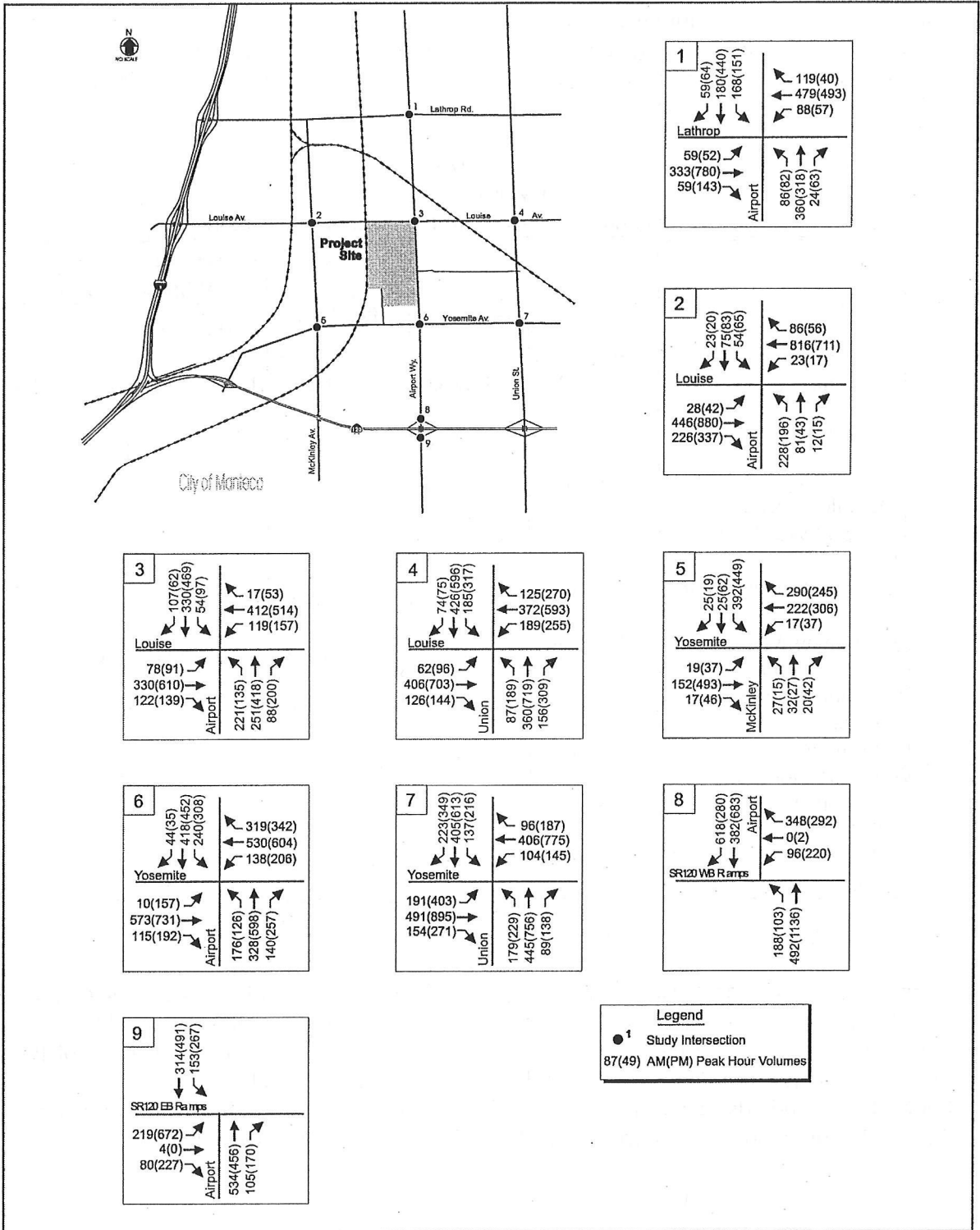
Intersection operations during the AM and PM peak hours at the nine study intersections were analyzed for this traffic study under cumulative conditions. LOS that would occur at these intersections are presented in **Table 4.10-5** below. The cumulative AM and PM peak hour traffic volumes are illustrated in **Figure 4.10-3**.

**TABLE 4.10-5  
CUMULATIVE CONDITION  
AM and PM Peak Hour Intersection Operations**

Intersection	Control	Cumulative Geometrics							
		AM Peak		PM Peak		With Improvements			
		LOS	Delay	LOS	Delay	LOS	Delay		
1. Airport Way/Lathrop Road	Signal	C	30.0	C	27.0				
2. Louise Avenue /McKinley Avenue	Signal	C	24.1	C	21.1				
3. Airport Way/Louise Avenue	Signal	C	31.9	D	35.7				
4. Louise Avenue/Union Road	Signal	C	31.8	D	52.0				
5. Yosemite Avenue /McKinley Avenue	All Way Stop	C	16.5	F	67.3	C	27.4	C	31.5
6. Airport Way/Yosemite Avenue	Signal	C	30.6	D	38.6				
7. Yosemite Avenue/Union Road	Signal	C	33.0	E	62.3	C	32.1	D	44.6
8. Airport Way/SR-120 WB Ramps	Signal	C	24.4	C	20.3				
9. Airport Way/SR-120 EB Ramps	Signal	C	22.6	C	28.3				

**Notes:** Delay values are overall delay per vehicle for unsignalized intersections  
**Source:** T.Y. Lin International/CCS, 2004.

As shown in **Table 4.10-5**, two intersections would operate at conditions below the City standard of LOS D: Yosemite Avenue/McKinley Avenue (PM only) and Yosemite Avenue/Union Road (PM only). Three other study intersections would experience LOS declines as a result of the project under cumulative conditions, but would still maintain an acceptable LOS. The decline of LOS below City standards at the Yosemite Avenue/McKinley Avenue intersection and the Yosemite Avenue/Union Road intersection is a **significant impact** and subject to mitigation.



SOURCE: TY LIN INTERNATIONAL/CCS, JULY 2004

FIGURE 4.10-3  
CUMULATIVE + PROJECT PEAK HOUR VOLUMES

Mitigation Measures

Manteca Municipal Code Section 13.38.070 requires developers of property to pay a transportation facilities improvement fee, as set by City Council resolution and in accordance with procedures set forth in the Municipal Code. The fee would be applied to transportation facility projects listed in the Public Facilities Implementation Plan Report.

**MM 4.10.7a** The project shall contribute its fair share to the costs of the installation of a traffic signal at the Yosemite Avenue/McKinley Avenue intersection. Based upon the traffic study prepared for the project, the traffic generated by the project will contribute approximately 26 percent of the Existing Plus Project AM peak hour traffic passing through the intersection, and approximately 40 percent of the PM peak hour traffic. The project applicant and the City shall develop a formula that equitably distributes the cost of the installation of the signal at such time as the intersection meets warrants for such.

*Timing/Implementation: Prior to issuance of the first building permit.  
Enforcement/Monitoring: City of Manteca Public Works Department.*

**MM 4.10.7b** The project shall contribute its fair share to the costs of the installation of a traffic signal at the Yosemite Avenue/Union Road intersection. Based upon the traffic study prepared for the project, the traffic generated by the project will contribute approximately 12 percent of the Existing Plus Project AM peak hour traffic passing through the intersection, and approximately 14 percent of the PM peak hour traffic. The project applicant and the City shall develop a formula that equitably distributes the cost of the installation of the signal at such time as the intersection meets warrants for such.

*Timing/Implementation: Prior to issuance of the first building permit.  
Enforcement/Monitoring: City of Manteca Public Works Department.*

Implementation of the mitigation measure would improve LOS at both the Yosemite Avenue/McKinley Avenue and Yosemite Avenue/Union Road intersections to LOS C or LOS D, which would meet City standards. Impacts after mitigation would be **less than significant**.

**Cumulative Site Access**

**Impact 4.10.8** The level of service at two access points to the project site would operate below City standards under cumulative conditions. [SM]

All four of the major project access intersections were analyzed to determine level of service/operations with the project traffic. Traffic operations under cumulative conditions at the driveway intersections are summarized below in **Table 4.10-6**.

The Cumulative Plus Project results indicate that all project roadway intersections would operate at acceptable LOS B or better during the AM and PM peak hours, except for the Louise Avenue/Swanson Road/Villa Ticino West Roadway/Assieh Industrial Roadway and Yosemite Avenue/Swanson Road Extension intersections, which would both operate at LOS F conditions in the AM and PM peak hour. This impact is **significant** and subject to mitigation.

**TABLE 4.10-6  
CUMULATIVE PLUS PROJECT  
AM AND PM PEAK HOUR DRIVEWAY INTERSECTION OPERATIONS**

Intersection	Control	Base Geometrics					
		AM Peak		PM Peak		With Improvements	
		LOS	Delay	LOS	Delay	AM Peak LOS Delay	PM Peak LOS Delay
1. Louise Avenue/Swanson Road/Villa Ticino West Access/Assieh Industrial Access	Two Way Stop	F	<120.0	F	<120.0	B 18.1	B 17.6
2. Airport Way/Villa Ticino West Access/Geneva Way	Two Way Stop	A	9.5	A	9.7		
3. Airport Way/Villa Ticino West/Crom Street	Signal	B	18.7	B	16.6		
4. Yosemite Avenue/Swanson Road Extension	Two Way Stop	F	<120.0	F	<120.0	B 19.6	B 18.4

Mitigation Measures

Both of the driveway intersections meet Caltrans traffic signal warrant 11 (Peak Hour Volume) under cumulative conditions. To mitigate the traffic impacts to less-than-significant level, signalization is recommended. **MM 4.10.2** requires traffic signals at both of the subject access points. The following mitigation measure applies to the Yosemite Avenue/Swanson Road access point.

Implementation of traffic signals at the subject driveway locations pursuant to **MM 4.10.2** would result in acceptable LOS in the AM and PM peak hours. LOS at the driveway intersections based on the recommended improvements is presented in **Table 4.10-6** above and is presented in **MM 4.10.2**. Impacts after mitigation would be **less than significant**.

**Cumulative Traffic Queuing**

**Impact 4.10.9** Queuing on offsite roadways may occur as a result of the project under cumulative conditions. [LS]

Under Cumulative AM and PM peak hour conditions, there will be no off-site queuing problems based on the available queuing/storage distance between the railroad tracks and the project driveway. Although the intersection of Louise Avenue/Swanson Road/Driveway (N) would continue to operate at unacceptable LOS F conditions during the PM peak hour, the poor LOS is due to northbound left turn out of the project site. The results also show that queuing will be minimal at the other driveway locations. Therefore, impacts are **less than significant**.

## UTILITIES AND SERVICE SYSTEMS

**Impact 4.11.3**            **Implementation of the proposed project, in combination with cumulative development under the Manteca General Plan, would increase the current demand for water supply [LS].**

Project development would be consistent with the designations under the Manteca General Plan. The Manteca General Plan EIR evaluated the potential effects of General Plan buildout on water supplies. The EIR concluded that goals, policies and implementation measures of the Public Facilities and Services Element would assist in accommodating future water demand by encouraging a combination of increasing water sources and implementing water conservation measures. Also, the EIR mentions that the City's *Master Water Plan* indicates that future City demand would be met by a combination of SSJID water from the South County Water Supply Program and groundwater from City wells. The SSJID water would be used as the base supply, with groundwater to be used to meet peak water demands. SSJID water would meet nearly the entire City's projected water demands during the winter months. Therefore, cumulative impacts of the project on water supply are considered **less than significant**.

**Impact 4.11.6**            **Implementation of the proposed project, in combination with cumulative development under the Manteca General Plan, would increase demand for wastewater treatment services. [LS]**

Project development would be consistent with the designations under the Manteca General Plan. The Manteca General Plan EIR evaluated the potential effects of General Plan buildout on water supplies. The EIR concluded that goals, policies and implementation measures of the Public Facilities and Services Element would assist in accommodating future wastewater treatment demand, mainly by updating the Public Facilities Implementation Plan every five years, by encouraging an industrial pretreatment program for business parks and other industrial uses, and by promoting reduced demand through efficient water use. Also, the WQTF has an ultimate treatment capacity of 25 MGD, which the EIR concluded would be more than adequate capacity to accommodate wastewater treatment demand generated by growth as projected in the Manteca General Plan. Therefore, cumulative impacts of the project on the City's wastewater system are considered **less than significant**.

**Impact 4.11.9**            **The project would contribute to cumulative demands for solid waste disposal services. [LS]**

Solid waste generation is expected to increase in the Manteca area as development occurs. This would place additional demands on the capacity of the landfill to which the City's solid waste would be sent. As previously noted, Forward Landfill has approximately 78 percent remaining capacity. Therefore, it would be able to accommodate both the solid waste generated by the project and waste generated by future development in the City. Moreover, the waste diversion programs initiated by the City would reduce the amount of solid waste that is actually disposed at the landfill. Assuming that the current waste diversion rate remains the same, approximately half of the City's solid waste would be diverted from the landfill. Cumulative impacts on solid waste disposal are considered **less than significant**.

## 5.0 CUMULATIVE IMPACTS SUMMARY

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### AGRICULTURAL RESOURCES

#### Cumulative Agricultural Land Conversion

**Impact 4.12.3**      **The project would convert land classified as Prime Farmland and Farmland of Statewide Importance to urban uses, contributing to the cumulative loss of such farmland in San Joaquin County and the Central Valley region. [SU]**

The project site is located on a piece of land located on Manteca's western city limits that is currently used for agricultural production. Previous land use decisions made by both communities have established a pattern of development that has resulted in the project site being largely surrounded by urban uses. In addition to these projects, other developments throughout San Joaquin County and the larger Central Valley are contributing to the cumulative loss of agricultural land resources. As previously shown in **Table 4.12-1**, San Joaquin County has lost approximately 18,500 acres of Prime Farmland and Farmland of Statewide Importance from 1992 to 2000. While much of this loss was made up with the addition of Unique Farmland and Farmland of Local Importance, these farmlands require a greater investment of inputs such as labor, equipment and materials (e.g., water, fertilizer) than would Prime Farmland and Farmland of Statewide Importance.

The City of Manteca's General Plan guides the development of the community to the year 2023. The current General Plan document addresses development issues on 25,975 acres outside Manteca's municipal boundaries. These outside areas were evaluated in order to identify and evaluate future economic viability, traffic, services and aesthetic qualities found within these lands that may impact the Manteca community. According to the Manteca General Plan EIR, buildout as identified in the General Plan would convert farmland to urban uses over the 20-year planning period covered by the General Plan. This impact was identified as significant and unavoidable in the EIR prepared for the General Plan update. The impact of urban development on agricultural land has been envisioned and recognized by the County through the adoption of a Statement of Overriding Consideration. Nevertheless, the project would contribute to the cumulative loss of Prime Farmland and Farmland of Statewide Importance. This impact is **significant and unavoidable**. There are no feasible measures that would mitigate this impact to a level that is less than significant.